As filed with the Securities and Exchange Commission on September 30, 2014

Registration No. 333-198476

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

AMENDMENT NO. 1
TO
FORM S-1

REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

TITAN PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware	**2836**	**94-3171940**
(State or other jurisdiction of incorporation or organization)	(Primary standard industrial classification code number)	(I.R.S. employer identification number)

400 Oyster Point Boulevard
South San Francisco, CA 94080
(650) 244-4990

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

Sunil Bhonsle, President
400 Oyster Point Boulevard
South San Francisco, CA 94080
(650) 244-4990

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

Fran Stoller, Esq.	**John D. Hogoboom, Esq.**
Loeb & Loeb LLP	**Lowenstein Sandler LLP**
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New York, NY 10154	**New York, NY 10020**
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Fax No.: 212-214-0706	**Fax No.: 973-597-2500**

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

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933 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, please 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, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b2

of the Exchange Act.

Large Accelerated Filer ☐	Accelerated filer ☐
Non-accelerated filer ☐ (Do not check if a smaller reporting company)	Smaller reporting company ☒

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CALCULATION OF REGISTRATION FEE

Title of Each Class of Security Being Registered	Proposed Maximum Aggregate Offering Price[1][2]	Amount of Registration Fee
Units, each unit consisting of:	$ 10,000,000	$ 1,288[5]
(i) one share of common stock, par value $0.001[3]		
(ii) 0.75 of a Class A warrant, each to purchase one share of common stock[3][4]		
Underwriter's warrants[3][4]		

(1) Estimated solely for the purpose of calculating the registration fee pursuant to Rule 457(o) under the Securities Act of 1933, as amended, or the Securities Act.

(2) Pursuant to Rule 416 under the Securities Act, there are also being registered such additional securities as may be issued to prevent dilution resulting from stock splits, stock dividends or similar transactions.

(3) No separate fee is required pursuant to Rule 457(g) under the Securities Act.

(4) The shares of common stock issuable upon exercise of such warrants are not being registered herewith.

(5) A registration fee of $2,365 has previously been paid.

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. These securities may not be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state or other jurisdiction where the offer or sale is not permitted.

PRELIMINARY PROSPECTUS **SUBJECT TO COMPLETION, SEPTEMBER 30, 2014**

TITAN PHARMACEUTICALS, INC.

20,000,000 Units
Each Unit Consisting of One Share of Common Stock
and
0.75 of a Class A Warrant, Each to Purchase One Share of Common Stock

We are offering 20,000,000 units, each of which consists of one share of our common stock and 0.75 of a Class A Warrant, each to purchase one share of our common stock at an exercise price per share equal to 110% of the closing price of our common stock on the date of pricing. The Class A Warrants will be exercisable beginning on the later of (i) one year and one day from the date of issuance and (ii) the date our stockholders approve either an increase in the number of our authorized shares of common stock or a reverse stock split, in either case in an amount sufficient to permit the exercise in full of the Class A Warrants, and will expire on the fifth anniversary of the date they first become exercisable. No units will be issued, however, and purchasers will receive only shares of common stock and Class A Warrants. The common stock and the Class A Warrants may be transferred separately immediately upon issuance. We are not registering the shares of common stock issuable from time to time upon the exercise of the Class A Warrants.

Our common stock is quoted on the OTCBB under the symbol "TTNP." On September 29, 2014, the closing price of our common stock as quoted on the OTCBB was $0.57. We do not intend to list the Class A Warrants on any securities exchange or other trading market and we do not expect that a public trading market will develop for the Class A Warrants. Without an active market, the liquidity of the Class A Warrants will be limited.

Investing in our common stock involves a high degree of risk. See "Risk Factors" beginning on page 5 of this prospectus.

	Per Unit	Total
Public offering price	$	$
Underwriting discounts and commissions(1)	$	$
Proceeds to us, before expenses(2)	$	$

(1) The underwriter will receive compensation in addition to the underwriting discount. See "Underwriting" beginning on page 52 of this prospectus for a description of compensation payable to the underwriter.

(2) We estimate the total expenses of this offering, excluding the underwriting discount, will be approximately $255,000.

In addition to the discounts and commissions listed above, we have agreed to issue to the underwriter or its designees underwriter's warrants to purchase shares of common stock equal to 3% of the total number of shares included in the units (excluding the shares underlying the Class A Warrants). The underwriter's warrants will have the same terms, including the exercise price, as the Class A Warrants issued to investors, except that the underwriter's warrants will comply with FINRA Rule 5110(g)(1) and will not include the liquidated damages rights contained in the Class A Warrants. The registration statement of which this prospectus is a part also covers the underwriter's warrants but not the shares of common stock issuable from time to time upon the exercise of the underwriter's warrants. We have also agreed to reimburse the underwriter for certain of its reasonable out-of-pocket expenses. See "Underwriting" beginning on page 52 for more information on this offering and the underwriting arrangements. All costs associated with the registration will be borne by us.

The underwriter expects to deliver the units against payment on or about , 2014.

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.

Roth Capital Partners

The date of this prospectus is , 2014

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You should rely only on the information contained in this prospectus and any free writing prospectus prepared by us or on our behalf. We have not, and the underwriter has not, authorized anyone to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriter is not, making an offer to sell these securities in any jurisdiction where the offer is not permitted. The information contained in this prospectus and any free writing prospectus that we have authorized for use in connection with this offering is accurate only as of the date of those respective documents, regardless of the time of delivery of this prospectus or any authorized free writing prospectus or the time of issuance or sale of any securities. Our business, financial condition, results of operations and prospects may have changed since those dates. You should read this prospectus and any free writing prospectus that we have authorized for use in connection with this offering in their entirety before making an investment decision. You should also read and consider the information in the documents to which we have referred you in the section of this prospectus entitled "Where You Can Find More Information."

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains "forward-looking statements" within the meaning of Section 27A of the Securities Act of 1933, as amended, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, or Exchange Act. Forward-looking statements reflect the current view about future events. When used in this prospectus, the words "anticipate," "believe," "estimate," "expect," "future," "intend," "plan," or the negative of these terms and similar expressions, as they relate to us or our management, identify forward-looking statements. Such statements, include, but are not limited to, statements contained in this prospectus relating to our business strategy, our future operating results and liquidity and capital resources outlook. Forward-looking statements are based on our current expectations and assumptions regarding our business, the economy and other future conditions. Because forward–looking statements relate to the future, they are subject to inherent uncertainties, risks and changes in circumstances that are difficult to predict. Our actual results may differ materially from those contemplated by the forward-looking statements. They are neither statements of historical fact nor guarantees of assurance of future performance. We caution you therefore against relying on any of these forward-looking statements. Important factors that could cause actual results to differ materially from those in the forward-looking statements include, without limitation, the results of clinical trials and the regulatory approval process; our ability to raise capital to fund continuing operations; market acceptance of any products that may be approved for commercialization; our ability to protect our intellectual property rights; the impact of any infringement actions or other litigation brought against us; competition from other providers and products; our ability to develop and commercialize new and improved products and services; changes in government regulation; our ability to complete capital raising transactions; and other factors (including the risks contained in the section of this prospectus entitled "Risk Factors") relating to our industry, our operations and results of operations. Should one or more of these risks or uncertainties materialize, or should the underlying assumptions prove incorrect, actual results may differ significantly from those anticipated, believed, estimated, expected, intended or planned.

Factors or events that could cause our actual results to differ may emerge from time to time, and it is not possible for us to predict all of them. We cannot guarantee future results, levels of activity, performance or achievements. Except as required by applicable law, including the securities laws of the United States, we do not intend to update any of the forward-looking statements to conform these statements to actual results.

PROSPECTUS SUMMARY

This summary highlights information contained in other parts of this prospectus. Because it is a summary, it does not contain all of the information that you should consider before investing in our securities. You should read the entire prospectus carefully. References herein to "we," "us," "Titan," and "our company" refer to Titan Pharmaceuticals, Inc. and its subsidiaries unless the context otherwise requires.

The Company

We are a specialty pharmaceutical company developing proprietary therapeutics for the treatment of serious medical disorders. Our product development programs utilize our proprietary long-term drug delivery platform, ProNeura®, and focus primarily on innovative treatments for select chronic diseases for which steady state delivery of a drug provides an efficacy and/or safety benefit.

Probuphine®, our first product candidate to utilize ProNeura, is in development for the long term maintenance treatment of opioid dependence designed to maintain a stable, around the clock blood level of the medicine in patients for six months following a single treatment. We have licensed the U.S. and Canadian rights to Probuphine to Braeburn Pharmaceuticals Sprl ("Braeburn"). In April 2013, the FDA issued a Complete Response Letter ("CRL") to the New Drug Application ("NDA") we submitted the prior year stating that it cannot approve the NDA in its present form and outlining the FDA's request for additional clinical data demonstrating adequate clinical benefit to patients from this treatment, data from human factors testing of the training program for insertion and removal of the implants, as well as recommendations regarding product labeling, Risk Evaluation and Mitigation Strategy ("REMS") and non-clinical safety data.

Since receipt of the CRL we have been working with Braeburn, a team of expert clinical and regulatory advisors and the FDA to establish a path forward for Probuphine, which along with other steps includes conducting an additional clinical study in clinically stable patients who are receiving maintenance treatment with an approved sublingual formulation containing buprenorphine at a daily dose of 8mg or less. Patient enrollment in this 180 patient clinical study, which is being funded and managed by Braeburn, began in July 2014 and study completion is anticipated by the middle of 2015 followed by resubmission of the NDA later in the year. Pursuant to our license agreement with Braeburn, as amended to date, we are entitled to receive a $15 million milestone payment upon FDA approval of the Probuphine NDA and percentage royalties on net sales of Probuphine ranging from the mid-teens to the low twenties. The agreement also provides for up to $165 million in sales milestones and $35 million in regulatory milestones and entitles us to royalty rates in the low single digit on sales by Braeburn, if any, of other future products in the addiction market.

We believe that our ProNeura technology has the potential to be used in the treatment of other chronic conditions, such as Parkinson's disease (PD), where maintaining stable, around the clock blood levels of a dopamine agonist may benefit the patient and improve medical outcomes. We have commenced initial work on an implant formulation with ropinirole, a dopamine agonist approved for the treatment of PD, and intend to use a portion of the proceeds of this offering to advance this program, including the development of a proof of concept clinical study. We are also currently evaluating drugs and disease settings for opportunities to develop our drug delivery technology for other potential treatment applications in situations where conventional treatment is limited by variability in blood drug levels and poor patient compliance and where existing therapeutic compounds have sufficient potency to be effective at low doses.

Our principal executive offices are located 400 Oyster Point Boulevard, Suite 505 South San Francisco, CA 94080. Our telephone number is (650) 238-6621.

Probuphine® and ProNeura™ are trademarks of Titan Pharmaceuticals, Inc. This prospectus also includes trade names and trademarks of companies other than Titan Pharmaceuticals, Inc.

	The Offering
Securities we are offering	20,000,000 units (assuming an offering price of $0.50 per unit), each consisting of one share of our common stock and 0.75 of a Class A Warrant, each full warrant to purchase one share of our common stock at an exercise price per share equal to 110% of the closing price of our common stock on the date of pricing. The Class A Warrants will be exercisable beginning on the later of (i) one year and one day from the date of issuance and (ii) the date our stockholders approve either an increase in the number of our authorized shares of common stock or a reverse stock split, in either case in an amount sufficient to permit the exercise in full of the Class A Warrants, and will expire on the fifth anniversary of the date they first become exercisable. We do not have a sufficient number of authorized shares to permit exercise of the Class A Warrants. In the event that we are unable to effect an increase in our authorized shares of common stock or a reverse split by the first anniversary of the date of issuance, we will be required to pay liquidated damages in an aggregate amount of $2,500,000. See "Description of Securities We Are Offering—Class A Warrants—Stockholder Approval; Payment of Liquidated Damages; Registration of Warrant Shares." We are not registering the shares of common stock issuable from time to time upon exercise of the Class A Warrants offered hereby.
Public offering price	$ per unit
Common stock outstanding before this offering[(1)]	88,997,533 shares
Common stock to be outstanding after the offering[(1)]	108,997,533 shares or 123,997,533 shares if the Class A Warrants sold in this offering are exercised in full.
Use of proceeds	We intend to use the net proceeds of this offering to support ongoing Probuphine development and ex-U.S. partnering efforts, for pre-clinical development of other ProNeura technology-based products and for working capital and other general corporate purposes.
Risk factors	See "Risk Factors" beginning on page 5 for a discussion of risks you should consider before purchasing shares of our common stock.
Market symbol and listing	Our common stock is currently quoted on the OTCQB under the symbol "TTNP". We do not intend to list the Class A Warrants on any securities exchange or other trading market and we do not expect that a public trading market will develop for the Class A Warrants. Without an active market, the liquidity of the Class A Warrants will be limited.

(1) The number of shares of our common stock prior to and to be outstanding immediately after this offering as set forth in the table above is based on 88,997,533 shares of our common stock outstanding as of August 25, 2014. The number of shares outstanding as of August 25, 2014 excludes, as of that date:

- 6,670,053 shares issuable upon exercise of outstanding options with a weighted average exercise price of $1.25;
- 5,450,892 shares issuable upon exercise of outstanding warrants with a weighted average exercise price of $1.16 (as a result of this offering, the exercise price of the substantial majority of these warrants will be reduced);
- 358,500 shares subject to unvested restricted stock awards;
- shares of common stock issuable upon the exercise of the Class A Warrants offered hereby; and
- shares of common stock issuable upon the exercise of the underwriter's warrants.

RISK FACTORS

This investment has a high degree of risk. Before you invest you should carefully consider the risks and uncertainties described below and the other information in this prospectus. If any of the following risks actually occur, our business, operating results and financial condition could be harmed and the value of our stock could go down. This means you could lose all or a part of your investment.

Risks Associated with our Business

Further delays in the FDA approval process for Probuphine or termination of the license agreement by Braeburn could materially adversely impact our liquidity and financial condition.

While Braeburn has commenced the clinical study and patient enrollment is underway, we cannot predict the timing of commencement or completion of the study. At June 30, 2014, we had cash of approximately $8.9 million, which we believe is sufficient to fund our planned operations into June 2015. Under our license agreement, as amended, Braeburn currently has the technical right to terminate the agreement. If Braeburn were to exercise this right, we would not have sufficient funds available to us to complete the FDA regulatory process and, in the event of ultimate approval, commercialize Probuphine without raising additional capital. If we are unable to complete a debt or equity offering, or otherwise obtain sufficient financing in such event, our business and prospects would be materially adversely impacted. We cannot assure you that the financing we need will be available on acceptable terms.

FDA approval of Probuphine may be denied.

While Titan and Braeburn have agreed in principal with the FDA on a path forward for Probuphine, which along with other steps includes conducting an additional clinical study for which patient enrollment has commenced, there can be no assurance that the FDA will ultimately approve the NDA. The FDA may deny approval of Probuphine for many reasons, including:

- we may be unable to demonstrate to the satisfaction of the FDA that Probuphine is safe and effective for the treatment of opioid dependence in the targeted patient population;
- the FDA may disagree with our interpretation of data from the clinical trial;
- we may be unable to demonstrate that Probuphine's clinical and other benefits outweigh any safety or other perceived risks; or
- we may not be able to successfully address the other issues raised by the FDA in the CRL.

If Probuphine fails to receive FDA approval, our business and prospects will be materially adversely impacted.

Even if we obtain FDA approval of Probuphine, we may never obtain approval or commercialize our products outside of the United States, which would limit our ability to realize their full market potential.

In order to market Probuphine outside of the United States, we must establish and comply with numerous and varying regulatory requirements of other countries regarding safety and efficacy. Clinical trials conducted in one country may not be accepted by regulatory authorities in other countries, and regulatory approval in one country does not mean that regulatory approval will be obtained in any other country. Approval procedures vary among countries and can involve additional product testing and validation and additional administrative review periods. Seeking foreign regulatory approvals could result in significant delays, difficulties and costs for us and may require additional pre-clinical studies or clinical trials which would be costly and time consuming. Regulatory requirements can vary widely from country to country and could delay or prevent the introduction of our products in those countries. Satisfying these and other regulatory requirements is costly, time consuming, uncertain and subject to unanticipated delays. In addition, our failure to obtain regulatory approval in any country may delay or have negative effects on the process for regulatory approval in other countries. We do not have any product candidates approved for sale in any jurisdiction, including international markets, and we do not have experience in obtaining regulatory approval in international markets. If we fail to comply with regulatory requirements in international markets or to obtain and maintain required approvals, our target market will be reduced and our ability to realize the full market potential of our products will be harmed.

The timing and amount of revenues from Probuphine, if any, will be wholly dependent on the efforts of third parties.

We have granted an exclusive license to Braeburn for the commercialization of Probuphine in the United States and Canada (the "Territory"). If approved by the FDA, Braeburn will be solely responsible for the marketing, manufacture and commercialization of Probuphine in the Territory and, accordingly, the timing and amount of any royalty revenues or sales milestones we receive from this product will be wholly dependent upon Braeburn's ability to successfully launch and commercialize this product in the Territory. Braeburn is a recently formed company and does not have a track record upon which investors can rely on making an investment decision. Additionally, our ability to generate revenues in the Territory from any additional indications for Probuphine, including chronic pain, depends on Braeburn's ability to successfully develop, obtain regulatory approvals for and commercialize the product for additional indications. We do not have control over the amount and timing of resources that Braeburn will dedicate to these efforts, none of which have commenced to date. We will be similarly dependent on the development, regulatory and marketing efforts of third parties with respect to revenues, if any, from sales of Probuphine outside the Territory. To date, we have not entered into any collaborative arrangements or granted any rights with respect to Probuphine in the rest of the world.

Our ProNeura development programs are at very early stages and will require substantial additional resources that may not be available to us.

To date, we have conducted limited research and development activities based on our ProNeura delivery system beyond Probuphine. We will require substantial additional funds to support our research and development activities, and the anticipated costs of preclinical studies and clinical trials, regulatory approvals and eventual commercialization of ProNeura for PD or any therapeutic based on our ProNeura platform technology. If we are unable to generate sufficient revenues from royalties from the sale of Probuphine or other payments under our license agreement with Braeburn, we will need to seek additional sources of financing, which may not be available on favorable terms, if at all. If we do not succeed in raising the requisite financing on acceptable terms, we may be unable to initiate clinical trials or obtain approval of any product candidates from the FDA and other regulatory authorities. In addition, we could be forced to discontinue product development, forego sales and marketing efforts and forego attractive business opportunities.

To the extent we raise additional capital through the sale of equity securities, the issuance of those securities could result in dilution to our shareholders. In addition, if we obtain debt financing, a substantial portion of our operating cash flow may be dedicated to the payment of principal and interest on such indebtedness, thus limiting funds available for our business activities. If adequate funds are not available, we may be required to delay, reduce the scope of or eliminate our research and development programs, reduce our commercialization efforts or curtail our operations. In addition, we may be required to obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to technologies, product candidates or products that we would otherwise seek to develop or commercialize ourselves or license rights to technologies, product candidates or products on terms that are less favorable to us than might otherwise be available.

Our ProNeura program for PD is at a very early stage and we may not be able to successfully develop this product or any other product based on our ProNeura drug delivery technology.

Our ability to successfully develop any future product candidates based on our ProNeura drug delivery technology is subject to the risks of failure and delay inherent in the development of new pharmaceutical products, including: delays in product development, clinical testing, or manufacturing; unplanned expenditures in product development, clinical testing, or manufacturing; failure to receive regulatory approvals; emergence of superior or equivalent products; inability to manufacture on its own, or through any others, product candidates on a commercial scale; and failure to achieve market acceptance.

Because of these risks, our research and development efforts may not result in any commercially viable products. If a significant portion of these development efforts are not successfully completed, required regulatory approvals are not obtained or any approved products are not commercially successfully, our business, financial condition, and results of operations may be materially harmed.

Our development and commercialization strategy for ProNeura for PD depends, in part, upon the FDA's prior findings regarding the safety and efficacy of ropinirole based on data not developed by us, but upon which the FDA may rely in reviewing our NDA.

We are developing ProNeura for PD with the expectation that it will be eligible for approval through the regulatory pathway under Section 505(b)(2) of the FDCA. Section 505(b)(2) of the FDCA allows an NDA to rely in part on data in the public domain or the FDA's prior conclusions regarding the safety and effectiveness of an approved drug product, which could expedite the development program for ProNeura for PD by potentially decreasing the amount of clinical data that would need to be generated in order to obtain FDA approval. 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 product approval. If this were to occur, the time and financial resources required to obtain FDA approval for ProNeura for PD, and complications and risks associated with regulatory approval, would likely substantially increase. Moreover, inability to pursue the Section 505(b)(2) regulatory pathway may result in new competitive products reaching the market more quickly than ProNeura for PD, which would adversely impact our competitive position and prospects. Even if we are able to utilize the Section 505(b)(2) regulatory pathway, there is no guarantee that this regulatory pathway will ultimately lead to accelerated product development or earlier approval for ProNeura for PD. Moreover, notwithstanding the approval of many products by the FDA pursuant to Section 505(b)(2), over the last few years, some pharmaceutical companies and others have objected to the FDA's interpretation of Section 505(b)(2). If the FDA changes its interpretation of Section 505(b)(2), or if the FDA's interpretation is successfully challenged in court, this result could delay or even prevent the FDA from approving any Section 505(b)(2) NDAs that we submit. Such a result could require us to conduct additional testing and costly clinical trials, which could substantially delay or prevent the approval and launch of ProNeura for PD. The FDA may require us to perform additional studies or measurements to support any changes in our product as compared to the approved product. If we utilize Section 505(b)(2), the FDA may approve our new product for all or some of the label indications for which the referenced product has been approved, as well as for any new indication sought by us.

Clinical trials required for new product candidates are expensive and time-consuming, and their outcome is uncertain.

In order to obtain FDA approval to market a new drug product based on our ProNeura drug delivery technology, we must demonstrate proof of safety and effectiveness in humans. To meet these requirements, we must conduct "adequate and well controlled" clinical trials. Conducting clinical trials is a lengthy, time-consuming, and expensive process. The length of time may vary substantially according to the type, complexity, novelty, and intended use of the product candidate, and often can be several years or more per trial. Delays associated with products for which we are directly conducting clinical trials may cause us to incur additional operating expenses. The commencement and rate of completion of clinical trials may be delayed by many factors, including, for example: inability to manufacture sufficient quantities of qualified materials under cGMP, for use in clinical trials; slower than expected rates of patient recruitment; failure to recruit a sufficient number of patients; modification of clinical trial protocols; changes in regulatory requirements for clinical trials; the lack of effectiveness during clinical trials; the emergence of unforeseen safety issues; delays, suspension, or termination of the clinical trials due to the institutional review board responsible for overseeing the study at a particular study site; and government or regulatory delays or "clinical holds" requiring suspension or termination of the trials.

The results from early clinical trials are not necessarily predictive of results obtained in later clinical trials. Accordingly, even if we obtain positive results from early clinical trials, we may not achieve the same success in future clinical trials. Clinical trials may not demonstrate statistically significant safety and effectiveness to obtain the requisite regulatory approvals for product candidates.

The failure of clinical trials to demonstrate safety and effectiveness for the desired indications could harm the development of that product candidate and other product candidates. This failure could cause us to abandon a product candidate and could delay development of other product candidates. Any delay in, or termination of, our clinical trials would delay the filing of our NDAs with the FDA and, ultimately, our ability to commercialize our product candidates and generate product revenues. Any change in, or termination of, our clinical trials could materially harm our business, financial condition, and results of operation.

If Probuphine or any other product candidate that we may successfully develop does not achieve broad market acceptance among physicians, patients, healthcare payors and the medical community, the revenues that it generates from their sales will be limited.

Even if Probuphine or any other product candidate we may in the future develop receives regulatory approval, they may not gain market acceptance among physicians, patients, healthcare payors and the medical community. Coverage and reimbursement of our product candidates by third-party payors, including government payors, generally is also necessary for commercial success. The degree of market acceptance of any approved products will depend on a number of factors, including:

- the efficacy and safety as demonstrated in clinical trials;
- the clinical indications for which the product is approved;
- acceptance by physicians, operators of hospitals and clinics and patients of the product as a safe and effective product;
- the potential and perceived advantages of the product over alternative treatments;
- the safety of the product in broader patient groups, including its use outside of approved indications;
- the cost of treatment in relation to alternative treatments;
- the availability of adequate reimbursement and pricing by third parties and government authorities;
- the prevalence and severity of adverse events;
- the effectiveness of sales and marketing efforts; and
- unfavorable publicity relating to the product.

If any product candidate is approved but does not achieve an adequate level of acceptance by physicians, hospitals and clinics, healthcare payors and patients, we may not generate significant revenue from such products.

We must comply with extensive government regulations.

The research, development, manufacture labeling, storage, record-keeping, advertising, promotion, import, export, marketing and distribution of pharmaceutical products are subject to an extensive regulatory approval process by the FDA in the U.S. and comparable health authorities in foreign markets. The process of obtaining required regulatory approvals for drugs is lengthy, expensive and uncertain. Approval policies or regulations may change and the FDA and foreign authorities have substantial discretion in the pharmaceutical approval process, including the ability to delay, limit or deny approval of a product candidate for many reasons. Despite the time and expense invested in clinical development of product candidates, regulatory approval is never guaranteed. Regulatory approval may entail limitations on the indicated usage of a drug, which may reduce the drug's market potential. Even if regulatory clearance is obtained, post-market evaluation of the products, if required, could result in restrictions on a product's marketing or withdrawal of the product from the market, as well as possible civil and criminal sanctions. Of the large number of drugs in development, only a small percentage successfully complete the regulatory approval process and are commercialized.

We are dependent upon key collaborative relationships and license agreements.

We will rely significantly on the resources of third parties to market and commercialize Probuphine, if approved, as well as any other products we may develop. For example, our ability to ultimately derive revenues from Probuphine in the United States and Canada is dependent upon Braeburn implementing a successful marketing program for the treatment of opioid dependence in adults and pursuing development and commercialization of the product for other indications. Beyond any contractual rights, we cannot control the amount or timing of resources that any existing or future corporate partner devotes to product development and commercialization efforts for our product candidates. We depend on our ability to maintain existing collaborative relationships, to develop new collaborative relationships with third parties and potentially to acquire or in-license additional products and technologies for the development of new product candidates.

Our dependence on third party collaborators and license agreements subjects us to a number of risks, including:

- our collaborators may not comply with applicable regulatory guidelines with respect to developing or commercializing our products, which could adversely impact sales or future development of our products;
- we and our collaborators could disagree as to future development plans and our collaborators may delay, fail to commence or stop future clinical trials or other development; and
- there may be disputes between us and our collaborators, including disagreements regarding the license agreements, that may result in the delay of or failure to achieve developmental, regulatory and commercial objectives that would result in milestone or royalty payments and/or the delay or termination of any future development or commercialization of our products.

In addition, collaborators may, to the extent permitted by our agreements, develop products that divert resources from our products, preclude us from entering into collaborations with their competitors or terminate their agreements with us prematurely. Moreover, disagreements could arise with our collaborators or strategic partners over rights to our intellectual property and our rights to share in any of the future revenues from products or technologies resulting from use of our technologies, or our activities in separate fields may conflict with other business plans of our collaborators.

We face risks associated with third parties conducting preclinical studies and clinical trials of our products; as well as our dependence on third parties to manufacture any products that we may successfully develop.

We depend on third-party laboratories and medical institutions to conduct preclinical studies and clinical trials for our products and other third-party organizations to perform data collection and analysis, all of which must maintain both good laboratory and good clinical practices. We also depend upon third party manufacturers for the production of any products we may successfully develop to comply with current Good Manufacturing Practices of the FDA, which are similarly outside our direct control. If third party laboratories and medical institutions conducting studies of our products fail to maintain both good laboratory and clinical practices, the studies could be delayed or have to be repeated. Similarly, if the manufacturers of any products we develop in the future fail to comply with current Good Manufacturing Practices of the FDA, we may be forced to cease manufacturing such product until we have found another third party to manufacture the product.

We face risks associated with product liability lawsuits that could be brought against us.

The testing, manufacturing, marketing and sale of human therapeutic products entail an inherent risk of product liability claims. We currently have a limited amount of product liability insurance, which may not be sufficient to cover claims that may be made against us in the event that the use or misuse of our product candidates causes, or merely appears to have caused, personal injury or death. In the event we are forced to expend significant funds on defending product liability actions, and in the event those funds come from operating capital, we will be required to reduce our business activities, which could lead to significant losses. Adequate insurance coverage may not be available in the future on acceptable terms, if at all. If available, we may not be able to maintain any such insurance at sufficient levels of coverage and any such insurance may not provide adequate protection against potential liabilities. Whether or not a product liability insurance policy is obtained or maintained in the future, any claims against us, regardless of their merit, could severely harm our financial condition, strain our management and other resources or destroy the prospects for commercialization of the product which is the subject of any such claim.

We may be unable to protect our patents and proprietary rights.

Our future success will depend to a significant extent on our ability to:

- obtain and keep patent protection for our products and technologies on an international basis;
- enforce our patents to prevent others from using our inventions;
- maintain and prevent others from using our trade secrets; and
- operate and commercialize products without infringing on the patents or proprietary rights of others.

We cannot assure you that our patent rights will afford any competitive advantages, and these rights may be challenged or circumvented by third parties. Further, patents may not be issued on any of our pending patent applications in the U.S. or abroad. Because of the extensive time required for development, testing and regulatory review of a potential product, it is possible that before a potential product can be commercialized, any related patent may expire or remain in existence for only a short period following commercialization, reducing or eliminating any advantage of the patent. If we sue others for infringing our patents, a court may determine that such patents are invalid or unenforceable. Even if the validity of our patent rights is upheld by a court, a court may not prevent the alleged infringement of our patent rights on the grounds that such activity is not covered by our patent claims.

In addition, third parties may sue us for infringing their patents. In the event of a successful claim of infringement against us, we may be required to:

- pay substantial damages;
- stop using our technologies and methods;
- stop certain research and development efforts;
- develop non-infringing products or methods; and
- obtain one or more licenses from third parties.

If required, we cannot assure you that we will be able to obtain such licenses on acceptable terms, or at all. If we are sued for infringement, we could encounter substantial delays in development, manufacture and commercialization of our product candidates. Any litigation, whether to enforce our patent rights or to defend against allegations that we infringe third party rights, will be costly, time consuming, and may distract management from other important tasks.

We also rely in our business on trade secrets, know-how and other proprietary information. We seek to protect this information, in part, through the use of confidentiality agreements with employees, consultants, advisors and others. Nonetheless, we cannot assure you that those agreements will provide adequate protection for our trade secrets, know-how or other proprietary information and prevent their unauthorized use or disclosure. To the extent that consultants, key employees or other third parties apply technological information independently developed by them or by others to our proposed products, disputes may arise as to the proprietary rights to such information, which may not be resolved in our favor.

We face intense competition.

Competition in the pharmaceutical and biotechnology industries is intense. We face, and will continue to face, competition from numerous companies that currently market, or are developing, products for the treatment of the diseases and disorders we have targeted. Many of these entities have significantly greater research and development capabilities, experience in obtaining regulatory approvals and manufacturing, marketing, financial and managerial resources than we have. We also compete with universities and other research institutions in the development of products, technologies and processes, as well as the recruitment of highly qualified personnel. Our competitors may succeed in developing technologies or products that are more effective than the ones we have under development or that render our proposed products or technologies noncompetitive or obsolete. In addition, our competitors may achieve product commercialization or patent protection earlier than we will.

Healthcare reform and restrictions on reimbursements may limit our financial returns.

Braeburn's ability to commercialize Probuphine in the Territory and our ability or the ability of any future collaborators to commercialize Probuphine outside the Territory or to commercialize any other products we may successfully develop will depend in part on the extent to which government health administration authorities, private health insurers and other organizations will reimburse consumers for the cost of these products. These third parties are increasingly challenging both the need for and the price of new drug products. Significant uncertainty exists as to the reimbursement status of newly approved therapeutics. Adequate third party reimbursement may not be available for our own or our collaborator's drug products to

enable us or them to maintain price levels sufficient to realize an appropriate return on their and our investments in research and product development.

Health care reform measures and changes in policies, funding, staffing and leadership at the FDA and other agencies could hinder or prevent the commercial success of our products.

In the United States, there have been a number of legislative and regulatory changes to the healthcare system in ways that could affect our future results of operations and the future results of operations of our potential customers. For example, the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 established a new Part D prescription drug benefit, which became effective January 1, 2006. Under the prescription drug benefit, Medicare beneficiaries can obtain prescription drug coverage from private sector plans that are permitted to limit the number of prescription drugs that are covered in each therapeutic category and class on their formularies. If our products are not widely included on the formularies of these plans, our ability to market our products may be adversely affected.

Furthermore, there have been and continue to be a number of initiatives at the federal and state levels that seek to reduce healthcare costs. In March 2010, President Obama signed into law the Patient Protection and Affordable Health Care Act of 2010, as amended by the Health Care and Education Affordability Reconciliation Act of 2010 (jointly, the "PPACA"), which includes measures to significantly change the way health care is financed by both governmental and private insurers. Among the provisions of the PPACA of importance to the pharmaceutical industry are the following:

- an annual, nondeductible fee on any entity that manufactures or imports certain branded prescription drugs and biologic agents, apportioned among these entities according to their market share in certain government healthcare programs;
- an increase in the statutory minimum rebates a manufacturer must pay under the Medicaid Drug Rebate Program, retroactive to January 1, 2010, to 23% and 13% of the average manufacturer price for most branded and generic drugs, respectively;
- a new Medicare Part D coverage gap discount program, in which manufacturers must agree to offer 50% point-of-sale discounts off negotiated prices of applicable brand drugs to eligible beneficiaries during their coverage gap period, as a condition for the manufacturer's outpatient drugs to be covered under Medicare Part D;
- extension of manufacturers' Medicaid rebate liability to covered drugs dispensed to individuals who are enrolled in Medicaid managed care organizations;
- expansion of 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 certain individuals with income at or below 133% of the Federal Poverty Level, thereby potentially increasing both the volume of sales and manufacturers' Medicaid rebate liability;
- expansion of the entities eligible for discounts under the Public Health Service pharmaceutical pricing program;
- new requirements to report certain financial arrangements with physicians and teaching hospitals, as defined in the PPACA and its implementing regulations, including reporting any "transfer of value" made or distributed to teaching hospitals, prescribers, and other healthcare providers and reporting any ownership and investment interests held by physicians and their immediate family members and applicable group purchasing organizations during the preceding calendar year, with data collection required and reporting to the Centers for Medicare & Medicaid Services (the "CMS") required by the 90th day of each calendar year;
- a new requirement to annually report drug samples that manufacturers and distributors provide to physicians;
- expansion of health care fraud and abuse laws, including the False Claims Act and the Anti-Kickback Statute, new government investigative powers, and enhanced penalties for noncompliance;

- a licensure framework for follow-on biologic products;
- a new Patient-Centered Outcomes Research Institute to oversee, identify priorities in, and conduct comparative clinical effectiveness research, along with funding for such research;
- creation of the Independent Payment Advisory Board which, beginning in 2014, will have authority to recommend certain changes to the Medicare program that could result in reduced payments for prescription drugs and those recommendations could have the effect of law even if Congress does not act on the recommendations; and
- establishment of a Center for Medicare Innovation at the CMS to test innovative payment and service delivery models to lower Medicare and Medicaid spending, potentially including prescription drug spending.

In addition, other legislative changes have been proposed and adopted since the PPACA was enacted. On August 2, 2011, the Budget Control Act of 2011, among other things, created measures for spending reductions by Congress. This includes aggregate reductions to Medicare payments to providers of up to 2% per fiscal year. On January 2, 2013, President Obama signed into law the American Taxpayer Relief Act of 2012 (the "ATRA"), which, among other things, reduced Medicare payments to several providers, including hospitals, imaging centers 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 laws may result in additional reductions in Medicare and other health care funding, which could have a material adverse effect on our customers and accordingly, our financial operations.

Additionally, individual states have become increasingly aggressive in passing legislation and implementing regulations designed to control pharmaceutical product pricing, including price or patient reimbursement constraints, discounts, restrictions on certain product access, and marketing cost disclosure and transparency measures, and designed to encourage importation from other countries and bulk purchasing. Legally-mandated price controls on payment amounts by third-party payors or other restrictions could harm our business, results of operations, financial condition and prospects.

In addition, regional healthcare authorities and individual hospitals are increasingly using bidding procedures to determine what pharmaceutical products and which suppliers will be included in their prescription drug and other healthcare programs. This can reduce demand for our products or put pressure on our product pricing, which could negatively affect our business, results of operations, financial condition and prospects.

Additionally, given recent federal and state government initiatives directed at lowering the total cost of healthcare, Congress and state legislatures will likely continue to focus on healthcare reform, the cost of prescription drugs and the reform of the Medicare and Medicaid programs. While we cannot predict the full outcome of any such legislation, it may result in decreased reimbursement for prescription drugs, which may further exacerbate industry-wide pressure to reduce prescription drug prices. This could harm our ability to market our products and generate revenues. In addition, legislation has been introduced in Congress that, if enacted, would permit more widespread importation or re-importation of pharmaceutical products from foreign countries into the United States, including from countries where the products are sold at lower prices than in the United States. Such legislation, or similar regulatory changes, could lead to a decision to decrease our prices to better compete, which, in turn, could adversely affect our business, results of operations, financial condition and prospects. It is also possible that other legislative proposals having similar effects will be adopted.

Furthermore, regulatory authorities' assessment of the data and results required to demonstrate safety and efficacy can change over time and can be affected by many factors, such as the emergence of new information, including on other products, changing policies and agency funding, staffing and leadership. We cannot be sure whether future changes to the regulatory environment will be favorable or unfavorable to our business prospects.

We may not be able to retain our key management and scientific personnel, and a loss of certain key personnel could significantly hinder our ability to move forward with our business plan.

As a company with a limited number of personnel, we are highly dependent on the services of our executive management and scientific staff, in particular Sunil Bhonsle and Marc Rubin, our President and Executive Chairman, respectively, and Katherine Glassman-Beebe our Executive Vice President and Chief Development Officer. The loss of one or more of such individuals could substantially impair ongoing research and development programs and could hinder our ability to obtain corporate partners. Our success depends in large part upon our ability to attract and retain highly qualified personnel. We compete in our hiring efforts with other pharmaceutical and biotechnology companies, as well as universities and nonprofit research organizations, and we may not be successful in our efforts to attract and retain personnel.

Our net operating losses and research and development tax credits may not be available to reduce future federal and state income tax payments.

At December 31, 2013, we had federal net operating loss and tax credit carryforwards of $225.6 million and $8.2 million, respectively, and state net operating loss and tax credit carryforwards of $157.7 million and $8.0 million, respectively, available to offset future taxable income, if any. Current federal and state tax laws include substantial restrictions on the utilization of net operating loss and tax credits in the event of an ownership change and we cannot assure you that our net operating loss and tax carryforwards will continue to be available.

Risks Associated with our Capital Stock

Following this offering, we will have a limited number of authorized shares of common stock available for issuance and will need to seek stockholder approval to amend our charter to either effect an increase in our authorized shares of common stock or a reverse split.

Immediately following this offering, we will have only authorized but unissued shares of our common stock. We will not have a sufficient number of authorized shares to permit exercise of the Class A Warrants. Furthermore, we will need to continue to seek additional financing in order to fund our product development programs until such time, if ever, as the Probuphine NDA is approved by the FDA and royalty and milestone payments are sufficient to fund our operations. We have agreed to seek stockholder approval of an amendment to our certificate of incorporation to effect either an increase the number of authorized shares of common stock or a reverse split, in either case in an amount sufficient to permit the exercise in full of the Class A Warrants. An increase in the authorized number of shares of common stock and the subsequent issuance of such shares could have the effect of delaying or preventing a change in control of our company without further action by our stockholders. Shares of authorized and unissued common stock could, within the limits imposed by applicable law, be issued in one or more transactions which would make a change in control of our company more difficult, and therefore less likely. Furthermore, there are risks associated with effecting a reverse split, including a decline in the market price of our common stock and the possibility of certain shareholders owning “odd lots” of less than 100 shares, which may be more difficult to sell, or require greater transaction costs per share to sell, than shares in “round lots” of even multiples of 100 shares. In addition, because holders of our common stock have no preemptive rights to purchase or subscribe for any unissued stock of our company, the availability of a greater number of authorized shares, whether as a result of a reverse split or an increase in the authorized number, could result in additional dilution to existing shareholders and investors in this offering.

Our stock price has been and will likely continue to be volatile.

Our stock price has experienced substantial fluctuations and could continue to fluctuate significantly due to a number of factors, including:

- variations in our anticipated or actual operating results or prospects;
- sales of substantial amounts of our common stock;
- announcements about us or about our competitors, including introductions of new products;
- litigation and other developments relating to our patents or other proprietary rights or those of our competitors;

- conditions in the pharmaceutical or biotechnology industries;
- governmental regulation and legislation; and
- change in securities analysts' estimates of our performance, or our failure to meet analysts' expectations.

Our common stock is not listed on a national securities exchange and we may not be able to obtain an uplisting to a national exchange in the foreseeable future, if ever.

Our common stock is currently listed on the OTCBB. Trading on the OTC Market is characterized by wide fluctuations in bid and asked prices and periods of inactive or limited trading. We expect to commence efforts to seek an uplisting to the Nasdaq Stock Market or another national securities exchange following completion of this offering; however, we do not know whether we will be able to meet the initial listing criteria to enable us to obtain an uplisting of our common stock in the foreseeable future, if ever.

Our common stock is deemed to be a "penny stock," which may make it more difficult for investors to sell their shares due to suitability requirements.

Our common stock is subject to Rule 15g-1 through 15g-9 under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), which imposes certain sales practice requirements on broker-dealers which sell our common stock to persons other than established customers and "accredited investors" (generally, individuals with a net worth in excess of $1,000,000 or annual incomes exceeding $200,000 (or $300,000 together with their spouses)). For transactions covered by this rule, a broker-dealer must make a special suitability determination for the purchaser and have received the purchaser's written consent to the transaction prior to the sale. This rule adversely affects the ability of broker-dealers to sell our common stock and the ability of our stockholders to sell their shares of common stock.

Additionally, our common stock is subject to the SEC regulations for "penny stock." Penny stock includes any equity security that is not listed on a national exchange and has a market price of less than $5.00 per share, subject to certain exceptions. The regulations require that prior to any non-exempt buy/sell transaction in a penny stock, a disclosure schedule set forth by the SEC relating to the penny stock market must be delivered to the purchaser of such penny stock. This disclosure must include the amount of commissions payable to both the broker-dealer and the registered representative and current price quotations for the common stock. The regulations also require that monthly statements be sent to holders of penny stock that disclose recent price information for the penny stock and information of the limited market for penny stocks. These requirements adversely affect the market liquidity of our common stock.

We have never paid and do not intend to pay cash dividends. As a result, capital appreciation, if any, will be your sole source of gain.

We have never paid cash dividends on any of our capital stock and we currently intend to retain future earnings, if any, to fund the development and growth of our business. In addition, the terms of existing and 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.

Provisions in our certificate of incorporation, our by-laws and Delaware law might discourage, delay or prevent a change in control of our company or changes in our management and, therefore, depress the trading price of our common stock.

Provisions of our certificate of incorporation, our by-laws and Delaware law may have the effect of deterring unsolicited takeovers or delaying or preventing a change in control of our company or changes in our management, including transactions in which our stockholders might otherwise receive a premium for their shares over then current market prices. In addition, these provisions may limit the ability of stockholders to approve transactions that they may deem to be in their best interests. These provisions include:

- the inability of stockholders to call special meetings; and
- the ability of our Board of Directors to designate the terms of and issue new series of preferred stock without stockholder approval, which could include the right to approve an acquisition or other

change in our control or could be used to institute a rights plan, also known as a poison pill, that would work to dilute the stock ownership of a potential hostile acquirer, likely preventing acquisitions that have not been approved by our Board of Directors.

In addition, Section 203 of the Delaware General Corporation Law prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder, generally a person which together with its affiliates owns, or within the last three years, has owned 15% of our voting stock, for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is approved in a prescribed manner.

The existence of the forgoing provisions and anti-takeover measures could limit the price that investors might be willing to pay in the future for shares of our common stock. They could also deter potential acquirers of our company, thereby reducing the likelihood that you could receive a premium for your common stock in an acquisition.

Price adjustment provisions in our outstanding warrants will be triggered by this offering.

As of August 25, 2014, we had outstanding warrants to purchase 5,408,638 shares that provide for a reduction in the exercise price per share if we issue or are deemed to issue additional shares of our common stock at an effective per share price lower than their current exercise price, subject to certain exceptions. The exercise price will adjust on a weighted average basis that takes into account the relative size of the issuance resulting in the price adjustment. As a result of this offering, the exercise price of such warrants will be reduced, reducing the proceeds, if any, that we will receive upon exercise and potentially resulting in addition dilution to investors in this offering.

Risks Associated with the Offering

You will be unable to exercise the Class A Warrants and they may have no value under certain circumstances.

We will not have authorized shares available to permit exercise of the Class A Warrants and such warrants will not be exercisable if we do not obtain stockholder approval to either increase the number of authorized shares of common stock or effect a reverse stock split, in either case in an amount sufficient to permit exercise in full of the Class A Warrants. The Class A Warrants will not be exercisable if we are unable to obtain such approval, in which event such warrants will have no value. Even if we obtain stockholder approval, the Class A Warrants may only be exercised if such exercise is separately registered under the Securities Act or an exemption therefrom exists. If we are unable to register the shares issuable upon exercise of the Class A Warrants and an exemption therefrom is not available, the Class A Warrants will not be exercisable. In no event may the Class A Warrants be net cash settled.

We are required to hold a stockholders' meeting no later than March 31, 2015 to vote on a proposal to effect a reverse stock split or increase in our authorized common stock, and if we fail to obtain such approval on a timely basis, we are required to pay $2,500,000 in liquidated damages. The Class A Warrants will not be exercisable if we are unable to obtain such approval.

We have agreed to hold a stockholders' meeting no later than March 31, 2015 to seek stockholder approval to effect a reverse stock split or for an increase in the authorized shares of our common stock. If we are unable to obtain the required stockholder approval by October , 2015, we will be required to pay liquidated damages of $2,500,000, which could have a negative effect on our business and harm the market price of our common stock. In such event, the Class A Warrants will not be exercisable and will have no value.

Our management will have broad discretion in the use of the net proceeds of this offering and may not use them effectively.

We intend to use the net proceeds from this offering for general corporate purposes and to continue non-clinical and clinical development of our product candidates. However, our management will have broad discretion in the application of the net proceeds from this offering and could spend the proceeds in ways that do not improve our results of operations or enhance the value of our common stock. The failure by

management to apply these funds effectively could result in financial losses that could have a material adverse effect on our business, cause the price of our common stock to decline and delay the development of our product candidates. Pending their use, we may invest the net proceeds from this offering in a manner that does not produce income or that loses value.

You will experience immediate and substantial dilution in the net tangible book value per share of the common stock you purchase.

Because the public offering price per share of our common stock is substantially higher than the net tangible book value per share of our common stock, you will suffer substantial dilution in the net tangible book value of the common stock you purchase in this offering. After giving effect to the issuance and sale by us of the 20,000,000 units offered hereby at an assumed public offering price of $0.50 per unit, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, and attributing no value to the Class A Warrants, if you purchase units in this offering, you will suffer immediate and substantial dilution of approximately $0.38 per share in the net tangible book value of the common stock you acquire. In the event that you exercise your Class A Warrants, you will experience additional dilution to the extent that the exercise price of those warrants is higher than the book value per share of our common stock. See "Dilution" below for a more detailed discussion of the dilution you will incur if you purchase securities in this offering.

The exercise of outstanding options and warrants to acquire shares of our common stock would cause additional dilution which could cause the price of our common stock to decline.

In the past, we have issued options and warrants to acquire shares of our common stock. At August 25, 2014, there were 5,450,892 warrants, and 6,594,726 vested and 75,327 non-vested stock options outstanding, and we may issue additional options, warrants and other types of equity in the future as part of stock-based compensation, capital raising transactions, technology licenses, financings, strategic licenses or other strategic transactions. To the extent these options and warrants are ultimately exercised, existing holders of our common stock would experience additional dilution which may cause the price of our common stock to decline.

There is no public market for the Class A Warrants being sold in this offering.

There is no established public trading market for the Class A Warrants being offered in this offering, and we do not expect a market to develop. We do not intend to apply for listing of the Class A Warrants on any securities exchange or other trading market. Without an active market, the liquidity of the Class A Warrants will be limited.

Because our common stock is not listed on a national securities exchange, U.S. holders of Class A Warrants may not be able to exercise their warrants without compliance with applicable state securities laws and the value of your Class A Warrants may be significantly reduced.

Because our common stock is not listed on a national securities exchange, the exercise of the Class A Warrants by U.S. holders may not be exempt from state securities laws. As a result, depending on the state of residence of a holder of the Class A Warrants, a U.S. holder may not be able to exercise its Class A Warrants unless we comply with any state securities law requirements necessary to permit such exercise or an exemption applies. Although we plan to use our reasonable efforts to assure that U.S. holders will be able to exercise their Class A Warrants under applicable state securities laws if no exemption exists, there is no assurance that we will be able to do so. As a result, your ability to exercise your Class A Warrants may be limited. The value of the Class A Warrants may be significantly reduced if U.S. holders are not able to exercise their Class A Warrants under applicable state securities laws.

Holders of our Class A Warrants will have no rights as a common stockholder until they acquire our common stock.

Until you acquire shares of our common stock upon exercise of your Class A Warrants, you will have no rights with respect to our common stock. Upon exercise of your Class A warrants, you will be entitled to exercise the rights of a common stockholder only as to matters for which the record date occurs after the exercise date.

A large number of shares issued in this offering may be sold in the market following this offering, which may depress the market price of our common stock.

A large number of shares issued in this offering may be sold in the market following this offering, which may depress the market price of our common stock. Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. If there are more shares of common stock offered for sale than buyers are willing to purchase, then the market price of our common stock may decline to a market price at which buyers are willing to purchase the offered shares of common stock and sellers remain willing to sell the shares. All of the securities issued in the offering will be freely tradable without restriction or further registration under the Securities Act.

The Class A Warrants may not have any value.

The Class A Warrants will have an exercise price per share equal to 110% of the closing price of our common stock on the date of pricing and will expire on the fifth anniversary of the date they first become exercisable. In the event our common stock price does not exceed the exercise price of the Class A Warrants during the period when the Class A Warrants are exercisable, the Class A Warrants may not have any value.

MARKET FOR COMMON EQUITY AND RELATED SHAREHOLDER MATTERS

Our common stock is traded in the over-the-counter market and has been quoted through the Over-The-Counter Bulletin Board under the symbol "TTNP" since June 2010. The following table sets forth, for the periods indicated, the high and low sale prices for our common stock as reported by the OTCBB. Quotations on the OTCBB reflect inter-dealer prices, without retail mark-up, mark-down or commissions, and may not represent actual transactions.

	High	Low
Fiscal 2014		
Third Quarter (through September 29, 2014)	$ 0.87	$ 0.52
Second Quarter	$ 0.86	$ 0.55
First Quarter	$ 0.84	$ 0.60
Fiscal 2013		
Fourth Quarter	$ 1.17	$ 0.58
Third Quarter	$ 0.70	$ 0.46
Second Quarter	$ 1.95	$ 0.43
First Quarter	$ 2.48	$ 1.19
Fiscal 2012		
Fourth Quarter	$ 1.23	$ 0.76
Third Quarter	$ 1.05	$ 0.65
Second Quarter	$ 1.13	$ 0.65
First Quarter	$ 1.40	$ 1.05

Holders

At September 29, 2014, there were 88,997,533 shares of our common stock outstanding held by 144 holders of record. The number of record holders was determined from the records of our transfer agent and does not include beneficial owners of common stock whose shares are held in the names of various security brokers, dealers, and registered clearing agencies.

Dividends

We have never declared or paid any cash dividends on our common stock and we do not anticipate paying any cash dividends to shareholders in the foreseeable future. Any future determination to pay cash dividends will be at the discretion of the Board of Directors and will be dependent upon our financial condition, results of operations, capital requirements, and such other factors as the Board of Directors deem relevant.

Equity Compensation Plan Information

The following table sets forth aggregate information regarding our equity compensation plans in effect as of December 31, 2013:

Plan category	Number of securities to be issued upon exercise of outstanding options, warrant and rights (a)	Weighted-average exercise price of outstanding options, warrants and rights (b)	Number of securities remaining available for future issuance under equity compensation plans (c)
Equity compensation plans approved by security holders	4,170,153	$ 1.31	—
Equity compensation plans not approved by security holders[(1)(2)(3)]	2,562,000	$ 1.32	—
Total	6,732,153	$ 1.31	—

(1) In August 2002, we amended our 2001 Employee Non-Qualified Stock Option Plan. Pursuant to this amendment, a total of 1,750,000 shares of common stock were reserved and authorized for issuance for option grants to employees and consultants who are not officers or directors of Titan. At December 31, 2013, 1,199,500 of these non-qualified stock options remained outstanding.

(2) In October 2007, we granted 1,500,000 non-qualified stock options outside of our stock option plans to our Chief Executive Officer, at an exercise price of $2.40, vesting equally over 48 months from the date of grant. At December 31, 2013, 437,500 of these non-qualified stock options remained outstanding.

(3) In May 2009, we granted 615,000 and 310,000 non-qualified stock options outside of our stock option plans to our Executive Chairman and President, respectively, at an exercise price of $0.79, vesting equally over 48 months from the date of grant.

USE OF PROCEEDS

We estimate that the net proceeds from the sale of the units we are offering will be approximately $9,145,000, assuming the issuance and sale by us of 20,000,000 units at an assumed public offering price of $0.50 per unit after deducting the estimated underwriting discounts and commissions and estimated offering expenses payable by us. This amount does not include any proceeds we may receive upon the exercise of any Class A Warrants. We cannot predict when or if the Class A Warrants will be exercised, and it is possible that the Class A Warrants may expire and never be exercised.

A $0.05 increase (decrease) in the assumed offering price of $0.50 per unit would increase (decrease) the expected net cash proceeds of the offering to us by approximately $940,000. A 300,000 increase (decrease) in the assumed number of units sold in this offering would increase (decrease) the expected net cash proceeds of the offering to us by approximately $141,000.

We intend to use the proceeds of this offering to support Probuphine development and ex-U.S. partnering efforts, to advance the ProNeura for PD product development program, to evaluate other ProNeura technology based product opportunities and for working capital and other general corporate purposes.

Until we use the net proceeds of the offering, we will invest the funds in short-term, investment grade, interest-bearing securities, or in savings accounts.

DILUTION

If you purchase any of the units offered by this prospectus, you will experience dilution to the extent of the difference between the offering price per unit you pay in this offering and the net tangible book value per share of our common stock immediately after this offering, assuming no value is attributed to the Class A Warrants included in the units. Our net tangible book value as of June 30, 2014 was approximately $3.5 million, or approximately $0.04 per share of common stock. Net tangible book value per share is equal to our total tangible assets minus total liabilities, divided by the number of shares of common stock outstanding.

After giving effect to the assumed issuance and sale by us of 20,000,000 units in this offering at an assumed public offering price of $0.50 per unit, assuming no value is attributed to the Class A Warrants included in the units, and after deducting estimated underwriting discounts and commissions and estimated offering expenses payable by us, our as adjusted net tangible book value as of June 30, 2014 would have been approximately $12.6 million, or approximately $0.12 per share of common stock. This represents an immediate increase in net tangible book value of approximately $0.08 per share to existing stockholders and an immediate dilution of approximately $0.38 per share to new investors. The following table illustrates this per share dilution:

Assumed public offering price per unit		$0.50
Net tangible book value per share as of June 30, 2014	$ 0.04	
Increase per share attributable to new investors	0.08	
As adjusted net tangible book value per share after this offering		0.12
Dilution per share to new investors		$0.38

Investors that acquire additional shares of common stock through the exercise of the Class A Warrants offered hereby may experience additional dilution depending on our net tangible book value at the time of exercise.

A $0.05 increase (decrease) in the assumed public offering price of $0.50 per unit would increase (decrease) our as adjusted net tangible book value by approximately $940,000 and dilution per share to new investors by approximately $0.04, assuming that the number of units offered by us, remains the same. A 300,000 increase (decrease) in the number of units offered by us would increase (decrease) our as adjusted net tangible book value per share by approximately $0.001 and dilution per share to new investors by approximately $0.001.

The number of shares of our common stock reflected in the discussion and the table above is based on 88,997,533 shares of our common stock outstanding as of June 30, 2014 and excludes, as of that date:

- 6,670,053 shares issuable upon exercise of outstanding options with a weighted average exercise price of $1.25;
- 5,450,892 shares issuable upon exercise of outstanding warrants with an exercise price of $1.16;
- 358,500 shares subject to unvested restricted stock awards;
- shares of common stock issuable upon the exercise of the Class A Warrants offered hereby; and
- shares of common stock issuable upon the exercise of the underwriter’s warrants.

SELECTED FINANCIAL INFORMATION

The selected financial information presented below summarizes certain financial data which has been derived from and should be read in conjunction with our financial statements and notes that are incorporated by reference into this prospectus and with "Management's Discussion and Analysis of Financial Condition and Results of Operations."

	Six months Ended June 30,		Years Ended December 31,	
	2014	2013	2013	2012
	(in thousands, except per share data)			
Statement of Operations Data:				
Total revenue	$ 1,823	$ 7,372	$ 10,481	$ 7,117
Operating expenses:				
Research and development	1,698	5,701	8,309	10,610
General and administrative	1,609	1,792	3,063	4,877
Other income (expense), net	(1,162)	11,186	10,602	(6,810)
Net income (loss)	$ (2,646)	$ 11,065	$ 9,711	$ (15,180)
Basic net income (loss) per common share	$ (0.03)	$ 0.14	$ 0.12	$ (0.23)
Diluted net income (loss) per common share	$ (0.03)	$ 0.10	$ 0.10	$ (0.23)
Shares used in computing:				
Basic net income (loss) per common share	88,964	80,403	82,099	66,509
Diluted net income (loss) per common share	88,964	86,271	82,659	66,509

	As of June 30,		As of December 31,	
	2014	2013	2013	2012
Balance Sheet Data:				
Cash	$ 8,853	$ 11,176	$ 11,798	$ 18,102
Working capital	4,991	1,705	5,974	2,042
Total assets	14,249	16,908	18,423	24,827
Total stockholders' equity (deficit)	3,463	2,146	5,760	(23,128)

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

You should read this discussion together with the consolidated financial statements and other consolidated financial information included in this prospectus.

Overview

We are a specialty pharmaceutical company developing proprietary therapeutics for the treatment of serious medical disorders. Our product development programs utilize our proprietary long-term drug delivery platform, ProNeura®, and focus primarily on innovative treatments for select chronic diseases for which steady state delivery of a drug provides an efficacy and/or safety benefit.

Our principal asset is Probuphine®, our first product candidate to utilize ProNeura. Probuphine is in development for the long term maintenance treatment of opioid dependence. It is designed to maintain a stable, around the clock blood level of the medicine in patients for six months following a single treatment. Upon completion of the Phase 3 clinical studies of Probuphine, we participated in a pre-NDA meeting with the FDA, and subsequently prepared and submitted the New Drug Application to the FDA in October 2012. On April 30, 2013, the FDA issued a complete response letter to our NDA stating that it cannot approve the NDA in its present form and outlining the FDA's request for additional clinical data demonstrating adequate clinical benefit to patients from this treatment, data from human factors testing of the training program for insertion and removal of the implants, as well as recommendations regarding product labeling, Risk Evaluation and Mitigation Strategy ("REMS") and non-clinical safety data.

Our efforts since receipt of the CRL have focused on working with Braeburn, a team of expert clinical and regulatory advisors and the FDA to establish a path forward for potential resubmission of the NDA with the additional information requested by the FDA. Following a meeting with the FDA on November 19, 2013 and subsequent communications, the FDA has provided guidance on a path forward, which along with other steps includes conducting an additional clinical study. This study, which is being funded and managed by Braeburn, is a randomized, double blind, double dummy design that is expected to enroll approximately 180 patients into two parallel treatment arms. The study population is clinically stable patients who are receiving maintenance treatment with an approved sublingual formulation containing buprenorphine at a daily dose of 8mg or less. Patients will be randomized to receive either four Probuphine implants, or to continue the daily sublingual buprenorphine therapy. The patients are expected to be treated for six months, and the primary analysis will be a non-inferiority comparison of responders in the two arms. Patient enrollment in this 180 patient clinical study began in July 2014 and study completion is anticipated by the middle of 2015 followed by resubmission of the NDA later in the year.

Pursuant to the license agreement with Braeburn, as amended to date, we are entitled to receive a $15 million milestone payment upon FDA approval of the Probuphine NDA and royalty percentages on net sales of Probuphine ranging from the mid-teens to the low twenties. The agreement also provides for up to $165 million in sales milestones and $35 million in regulatory milestones and entitles us to royalty rates in the low single digit on sales by Braeburn, if any, of other future products in the addiction market.

Probuphine is the first product candidate to utilize ProNeura, our novel, proprietary, continuous drug delivery technology. We believe that our ProNeura technology has the potential to be used in the treatment of other chronic conditions, such as Parkinson's disease (PD), where maintaining stable, around the clock blood levels of a dopamine agonist may benefit the patient and improve medical outcomes. We have commenced initial work on an implant formulation with ropinirole, a dopamine agonist approved for the treatment of PD. We are also currently evaluating drugs and disease settings for opportunities to develop this drug delivery technology for other potential treatment applications in situations where conventional treatment is limited by variability in blood drug levels and poor patient compliance. We operate in only one business segment, the development of pharmaceutical products.

Critical Accounting Policies and Use of Estimates

The preparation of our financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in our financial statements and accompanying notes. Actual results could differ materially from those estimates. We believe the following accounting policies for the years ended December 31, 2013 and 2012 to be applicable:

Revenue Recognition

We generate revenue principally from royalty payments, collaborative research and development arrangements, technology licenses, and government grants. Consideration received for revenue arrangements with multiple components is allocated among the separate units of accounting based on their respective selling prices. The selling price for each unit is based on vendor-specific objective evidence, or VSOE, if available, third party evidence if VSOE is not available, or estimated selling price if neither VSOE nor third party evidence is available. The applicable revenue recognition criteria are then applied to each of the units.

Revenue is recognized when the four basic criteria of revenue recognition are met: (1) a contractual agreement exists; (2) transfer of technology has been completed or services have been rendered; (3) the fee is fixed or determinable; and (4) collectibility is reasonably assured. For each source of revenue, we comply with the above revenue recognition criteria in the following manner:

- Royalties earned are based on third-party sales of licensed products and are recorded in accordance with contract terms when third-party results are reliably measurable and collectibility is reasonably assured. Pursuant to certain license agreements, we earn royalties on the sale of Fanapt™ by Novartis in the U.S. As described in Note 4 to our financial statements, Agreement with Sanofi-Aventis SA and Note 8 to our financial statements, Royalty Liability, we are obligated to pay royalties on such sales to Sanofi-Aventis and Deerfield. As we have no performance obligations under the license agreements, we have recorded the royalties earned, net of royalties we are obligated to pay, as revenue in our Statement of Operations.
- Collaborative arrangements typically consist of non-refundable and/or exclusive technology access fees, cost reimbursements for specific research and development spending, and various milestone and future product royalty payments. If the delivered technology does not have stand-alone value, the amount of revenue allocable to the delivered technology is deferred. Non-refundable upfront fees with stand-alone value that are not dependent on future performance under these agreements are recognized as revenue when received, and are deferred if we have continuing performance obligations and have no evidence of fair value of those obligations. Cost reimbursements for research and development spending are recognized when the related costs are incurred and when collections are reasonably expected. Payments received related to substantive, performance-based "at-risk" milestones are recognized as revenue upon achievement of the clinical success or regulatory event specified in the underlying contracts, which represent the culmination of the earnings process. Amounts received in advance are recorded as deferred revenue until the technology is transferred, costs are incurred, or a milestone is reached.
- Technology license agreements typically consist of non-refundable upfront license fees, annual minimum access fees or royalty payments. Non-refundable upfront license fees and annual minimum payments received with separable stand-alone values are recognized when the technology is transferred or accessed, provided that the technology transferred or accessed is not dependent on the outcome of our continuing research and development efforts.
- Government grants, which support our research efforts in specific projects, generally provide for reimbursement of approved costs as defined in the notices of grants. Grant revenue is recognized when associated project costs are incurred.

Share-Based Payments

We recognize compensation expense for all share-based awards made to employees and directors. The fair value of share-based awards is estimated at the grant date based on the fair value of the award and is recognized as expense, net of estimated pre-vesting forfeitures, ratably over the vesting period of the award.

We use the Black-Scholes option pricing model to estimate the fair value method of our awards. Calculating stock-based compensation expense requires the input of highly subjective assumptions, including the expected term of the share-based awards, stock price volatility, and pre-vesting forfeitures. We estimate the expected term of stock options granted for the years ended December 31, 2013 and 2012 based on the historical experience of similar awards, giving consideration to the contractual terms of the share-based awards, vesting schedules and the expectations of future employee behavior. We estimate the volatility of our common stock at the date of grant based on the historical volatility of our common stock. The assumptions used in calculating the fair value of stock-based awards represent our best estimates, but these estimates involve inherent uncertainties and the application of management judgment. As a result, if factors change and we use different assumptions, our stock-based compensation expense could be materially different in the future. In addition, we are required to estimate the expected pre-vesting forfeiture rate and only recognize expense for those shares expected to vest. We estimate the pre-vesting forfeiture rate based on historical experience. If our actual forfeiture rate is materially different from our estimate, our stock-based compensation expense could be significantly different from what we have recorded in the current period.

Income Taxes

We make certain estimates and judgments in determining income tax expense for financial statement purposes. These estimates and judgments occur in the calculation of certain tax assets and liabilities, which arise from differences in the timing of recognition of revenue and expense for tax and financial statement purposes.

As part of the process of preparing our financial statements, we are required to estimate our income taxes in each of the jurisdictions in which we operate. This process involves us estimating our current tax exposure under the most recent tax laws and assessing temporary differences resulting from differing treatment of items for tax and accounting purposes.

We assess the likelihood that we will be able to recover our deferred tax assets. We consider all available evidence, both positive and negative, expectations and risks associated with estimates of future taxable income and ongoing prudent and feasible tax planning strategies in assessing the need for a valuation allowance. If it is not more likely than not that we will recover our deferred tax assets, we will increase our provision for taxes by recording a valuation allowance against the deferred tax assets that we estimate will not ultimately be recoverable.

Clinical Trial Accruals

We also record accruals for estimated ongoing clinical trial costs. Clinical trial costs represent costs incurred by clinical research organizations (“CROs”) and clinical sites. These costs are recorded as a component of research and development expenses. Under our agreements, progress payments are typically made to investigators, clinical sites and CROs. We analyze the progress of the clinical trials, including levels of patient enrollment, invoices received and contracted costs when evaluating the adequacy of accrued liabilities. Significant judgments and estimates must be made and used in determining the accrued balance in any accounting period. Actual results could differ from those estimates under different assumptions. Revisions are charged to expense in the period in which the facts that give rise to the revision become known. The actual clinical trial costs for the Probuphine studies conducted in the past three years have not differed materially from the estimated projection of expenses.

Warrants Issued in Connection with Equity Financing

We generally account for warrants issued in connection with equity financings as a component of equity, unless there is a deemed possibility that we may have to settle warrants in cash. For warrants issued with deemed possibility of cash settlement, we record the fair value of the issued warrants as a liability at each reporting period and record changes in the estimated fair value as a non-cash gain or loss in the Statements of Operations and Comprehensive Income (Loss).

Results of Operations

Six Months Ended June 30, 2014 Compared to Six Months Ended June 30, 2013

License revenues of approximately $1.8 million and $5.9 million for the six months ended June 30, 2014 and 2013, respectively, reflect the amortization of the upfront license fee received from Braeburn in December 2012. We recognized no net royalty revenues during the six month ended June 30, 2014 compared to $1.4 million during the six months ended June 30, 2013 reflecting royalties paid on sales of Fanapt, all of which were paid to Deerfield in accordance with our royalty sales agreement. Beginning April 2013, we no longer recognize Fanapt royalty revenues since all of such royalties are paid to third parties.

Research and development expenses for the three month period ended June 30, 2014 were approximately $0.7 million, compared to approximately $1.8 million for the comparable period in 2013, a decrease of approximately $1.1 million, or 61%. Research and development expenses for the six month period ended June 30, 2014 were approximately $1.7 million, compared to approximately $5.7 million for the comparable period in 2013, a decrease of approximately $4.0 million, or 70%. The decrease in research and development costs was primarily associated with a decrease in external research and development expenses related to completion of the product development program and preparation and review of the NDA for our Probuphine product with the FDA. During the three and six month periods ended June 30, 2014, external research and development expenses relating to our Probuphine product development program were approximately $36,000 and $146,000, respectively. Other research and development expenses include internal operating costs such as clinical research and development personnel-related expenses, clinical trials related travel expenses, and allocation of facility and corporate costs. As a result of the risks and uncertainties inherently associated with pharmaceutical research and development activities described elsewhere in this prospectus, we are unable to estimate the specific timing and future costs of our clinical development programs or the timing of material cash inflows, if any, from our product candidates. However, we anticipate that our research and development expenses will increase in connection with our ProNeura for PD development activities and any other ProNeura technology based product development program we may pursue.

General and administrative expenses for the three month periods ended June 30, 2014 and 2013 were approximately $0.7 million. General and administrative expenses for the six month period ended June 30, 2014 were approximately $1.6 million, compared to approximately $1.8 million for the comparable period in 2013, a decrease of approximately $0.2 million, or 11%. The decrease in general and administrative expenses during the six month period ended June 30, 2014 was primarily related to decreases in non-cash stock compensation and employee related costs of approximately $53,000 and legal fees of approximately $0.2 million. This was offset in part by increases in depreciation of approximately $58,000.

Net other expense for the three month period ended June 30, 2014 was approximately $0.3 million which was primarily related to non-cash losses on changes in the fair value of warrants compared to net other income of approximately $5.4 million in the comparable period in 2013 which was primarily related to non-cash gains on changes in the fair value of warrants. Net other expense for the six month period ended June 30, 2014 was approximately $1.2 million which was primarily related to non-cash losses on changes in the fair value of warrants. Net other income during the comparable period in 2013 was approximately $11.2 million, consisting primarily of approximately $9.0 million in other income generated by the termination of Titan's royalty repurchase agreement with Deerfield, an approximately $1.9 million gain resulting from the settlement of indebtedness to Deerfield as a result of the exercise of all of the Deerfield Warrants and non-cash gains on changes in the fair value of warrants of approximately $2.3 million, which amounts were offset in part by interest expense of approximately $1.6 million related to the Deerfield loans and approximately $0.5 million in other expenses related to unamortized transaction fees related to the initial Deerfield debt transaction.

Our net loss for the three month period ended June 30, 2014 was approximately $0.8 million, or approximately $0.01 per share, compared to our net income of approximately $5.1 million, or approximately $0.06 per share, for the comparable period in 2013. Our net loss for the six month period ended June 30, 2014 was approximately $2.6 million, or approximately $0.03 per share, compared to our net income of approximately $11.1 million, or approximately $0.14 per share, for the comparable period in 2013.

Year Ended December 31, 2013 Compared to Year Ended December 31, 2012

License revenues of approximately $9.1 million and $2.3 million for the years ended December 31, 2013 and 2012 reflect the amortization of the upfront license fee received from Braeburn in December 2012. Royalty revenues for the years ended December 31, 2013 and 2012 reflect royalties paid on sales of Fanapt, all of which were paid to Deerfield in accordance with our royalty sales agreement. We no longer recognize Fanapt royalty revenues since all of such royalties are paid to third parties. We generated no grant revenue during the year ended December 31, 2013 compared with $42,000 of NIH grant revenue during the year ended December 31, 2012 relating to our Probuphine program.

Research and development expenses for 2013 were approximately $8.3 million compared to approximately $10.6 million in 2012, a decrease of approximately $2.3 million, or 22%. The decrease in research and development costs was primarily associated with a decrease in external research and development expenses related to completion of the product development program and preparation and review of the NDA for our Probuphine product with the FDA. External research and development expenses include direct expenses such as CRO charges, investigator and review board fees, patient expense reimbursements, expenses for NDA preparation and contract manufacturing expenses. During 2013, our external research and development expenses relating to our Probuphine product development program were approximately $3.5 million compared to approximately $5.4 million for 2012. Other research and development expenses include internal operating costs such as clinical research and development personnel-related expenses, clinical trials related travel expenses, and allocation of facility and corporate costs. As a result of the risks and uncertainties inherently associated with pharmaceutical research and development activities described elsewhere in this report, we are unable to estimate the specific timing and future costs of our clinical development programs or the timing of material cash inflows, if any, from our product candidates.

General and administrative expenses for 2013 were approximately $3.1 million, compared to approximately $4.9 million in 2012, a decrease of approximately $1.8 million, or 37%. The decrease in general and administrative expenses was primarily related to decreases in non-cash stock compensation costs of approximately $1.3 million, employee-related costs of approximately $0.2 million and consulting and professional fees of approximately $0.3 million.

Net other income for the year ended December 31, 2013 was approximately $10.6 million, compared to net other expense of approximately $6.8 million in the comparable period in 2012. The increase in net other income during the year ended December 31, 2013 was primarily related to approximately $9.0 million of other income generated by the termination of our royalty repurchase agreement with Deerfield, an approximately $1.9 million gain resulting from the $7.5 million settlement of our indebtedness to Deerfield as a result of Deerfield's exercise of all of the Deerfield Warrants, a decrease in interest expense of approximately $3.3 million related to the Deerfield loans and approximately $3.5 million related to non-cash gains on changes in the fair value of warrants. This was offset in part by approximately $0.5 million of other expense related to unamortized transaction fees related to the initial Deerfield debt transaction.

Our net income applicable to common stockholders for the year ended December 31, 2013 was approximately $9.7 million, or approximately $0.12 per share, compared to our net loss applicable to common stockholders of approximately $15.2 million, or approximately $0.23 per share, for the comparable period in 2012.

Liquidity and Capital Resources

We have funded our operations since inception primarily through the sale of our securities and the issuance of debt, as well as with proceeds from warrant and option exercises, corporate licensing and collaborative agreements, the sale of royalty rights and government-sponsored research grants. At June 30, 2014, we had working capital of approximately $5.0 million compared to working capital of approximately $6.0 million at December 31, 2013.

Our operating activities used approximately $2.9 million of cash during the six-months ended June 30, 2014. This consisted primarily of the net loss for the period of approximately $2.6 million and $2.0 million related to net changes in other operating assets and liabilities. This was offset in part by non-cash charges of approximately $0.4 million related to share-based compensation expenses, approximately $1.1 million related to non-cash losses resulting from changes in the fair value of warrants and approximately $0.2 million related

to depreciation and amortization. Uses of cash in operating activities were primarily to fund product development programs and administrative expenses.

Our operating activities used approximately $9.8 million of cash during the year ended December 31, 2013. This consisted primarily of approximately $1.9 million related to a non-cash gain on the settlement of long-term debt, approximately $9.0 million related to a non-cash gain on the termination of our royalty repurchase agreement with Deerfield, approximately $1.7 million related to net non-cash losses on changes in the fair value of warrants and approximately $9.1 million related to deferred revenue in connection with the license agreement with Braeburn. This was offset in part by the net income for the period of approximately $9.7 million, approximately $0.1 million related to depreciation, and approximately $0.7 million related to stock-based compensation expenses and approximately $1.3 million related to net changes in operating assets and liabilities. Uses of cash in operating activities were primarily to fund product development programs and administrative expenses.

Net cash used in investing activities of approximately $10,000 during the six-months ended June 30, 2014 and $0.3 million during the year ended December 31, 2013 was primarily related to purchases of equipment.

Net cash used in financing activities of approximately $37,000 during the six-months ended June 30, 2014 was primarily related to the issuance of restricted stock. Our financing activities provided approximately $3.8 million during the year ended December 31, 2013. This consisted primarily of approximately $4.9 million related to sale of common stock, $1.3 million in proceeds from the exercise of warrants and approximately $0.1 million in proceeds from the exercise of stock options. This was offset in part by approximately $2.5 million related to payments on our long-term debt.

In March 2011, we entered into several agreements with entities affiliated with Deerfield pursuant to which Deerfield agreed to provide $20.0 million in funding to us. Pursuant to the terms of a facility agreement, we issued Deerfield 8.5% promissory notes in the aggregate principal amount of $20.0 million. We paid Deerfield a facility fee of $0.5 million and issued them the Deerfield Warrants to purchase 6,000,000 shares of our common stock. Under a royalty agreement, in exchange for $3.0 million that was recorded as royalty liability, we agreed to pay Deerfield 2.5% of the aggregate royalties on net sales of Fanapt, subsequent to the funding date, constituting a portion of the royalty revenue we receive from Novartis. The agreements with Deerfield also provided us with the option to repurchase the royalty rights for $40.0 million.

In November 2011, we entered into several agreements with Deerfield pursuant to which we agreed to pay them a substantial portion of the remaining future royalties on the sales of Fanapt in exchange for $5.0 million in cash that was recorded as royalty liability, a $10.0 million reduction in the principal amount owed to Deerfield under the existing facility agreement and a revised principal repayment schedule of $2.5 million per year for four years commencing in April 2013 to retire the remaining long-term debt of $10.0 million. Deerfield is entitled to the balance of our portion of the royalties on Fanapt (5.5% to 7.5% of net sales, net of the 2.5% we previously agreed to pay to Deerfield) up to specified threshold levels of net sales of Fanapt and 40% of the royalties above the threshold level.

In February 2013, we amended the terms of the Deerfield Warrants to permit payment of the exercise price through the reduction of the outstanding loan. In February and March 2013, Deerfield exercised all of the Deerfield Warrants resulting in a $7.5 million reduction of our outstanding indebtedness. In April 2013, we made the last $2.5 million installment payment and our debt obligation to Deerfield was satisfied in full.

In March 2013, we terminated our option to repurchase the royalty rights. As a result, we recognized a gain on the extinguishment of the royalty liability of $9.0 million, which was recorded in other income, because we are no longer required to account for it as a liability. Additionally, we no longer recognize royalty income related to the Fanapt royalty payments received from Novartis.

In November 2013, we entered into (i) a stock purchase agreement pursuant to which Braeburn made a $5.0 million equity investment in our company and (ii) an amendment to the license agreement with Braeburn primarily to modify the amount and timing of the approval and sales milestone payments payable under the license agreement.

At June 30, 2014, we had cash of approximately $8.9 million, which we believe is sufficient to fund our planned operations into June 2015.

We are dependent on the proceeds of this offering to advance our current ProNeura development program for Parkinson's disease to later stage clinical studies and to pursue any other research and development programs utilizing the ProNeura platform beyond an initial stage. We will require additional funds, either through payments from Braeburn under the license agreement in the event the Probuphine NDA is ultimately approved or through other financing arrangements, to complete the clinical studies and regulatory approval process necessary to commercialize any additional products we might develop.

In addition, although Braeburn has commenced the clinical study and patient enrollment is underway, under our December 2012 license agreement with Braeburn, as amended, Braeburn currently has the right to terminate the agreement. If Braeburn were to exercise its right to terminate the agreement, we would not have sufficient funds available to us to complete the FDA regulatory process and, in the event of ultimate approval, commercialize Probuphine without raising additional capital. If we are unable to complete a debt or equity offering, or otherwise obtain sufficient financing in such event, our business and prospects would be materially adversely impacted.

Contractual Obligations

The following table sets forth the aggregate contractual cash obligations as of December 31, 2013 (in thousands):

	Payments Due by Period				
Contractual obligations	**Total**	**< 1 year**	**1 – 3 years**	**3 – 5 years**	**5 years+**
Operating leases	$ 525	$ 208	$ 317	$ —	$ —
Total contractual cash obligations	$ 525	$ 208	$ 317	$ —	$ —

Recently Issued Accounting Pronouncements

In July 2013, the FASB issued ASU No. 2013-11, *Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists*, providing guidance on the presentation of unrecognized tax benefits in the financial statements as either a reduction to a deferred tax asset or either a liability to better reflect the manner in which an entity would settle at the reporting date any additional income taxes that would result from the disallowance of a tax position when net operating loss carryforwards, similar tax losses or tax credit carryforwards exist. The amendments in this ASU do not require new recurring disclosures. The amendments in this ASU are effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. The amendments in this ASU should be applied prospectively to all unrecognized tax benefits that exist at the effective date. The adoption of the amendments in this ASU did not have a significant impact on our financial statements.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"), which supersedes nearly all existing revenue recognition guidance under U.S. GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, more judgment and estimates may be required within the revenue recognition process than are required under existing U.S. GAAP.

The standard is effective for annual periods beginning after December 15, 2016, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption (which includes additional footnote disclosures). We are currently evaluating the impact of our pending adoption of ASU 2014-09 on our financial statements and have not yet determined the method by which we will adopt the standard.

In June 2014, the FASB issued ASU No. 2014-12, *Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period* ("ASU 2014-12"). The standard provides guidance that a performance target that affects vesting of a share-based

payment and that could be achieved after the requisite service condition is a performance condition. As a result, the target is not reflected in the estimation of the award's grant date fair value. Compensation cost for such award would be recognized over the required service period, if it is probably that the performance condition will be achieved. ASU 2014-12 is effective for annual reporting periods beginning after December 15, 2015. Early adoption is permitted. The guidance should be applied on a prospective basis to awards that are granted or modified on or after the effective date. Companies also have the option to apply the amendments on a modified retrospective basis for performance targets outstanding on or after the beginning of the first annual period presented as of the adoption date. We are currently evaluating the impact of our pending adoption of ASU 2014-12 on our financial statements and the method by which we will adopt the standard.

Off-Balance Sheet Arrangements

We have never entered into any off-balance sheet financing arrangements and we have never established any special purpose entities. We have not guaranteed any debt or commitments of other entities or entered into any options on non-financial assets.

BUSINESS

Overview

We are a specialty pharmaceutical company developing proprietary therapeutics for the treatment of serious medical disorders. Our product development programs utilize our proprietary long-term drug delivery platform, ProNeura®, and focus primarily on innovative treatments for chronic conditions with significant unmet medical needs and meaningful commercial potential.

Probuphine®, our first product candidate to utilize ProNeura, is being developed for the long term maintenance treatment of opioid dependence and is designed to maintain a stable, around the clock blood level of the medicine in patients for six months following a single treatment. We have licensed the U.S. and Canadian rights to Probuphine to Braeburn. On April 30, 2013, the Psychopharmacologic Drugs Advisory Committee (PDAC) of the FDA voted in favor of approval of Probuphine. However, in April 2013, the FDA issued a CRL to the NDA we submitted the prior year stating that it cannot approve the NDA in its present form and outlining the FDA's request for additional clinical data demonstrating adequate clinical benefit to patients from this treatment, data from human factors testing of the training program for insertion and removal of the implants, as well as recommendations regarding product labeling, REMS and non-clinical safety data. Since receipt of the CRL we have been working with Braeburn, a team of expert clinical and regulatory advisors and the FDA to establish a path forward for Probuphine, which along with other steps includes conducting an additional clinical study in clinically stable patients who are receiving maintenance treatment with an approved sublingual formulation containing buprenorphine at a daily dose of 8mg or less. Patient enrollment in this 180 patient clinical study, which is being funded and managed by Braeburn, began in July 2014 and study completion is anticipated by the middle of 2015 followed by resubmission of the NDA later in the year. Pursuant to our license agreement with Braeburn, as amended to date, we are entitled to receive a $15 million milestone payment upon FDA approval of the Probuphine NDA and percentage royalties on net sales of Probuphine ranging from the mid-teens to the low twenties. The agreement also provides for up to $165 million in sales milestones and $35 million in regulatory milestones and entitles us to royalty rates in the low single digit on sales by Braeburn, if any, of other future products in the addiction market.

We believe that our ProNeura technology has the potential to be used in the treatment of other chronic conditions, such as Parkinson's disease (PD), where maintaining stable, around the clock blood levels of a dopamine agonist may benefit the patient and improve medical outcomes. We have commenced initial work on an implant formulation with ropinirole, a dopamine agonist approved for the treatment of PD. We are also currently evaluating drugs and disease settings for opportunities to develop our drug delivery technology for other potential treatment applications in situations where conventional treatment is limited by variability in blood drug levels and poor patient compliance.

Our Product Pipeline

Probuphine

We are developing Probuphine for the maintenance treatment of opioid dependence. Probuphine utilizes ProNeura, our novel, proprietary, long-term drug delivery technology. See "ProNeura Continuous Drug Delivery Technology" below. Upon subdermal insertion in a patient, Probuphine is designed to release medication continuously and maintain a stable, around the clock blood level of the drug buprenorphine, an approved agent in a daily dosed formulation for the treatment of opioid dependence. If approved, Probuphine is expected to provide six months of medication following a single treatment. Probuphine has been evaluated in the following Phase 3 clinical studies:

- Two six-month, double-blind, placebo-controlled safety and efficacy trials; one of which included an open label, active control (Suboxone). In both studies, Probuphine demonstrated superiority to placebo implants, and in the second study, established non-inferiority in comparison to Suboxone;
- Two six-month, open-label re-treatment safety trials; and
- A pharmacokinetic (relative bioavailability) safety study.

The goal of any therapy for an addictive disorder is to reduce the use of the addictive substance over time and to engage the patient in treatment long enough for therapeutic gains to be consolidated. In a clinical study, the effectiveness of a treatment for opioid dependence is primarily evaluated by testing a patient's urine samples for the presence of illicit opioids over the treatment period. In both placebo-controlled Phase 3 studies of Probuphine, every participant was required to provide urine samples three times a week, essentially on alternate days. Any missed sample was considered a positive result (i.e. urine testing positive for illicit opioid). In these studies, the primary effectiveness of the treatment with Probuphine (i.e. the primary endpoint) was established by comparing the negative urine results (i.e. urine testing negative for illicit opioid) between the Probuphine and placebo arms using a statistical technique, specifically 'the cumulative distribution function of negative urines', which basically performs a comparative analysis on the relative proportions of negative urines between treatment groups over the time period of treatment. The patients in the Probuphine arm showed statistically significant difference in the negative urines as compared to the placebo arm in both studies, i.e. the Probuphine patients had statistically more negative results than the placebo arm, demonstrating that the treatment with Probuphine was successful in reducing their usage of illicit opioids as compared to the treatment with placebo. These favorable results for Probuphine were also confirmed by a significant difference over the placebo arm in other secondary measures such as retention in treatment, withdrawal symptoms and craving for opioids, all of which are monitored by clinicians to see if a treatment is providing benefit to the patients.

Results for the first double-blind, placebo-controlled safety and efficacy study have been published in the Journal of the American Medical Association (JAMA, October 2010) and results of the follow-on randomized three arm study with Probuphine, placebo and sublingual treatment have been published in the journal Addiction (Addiction, September 2013).

Patients who completed the controlled studies were eligible for enrollment in six-month re-treatment studies, which provided data on up to one full year of treatment. The pharmacokinetic safety study has provided important data on the level of buprenorphine in the blood during the treatment period and gives a good profile of the safety of Probuphine. Data from all of these studies was presented at several scientific meetings, including the International Society of Addiction Medicine Annual Meetings in November 2008 and September 2011, the American Society of Addiction Medicine Annual Meetings in May 2009 and 2012, American Society of Addiction Medicine Education Forum in October 2011, and the American College of Neuropharmacology in November 2009 and 2012.

These studies are part of a registration directed program intended to obtain marketing approval of Probuphine for the treatment of opioid dependence in the U.S. and in Europe. We met with the FDA in October 2011 for a pre-NDA meeting and reviewed the clinical development program as well as the chemistry, manufacturing and controls ("CMC") aspects of the NDA. Based on this interaction we completed the requirements for an NDA and subsequently prepared and submitted the NDA in October 2012. On April 30, 2013, the FDA issued a complete response letter to our NDA stating that it cannot approve the application in its present form and outlining the FDA's request for additional clinical data demonstrating adequate clinical benefit to patients from this treatment, data from human factors testing of the training program for insertion and removal of the implant, as well as recommendations regarding product labeling, REMS and non-clinical safety data.

Our efforts since receipt of the CRL have focused on working with Braeburn, a team of expert clinical and regulatory advisors and the FDA to establish a path forward for potential resubmission of the NDA with the additional information requested by the FDA. Following a meeting with the FDA on November 19, 2013 and subsequent communications, the FDA has provided guidance on a path forward, which along with other steps includes conducting an additional clinical study. This study is a randomized, double blind, double dummy design that is expected to enroll approximately 180 patients into two parallel treatment arms. The study population is clinically stable patients who are receiving maintenance treatment with an approved sublingual formulation containing buprenorphine at a daily dose of 8mg or less. Patients will be randomized to receive either four Probuphine implants, or to continue the daily sublingual buprenorphine therapy. The patients are expected to be treated for six months, and the primary analysis will be a non-inferiority comparison of responders in the two arms. Patient enrollment in this 180 patient clinical study began in July 2014 and study completion is anticipated by the middle of 2015 followed by resubmission of the NDA later in the year.

Pursuant to the license agreement with Braeburn, as amended to date, we are entitled to receive a $15 million milestone payment upon FDA approval of the Probuphine NDA and royalty percentages on net sales of Probuphine ranging from the mid-teens to the low twenties. The agreement also provides for up to $165 million in sales milestones and $35 million in regulatory milestones and entitles us to royalty rates in the low single digit on sales by Braeburn, if any, of other future products in the addiction market.

Market Opportunity

Opioid dependence, including prescription drug misuse and abuse, is generally recognized to be a major public health and public safety crisis. It is a primary, chronic disease of brain reward, motivation, memory and related neurobiological circuitry that results in an inability to consistently abstain from the opiate, impairment of behavior control, cravings and diminished self-awareness of one's behavioral problems. Addiction involves cycles of relapse and remission and without treatment or engagement in recovery activities is progressive and can result in disability or premature death. In the U.S., daily dose buprenorphine has replaced methadone as the gold standard for treating opioid dependence, in part due to its ceiling effect, improved safety profile and lack of euphoric effect. In 2012, sales of oral buprenorphine (Suboxone®) exceeded $1.4 billion. We believe that Probuphine, if approved for commercialization, can address issues associated with the oral formulation, including need for daily compliance, fluctuating levels of drug, diversion for illegal sale, and the potential for child access and overdose.

ProNeura Continuous Drug Delivery Technology

Our ProNeura continuous drug delivery system consists of a small, solid rod made from a mixture of ethylene-vinyl acetate ("EVA") and a drug substance. The resulting product is a solid matrix that is placed subdermally, normally in the upper arm in a simple office procedure, and is removed in a similar manner at the end of the treatment period. The drug substance is released continuously through the process of dissolution. This results in a steady rate of release similar to intravenous administration. We believe that such long-term, linear release characteristics are desirable by avoiding peak and trough level dosing that may pose problems for many disease settings.

The ProNeura technology was developed to address the need for a simple, practical method to achieve continuous long-term drug delivery, and potentially can provide treatment on an outpatient basis over extended periods of up to 6 – 12 months. We believe that the benefits of this technology have been demonstrated by the clinical results to date with Probuphine. We believe that this technology has the potential to be useful in the treatment of other diseases. Accordingly, we have been evaluating opportunities to develop this drug delivery technology for other potential treatment applications in which conventional treatment is limited by variability in blood drug levels and poor patient compliance and where existing therapeutic compounds have sufficient potency to be effective at low doses. In furtherance of these efforts, during 2012, with the support of a National Institute of Health Small Business Innovation Research grant, we completed a non-clinical study with long-term delivery of ropinirole (Requip™), a dopamine agonist marketed in the U.S. by GlaxoSmithKline for the treatment of Parkinson's disease.

Market Opportunity

Parkinson's disease, or PD, is a disease of the central nervous system characterized by the loss of dopaminergic neurons, which leads to increasing activity in the brain region that influences movement and motor function. According to the Parkinson's Disease Foundation, more than one million people in the U.S. suffer from PD, and this number is projected to double by 2030. Early stage PD patients are treated with drugs designed to replace dopamine in the brain. However, these therapeutics typically lose their benefits after several years of chronic treatment, and trigger serious side effect. About one-third of the treated patients develop motor response fluctuations and/or drug-induced dyskinesias within only 3 – 5 years of treatment, and these symptoms are present in almost all patients after 10 – 12 years. Clinical and nonclinical research indicates that these motor side effects arise from the pulsatile dopaminergic stimulation resulting from current oral treatment. Continuous dopaminergic stimulation (CDS) by subcutaneous infusion has been shown to palliate these motor complications, as well as to delay or prevent the onset of dyskinesias. We believe our ProNeura™ drug delivery technology provides a clinically-validated platform to safely and conveniently provide CDS for several months from a single treatment. Further, the subdermal placement of these implants eliminates many of the device-related complications associated with existing treatment modalities.

The 2012 study, which was conducted using an MPTP Parkinsonian monkey model, demonstrated that a sustained non-fluctuating plasma level of ropinirole could be delivered safely for several months following implantation and could control PD symptoms without triggering dyskenesias in severely lesioned primates. We have begun efforts to optimize an implant formulation of ropinirole and to develop a non-clinical study plan in support of an IND application. We intend to design a proof of concept clinical study with the assistance of scientific advisors and will seek a pre-IND meeting with the FDA in the fourth quarter of this year of the first quarter of 2015. Our goal is to complete the non-clinical studies necessary to enable us to file an IND for the ProNeura ropinirole product in late 2015.

We have also been working with scientific collaborators to evaluate the potential for delivering other therapeutic substances, including peptides, using the ProNeura delivery technology.

Fanapt® (iloperidone)

Fanapt (iloperidone) is an atypical antipsychotic approved by the FDA for the treatment of schizophrenia currently being marketed by Novartis in the U.S. Under a sublicense agreement with Novartis, we are entitled to a royalty of 8 – 10% of net sales, based on a U.S. patent that we licensed from Sanofi-Aventis. The U.S. patent expires in October 2016 (excluding a six-month pediatric extension). Vanda Pharmaceuticals, Inc. ("Vanda") owns the development and commercialization rights to the oral and depot formulations of this product for the rest of the world. However, because patent coverage on the compound has now expired in the significant markets outside of the U.S. and no patent term extensions are possible since the product was not approved in these countries prior to patent expiration, we do not expect any royalties on any future sales in such markets.

We have entered into several agreements with Deerfield, which entitle Deerfield to most of the future royalty revenues related to Fanapt in exchange for cash and debt considerations, the proceeds of which have been used to advance the development of Probuphine and for general corporate purposes. We have retained a portion of the royalty revenue from net sales of Fanapt in excess of specified annual threshold levels; however, based on sales levels to date, it is unlikely that we will ever receive any revenue from Fanapt. We do not incur any ongoing expenses associated with this product.

License Agreements

In December 2012, we entered into a license agreement (the "Agreement") with Braeburn pursuant to which we granted Braeburn an exclusive right and license to commercialize Probuphine in the United States of America and its territories, including Puerto Rico, and Canada (the "Territory"). Under the Agreement, Braeburn made a non-refundable up-front license fee payment of $15.75 million and agreed to pay us tiered royalties on a percentage of net sales of Probuphine ranging from the mid-teens to the low twenties. Additionally, the Agreement provided for us to receive $45 million upon FDA approval of the NDA for Probuphine and at such time ownership of the NDA will transfer to Braeburn, as well as up to an additional $130 million upon the achievement of specified sales milestones and up to $35 million in regulatory milestones. We will retain all of the rights to Probuphine outside the Territory. Unless earlier terminated, the Agreement will expire on the later of (i) the 15th anniversary of the date of product launch in the Territory or (ii) the expiration of the last to expire patent in the Territory covered by the Agreement (the "Term"). Either party may terminate the Agreement prior to the expiration of the Term in the event of a material breach by the other party that remains uncured or in the event of the other party's bankruptcy. We may terminate the Agreement if, for reasons other than force majeure, regulatory, safety, manufacturing or product quality issues, Braeburn discontinues commercial sale of the product and fails to resume sales within 30 days following notice or in the event Braeburn or any of its affiliates or sublicensees commences any legal proceeding seeking to challenge or dispute the validity or ownership of the licensed patents. Braeburn may terminate the Agreement in the event that Braeburn, notwithstanding good faith efforts to do so, is unable to enter into an agreement for the supply of EVA or if such a supply agreement is terminated by Braeburn due to a material breach by the supplier or the supplier fails to provide EVA to Braeburn for a period of at least three months. Braeburn may also terminate the Agreement (i) on a country by country basis upon six months' notice following the occurrence of any "significant competition" in such country, as such term is defined in the Agreement; (ii) immediately upon notice if Braeburn determines in good faith that it is inadvisable to continue commercialization as a result of any actual or perceived safety issues.

In May 2013, we entered into an amendment to the Agreement (the "Amendment") primarily to modify certain of the termination provisions of the Agreement. The Amendment gives Braeburn the right to terminate the Agreement in the event that (A) after May 28, 2013, based on written or oral communications from or with the FDA, Braeburn reasonably determines either that the FDA will require significant development to be performed before approval of the Probuphine™ NDA can be given, such as, but not limited to, one or more additional controlled clinical studies with a clinical efficacy endpoint, or substantial post-approval commitments that may materially impact the products financial returns or that the FDA will require one or more changes in the proposed label, which change(s) Braeburn reasonably determines will materially reduce the authorized prescribed patient base, or (B) the NDA has not been approved by the FDA on or before June 30, 2014. The Amendment also provides that we will share in legal and consulting expenses in excess of a specified amount prior to approval of the NDA.

In July 2013, we entered into a second amendment to the Agreement (the "Second Amendment") primarily to establish and provide the parameters for a committee comprised of representatives of Titan and Braeburn responsible for and with the authority to make all decisions regarding the development and implementation of a strategic plan to seek approval from the FDA of Probuphine® for subdermal use in the maintenance treatment of adult patients with opioid dependence, including development of the strategy for all written and oral communications with the FDA. The Second Amendment also makes Braeburn the primary contact for FDA communications regarding the Probuphine NDA.

In November 2013, we entered into a stock purchase agreement pursuant to which Braeburn made a $5 million equity investment in our company and a third amendment to the Agreement (the "Third Amendment") primarily to modify the amount and timing of the approval and sales milestone payments payable under the Agreement. Under the Third Amendment, we are entitled to receive a $15 million payment upon FDA approval of the NDA, up to $165 million in sales milestones and $35 in regulatory milestones. In addition, we are entitled to receive royalties on a percentage of sales in the low single digit by Braeburn, if any, of other continuous delivery treatments for opioid dependence as defined in the Third Amendment and can elect to receive a low single digit royalty on sales by Braeburn, if any, of other products in the addiction market in exchange for a similar reduction in our royalties on Probuphine.

In January 1997, we acquired an exclusive worldwide license under U.S. and foreign patents and patent applications relating to the use of iloperidone for the treatment of psychiatric and psychotic disorders and analgesia from Sanofi-Aventis SA ("Sanofi-Aventis") (formerly Hoechst Marion Roussel, Inc.). The Sanofi-Aventis agreement provides for the payment of royalties on future net sales. In November 1997, we granted a worldwide sublicense, exclusive of Japan, to Novartis under which Novartis continued, at its expense, all further development of iloperidone. In April 2001, that sublicense was extended to include Japan. Under this agreement, Novartis agreed to pay Titan a royalty on future net sales of the product equal to 8% of annual worldwide net sales up to $200 million and 10% of annual worldwide net sales above $200 million, in addition to royalty payments owed by us to Sanofi-Aventis. In June 2004, Novartis granted Vanda the worldwide rights to develop and commercialize iloperidone. In October 2009, Vanda and Novartis amended and restated their sub-license agreement whereby Novartis acquired the U.S. and Canadian rights to commercialize Fanapt, the oral formulation of iloperidone approved in the U.S. Novartis also acquired the U.S. and Canadian development and commercialization rights to the depot formulation previously under development by Vanda and retained the right of first negotiation to co-market Fanapt and the depot formulation in the rest of the world. All of our rights and economic interests in iloperidone, including royalties on sales, remained essentially unchanged under these agreements and, as previously stated, we have entered into several agreements with Deerfield, which entitle Deerfield to the future royalty revenues related to Fanapt in exchange for cash and debt considerations.

Intellectual Property

Our goal is to obtain, maintain and enforce patent protection for our product candidates, formulations, processes, methods and any other proprietary technologies, preserve our trade secrets, and operate without infringing on the proprietary rights of other parties, both in the United States and in other countries. Our policy is to actively seek to obtain, where appropriate, the broadest intellectual property protection possible for our current product candidates and any future product candidates, proprietary information and proprietary

technology through a combination of contractual arrangements and patents, both in the United States and abroad. However, patent protection may not afford us with complete protection against competitors who seek to circumvent our patents.

We also depend upon the skills, knowledge, experience and know-how of our management and research and development personnel, as well as that of our advisors, consultants and other contractors. To help protect our proprietary know-how, which is not patentable, and for inventions for which patents may be difficult to enforce, we currently rely and will in the future rely on trade secret protection and confidentiality agreements to protect our interests. To this end, we require all of our employees, consultants, advisors and other contractors to enter into confidentiality agreements that prohibit the disclosure of confidential information and, where applicable, require disclosure and assignment to us of the ideas, developments, discoveries and inventions important to our business.

Four patent applications have been filed which incorporate the use of specific compounds with the continuous delivery technology, including three applications related to Probuphine for the potential treatment of opioid addiction and chronic pain. In June 2010, the United States Patent and Trademark Office ("USPTO") issued a patent covering methods of using Probuphine for the treatment of opiate addiction. Titan is the owner of this patent which claims a method for treating opiate addiction with a subdermally implanted device comprising buprenorphine and EVA, a biocompatible copolymer that releases buprenorphine continuously for extended periods of time. This patent will expire in April 2024. Patents covering use of Probuphine for the treatment of opiate addiction have also issued in Australia, India, Japan, Mexico and New Zealand. Further prosecution of Probuphine applications is currently proceeding at the USPTO and corresponding agencies in Europe, Canada, India and Hong Kong. Patents covering certain dopamine agonist implants have already been issued or allowed in Europe, Japan, Australia, Canada, South Korea, Mexico, New Zealand, South Africa, and Hong Kong, while prosecution of the patent application continues in the Israel, India, Japan, and China.

We have received a Notice of Allowance from the USPTO for a patent application covering the sustained release of dopamine agonists utilizing ProNeura.

We have filed additional patent applications for a heterogenous implant designed with some unique properties that may provide benefits to the structural integrity of the implants and potentially enhance drug delivery.

We hold a license from Sanofi-Aventis under certain issued U.S. patents and certain issued foreign patents relating to iloperidone and its methods of use in the treatment of psychiatric disorders, psychotic disorders and analgesia. The term of the U.S. patent that covers certain aspects of our iloperidone product expires in October 2016, excluding a six month extension possible if an approval of pediatric indication is obtained.

Competition

The pharmaceutical and biotechnology industries are characterized by rapidly evolving technology and intense competition. Many companies of all sizes, including major pharmaceutical companies and specialized biotechnology companies, are engaged in the development and commercialization of therapeutic agents designed for the treatment of the same diseases and disorders that we target. Many of our competitors have substantially greater financial and other resources, larger research and development staff and more experience in the regulatory approval process. Moreover, potential competitors have or may have patents or other rights that conflict with patents covering our technologies.

With respect to Probuphine, Reckitt Benckiser Group, PLC ("Reckitt") markets globally a sublingual buprenorphine product (tablet and film formulations) for the treatment of opioid dependence. This product (Subutex®, Suboxone®), which is administered daily, will compete with our six-month implantable product for treating opioid dependence. In September 2012, Reckitt announced the discontinuation of the sublingual tablet formulation of Suboxone in favor of the sublingual film formulation. In addition, during 2013, several generic and a proprietary sublingual tablet formulations of buprenorphine similar to Suboxone and Subutex were approved by the FDA which are expected to compete in the opioid addiction treatment market. Other forms of buprenorphine are also in development by other companies, including intramuscular injections, buccal delivery and intranasally delivered buprenorphine, which also might compete with our product. In 2010, Alkermes, Inc. received FDA approval to market Vivitrol®, a one month depot injection of naltrexone as a maintenance treatment for opioid dependent patients who have successfully achieved abstinence. We are aware of one

month depot formulations of buprenorphine in early clinical development for the treatment of opioid dependence, but we are not aware of any six-month formulations being developed other than Probuphine.

With respect to our potential ProNeura ropinirole product for Parkinson's disease, there are numerous dopamine agonist treatments currently in use that provide symptom relief from disease related immobility, and the complications associated with long-term levodopa therapy (e.g. dyskinesias, tolerance). Approved products in the U.S. in addition to Requip XL™, which is marketed by GlaxoSmithKline, include Apokyn® (US WorldMeds LLC), Parlodel® (Novartis Pharmaceuticals Inc.), Mirapex ER® (Boehringer Ingelheim Pharmaceuticals Inc.) and Neupro® (UCB Inc.).

Manufacturing

The manufacturing of Probuphine has primarily been conducted at DPT Laboratories, Inc., or DPT, and we have expanded the manufacturing facility at this contract manufacturer to establish commercial scale capability to support the future market launch of Probuphine and ongoing demand following potential approval by the FDA. To date, we have been operating with DPT under an arrangement pursuant to which batches of product needed for validation studies, stability testing or clinical trial purposes are acquired pursuant to purchase orders on a time and product cost basis. We have entered into a commercial manufacturing agreement with DPT that will govern the terms of the production and supply of Probuphine at such time, if ever, as the product is launched commercially. We anticipate that at or prior to such time, such agreement will be assigned to Braeburn as licensee or a replacement agreement entered into between Braeburn and DPT.

To date, we have obtained the supply of bupenorphine from Teva Pharmaceuticals, Inc., or Teva, under an arrangement similar to the one with DPT. We have entered into a commercial supply agreement with Teva; however, we anticipate that at or prior to such time if ever, as the product is launched commercially, such agreement will be assigned to Braeburn as licensee or a replacement agreement entered into between Braeburn and Teva.

Sales and Marketing

We do not currently have and do not intend to establish any sales and marketing capability. As licensee, Braeburn will have sole responsibility for sales and marketing of Probuphine within the United States and Canada. We intend to seek comparable partnering arrangements for Probuphine outside the Territory, as well as for any additional products we may successfully develop based on our ProNeura technology.

Government Regulation and Product Approval

Government authorities in the United States, at the federal, state and local level, and other countries extensively regulate, among other things, the research, development, testing, manufacture, quality control, approval, labeling, packaging, storage, record-keeping, promotion, advertising, distribution, post-approval monitoring and reporting, marketing and export and import of products such as those we are developing.

FDA Approval Process

In the United States, pharmaceutical products are subject to extensive regulation by the FDA. The Federal Food, Drug, and Cosmetic Act, or the FDC Act, and other federal and state statutes and regulations, govern, among other things, the research, development, testing, manufacture, storage, recordkeeping, approval, labeling, promotion and marketing, distribution, post-approval monitoring and reporting, sampling, and import and export of pharmaceutical products. Failure to comply with applicable U.S. requirements may subject a company to a variety of administrative or judicial sanctions, such as FDA refusal to approve pending new drug applications, or NDAs, warning letters, product recalls, product seizures, total or partial suspension of production or distribution, injunctions, fines, civil penalties, and criminal prosecution.

Pharmaceutical product development in the U.S. typically involves preclinical laboratory and animal tests, the submission to the FDA of either a notice of claimed investigational exemption or an investigational new drug application, or IND, which must become effective before clinical testing may commence, and adequate and well-controlled clinical trials to establish the safety and effectiveness of the drug for each indication for which FDA approval is sought. Satisfaction of FDA pre-market approval requirements typically takes many years and the actual time required may vary substantially based upon the type, complexity, and novelty of the product or disease.

Preclinical tests include laboratory evaluation of product chemistry, formulation, and toxicity, as well as animal trials to assess the characteristics and potential safety and efficacy of the product. The conduct of the preclinical tests must comply with federal regulations and requirements, including good laboratory practices. The results of preclinical testing are submitted to the FDA as part of an IND along with other information, including information about product chemistry, manufacturing and controls, and a proposed clinical trial protocol. Long term preclinical tests, such as animal tests of reproductive toxicity and carcinogenicity, may continue after the IND is submitted.

Clinical trials involve the administration of the investigational new drug to healthy volunteers or patients under the supervision of a qualified investigator. Clinical trials must be conducted: (i) in compliance with federal regulations; (ii) in compliance with good clinical practice, or GCP, an international standard meant to protect the rights and health of patients and to define the roles of clinical trial sponsors, administrators, and monitors; as well as (iii) under protocols detailing the objectives of the trial, the parameters to be used in monitoring safety, and the effectiveness criteria to be evaluated. Each protocol involving testing on U.S. patients and subsequent protocol amendments must be submitted to the FDA as part of the IND.

The FDA may order the temporary, or permanent, discontinuation of a clinical trial at any time, or impose other sanctions if it believes that the clinical trial either is not being conducted in accordance with FDA requirements or presents an unacceptable risk to the clinical trial patients. The study protocol and informed consent information for patients in clinical trials must also be submitted to an institutional review board, or IRB, for approval. An IRB may also require the clinical trial at the site to be halted, either temporarily or permanently, for failure to comply with the IRB's requirements, or may impose other conditions.

Clinical trials to support NDAs for marketing approval are typically conducted in three sequential phases, but the phases may overlap. In Phase 1, the initial introduction of the drug into healthy human subjects or patients, the drug is tested to assess metabolism, pharmacokinetics, pharmacological actions, side effects associated with increasing doses, and, if possible, early evidence on effectiveness. Phase 2 usually involves trials in a limited patient population to determine the effectiveness of the drug for a particular indication, dosage tolerance, and optimum dosage, and to identify common adverse effects and safety risks. If a compound demonstrates evidence of effectiveness and an acceptable safety profile in Phase 2 evaluations, Phase 3 trials are undertaken to obtain the additional information about clinical efficacy and safety in a larger number of patients, typically at geographically dispersed clinical trial sites, to permit FDA to evaluate the overall benefit-risk relationship of the drug and to provide adequate information for the labeling of the drug.

After completion of the required clinical testing, an NDA is prepared and submitted to the FDA. FDA approval of the NDA is required before marketing of the product may begin in the U.S. The NDA must include the results of all preclinical, clinical, and other testing and a compilation of data relating to the product's pharmacology, chemistry, manufacture, and controls. The cost of preparing and submitting an NDA is substantial.

Once the submission is accepted for filing, the FDA begins an in-depth review. Priority review can be applied to drugs that the FDA determines offer major advances in treatment, or provide a treatment where no adequate therapy exists. The FDA may refer applications for novel drug products, or drug products which present difficult questions of safety or efficacy, to an advisory committee — typically a panel that includes clinicians and other experts — for review, evaluation, and a recommendation as to whether the application should be approved. The FDA is not bound by the recommendation of an advisory committee, but it generally follows such recommendations. Before approving an NDA, the FDA will typically inspect one, or more, clinical sites to assure compliance with GCP. Additionally, the FDA will inspect the facility or the facilities at which the drug is manufactured. FDA will not approve the product unless compliance with current good manufacturing practices, or GMP — a quality system regulating manufacturing — is satisfactory and the NDA contains data that provide substantial evidence that the drug is safe and effective in the indication studied.

After the FDA evaluates the NDA and the manufacturing facilities, it issues either an approval letter or a complete response letter. A complete response letter generally outlines the deficiencies in the submission and may require substantial additional testing, or information, in order for the FDA to reconsider the application. If, or when, those deficiencies have been addressed to the FDA's satisfaction in a resubmission of the NDA, the FDA will issue an approval letter. An approval letter authorizes commercial marketing of the drug with

specific prescribing information for specific indications. As a condition of NDA approval, the FDA may require a risk evaluation and mitigation strategy, or REMS, to help ensure that the benefits of the drug outweigh the potential risks. REMS can include medication guides, communication plans for healthcare professionals, and elements to assure safe use, or ETASU. ETASU can include, but are not limited to, special training or certification for prescribing or dispensing, dispensing only under certain circumstances, special monitoring, and the use of patient registries. The requirement for a REMS can materially affect the potential market and profitability of the drug. Moreover, product approval may require substantial post-approval testing and surveillance to monitor the drug's safety or efficacy. Once granted, product approvals may be withdrawn if compliance with regulatory standards is not maintained or problems are identified following initial marketing.

The Hatch-Waxman Act

In seeking approval for a drug through an NDA, applicants are required to list with the FDA each patent whose claims cover the applicant's product. Upon approval of a drug, 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, commonly known as the Orange Book. Drugs listed in the Orange Book can, in turn, be cited by potential competitors in support of approval of an abbreviated new drug application, or ANDA. An ANDA provides for marketing of a drug product that has the same active ingredients in the same strengths and dosage form as the listed drug and has been shown through bioequivalence testing to be therapeutically equivalent to the listed drug. Other than the requirement for bioequivalence testing, ANDA applicants are not required to conduct, or submit results of, pre-clinical or clinical tests to prove the safety or effectiveness of their drug product. Drugs approved in this way are commonly referred to as "generic equivalents" to the listed drug, and can often be substituted by pharmacists under prescriptions written for the original listed drug.

The ANDA applicant is required to certify to the FDA concerning any patents listed for the approved product in the FDA's Orange Book. Specifically, the applicant must certify that: (i) the required patent information has not been filed; (ii) the listed patent has expired; (iii) the listed patent has not expired, but will expire on a particular date and approval is sought after patent expiration; or (iv) the listed patent is invalid or will not be infringed by the new product. A certification that the new product will not infringe the already approved product's listed patents, or that such patents are invalid, is called a Paragraph IV certification. If the applicant does not challenge the listed patents, the ANDA application will not be approved until all the listed patents claiming the referenced product have expired. The ANDA application also will not be approved until any non-patent exclusivity listed in the Orange Book for the referenced product has expired. Federal law provides a period of five years following approval of a drug containing no previously approved active ingredients during which ANDAs for generic versions of those drugs cannot be submitted, unless the submission contains a Paragraph IV challenge to a listed patent — in which case the submission may be made four years following the original product approval. Federal law provides for a period of three years of exclusivity during which the FDA cannot grant effective approval of an ANDA based on the approval of a listed drug that contains previously approved active ingredients but is approved in a new dosage form, route of administration or combination, or for a new use; the approval of which was required to be supported by new clinical trials conducted by, or for, the applicant.

Section 505(b)(2) New Drug Applications

Most drug products obtain FDA marketing approval pursuant to an NDA or an ANDA. A third alternative is a special type of NDA, commonly referred to as a Section 505(b)(2) NDA, that enables the applicant to rely, in part, on the FDA's previous approval of a similar product, or published literature, in support of its application. Our NDA for Probuphine was submitted under Section 505(b)(2) and we anticipate that we will pursue this pathway for any additional therapeutic products we may develop based on our ProNeura technology. 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. If the 505(b)(2) applicant can establish that reliance on the FDA's previous approval is scientifically appropriate, it may eliminate the need to conduct certain preclinical or clinical studies of the new product. The FDA may also require companies to perform additional studies or measurements to support the change from the approved product. The FDA may then approve the new product candidate for all, or some, of

the label indications for which the referenced product has been approved, as well as for any new indication sought by the Section 505(b)(2) applicant.

Advertising and Promotion

Once an NDA is approved, a product will be subject to certain post-approval requirements. For instance, the FDA closely regulates the post-approval marketing and promotion of drugs, including standards and regulations for direct-to-consumer advertising, off-label promotion, industry-sponsored scientific and educational activities and promotional activities involving the internet.

Drugs may be marketed only for the approved indications and in accordance with the provisions of the approved labeling. Changes to some of the conditions established in an approved application, including changes in indications, labeling, or manufacturing processes or facilities, require submission and FDA approval of a new NDA or NDA supplement before the change can be implemented. An NDA supplement for a new indication typically requires clinical data similar to that in the original application, and the FDA uses the same procedures and actions in reviewing NDA supplements as it does in reviewing NDAs.

Adverse Event Reporting and GMP Compliance

Adverse event reporting and submission of periodic reports is required following FDA approval of an NDA. The FDA also may require post-marketing testing, known as Phase 4 testing, risk minimization action plans, and surveillance to monitor the effects of an approved product, or the FDA may place conditions on an approval that could restrict the distribution or use of the product. In addition, quality-control, drug manufacture, packaging, and labeling procedures must continue to conform to current good manufacturing practices, or cGMPs, after approval. Drug manufacturers and certain of their subcontractors are required to register their establishments with FDA and certain state agencies. Registration with the FDA subjects entities to periodic unannounced inspections by the FDA, during which the agency inspects manufacturing facilities to assess compliance with cGMPs. Accordingly, manufacturers must continue to expend time, money, and effort in the areas of production and quality-control to maintain compliance with cGMPs. Regulatory authorities may withdraw product approvals or request product recalls if a company fails to comply with regulatory standards, if it encounters problems following initial marketing, or if previously unrecognized problems are subsequently discovered.

Pediatric Information

Under the Pediatric Research Equity Act, or PREA, NDAs or supplements to NDAs must contain data 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 drug is safe and effective. The FDA may grant full or partial waivers, or deferrals, for submission of data. Unless otherwise required by regulation, PREA does not apply to any drug for an indication for which orphan designation has been granted.

The Best Pharmaceuticals for Children Act, or BPCA, provides NDA holders a six-month extension of any exclusivity — patent or non-patent — for a drug if certain conditions are met. Conditions for exclusivity include the FDA's determination that information relating to the use of a new drug in the pediatric population may produce health benefits in that population, the FDA making a written request for pediatric studies, and the applicant agreeing to perform, and reporting on, the requested studies within the statutory timeframe. Applications under the BPCA are treated as priority applications, with all of the benefits that designation confers.

Physician Drug Samples

As part of the sales and marketing process, pharmaceutical companies frequently provide samples of approved drugs to physicians. The Prescription Drug Marketing Act, or the PDMA, imposes requirements and limitations upon the provision of drug samples to physicians, as well as prohibits states from licensing distributors of prescription drugs unless the state licensing program meets certain federal guidelines that include minimum standards for storage, handling, and record keeping. In addition, the PDMA sets forth civil and criminal penalties for violations.

Controlled Substances

Manufacturers of controlled substances, including buprenorphine, are also subject to the licensing, quota, and regulatory requirements of the Controlled Substances Act. Failure to comply with the Controlled Substances Act and the regulations promulgated thereunder could subject companies to loss or suspension of those licenses and to civil or criminal penalties.

Anti-Kickback, False Claims Laws & The Prescription Drug Marketing Act

In addition to FDA restrictions on marketing of pharmaceutical products, several other types of state and federal laws have been applied to restrict certain marketing practices in the pharmaceutical industry in recent years. These laws include anti-kickback statutes and false claims statutes. The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce; or in return for; purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service reimbursable under Medicare, Medicaid, or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers on the one hand and prescribers, purchasers, and formulary managers on the other. Violations of the anti-kickback statute are punishable by imprisonment, criminal fines, civil monetary penalties, and exclusion from participation in federal healthcare programs. Although there are a number of statutory exemptions and regulatory safe harbors protecting certain common activities from prosecution or other regulatory sanctions, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchases, or recommendations may be subject to scrutiny if they do not qualify for an exemption or safe harbor.

Federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government, or knowingly making, or causing to be made, a false statement to have a false claim paid. Recently, several pharmaceutical and other healthcare companies have been prosecuted under these laws for allegedly inflating drug prices they report to pricing services, which in turn were used by the government to set Medicare and Medicaid reimbursement rates, and for allegedly providing free product to customers with the expectation that the customers would bill federal programs for the product. In addition, certain marketing practices, including off-label promotion, may also violate false claims laws. The majority of states also have statutes or regulations similar to the federal anti-kickback law and false claims laws, which apply to items and services reimbursed under Medicaid and other state programs, or, in several states, apply regardless of the payor.

Foreign Regulatory Issues

Sales of pharmaceutical products outside the United States are subject to foreign regulatory requirements that vary widely from country to country. Whether or not FDA approval has been obtained, approval of a product by a comparable regulatory authority of a foreign country must generally be obtained prior to the commencement of marketing in that country. Although the time required to obtain such approval may be longer or shorter than that required for FDA approval, the requirements for FDA approval are among the most detailed in the world and FDA approval generally takes longer than foreign regulatory approvals.

Employees

As of August 25, 2014, we had 13 full-time employees.

Properties

Our executive offices are located in approximately 9,255 square feet of office space in South San Francisco, California that we occupy under a three-year operating lease expiring in June 2016.

Legal Proceedings

We are currently not a party to any material legal or administrative proceedings and are not aware of any pending or threatened legal or administrative proceedings against us.

MANAGEMENT

Set forth below are the name, age and position and a brief account of the business experience of each of our executive officers and directors:

Name	Age	Title
Marc Rubin	59	Executive Chairman of the Board
Sunil Bhonsle	64	President and Director
Victor J. Bauer	79	Director
Eurelio M. Cavalier	81	Director
M. David MacFarlane	73	Director
Ley Smith	80	Director

Marc Rubin, M.D. served as our President and Chief Executive from October 2007 until December 2008 and was re-engaged as our Executive Chairman in May 2009. Until February 2007, Dr. Rubin served as Head of Global Research and Development for Bayer Schering Pharma, as well as a member of the Executive Committee of Bayer Healthcare and the Board of Management of Bayer Schering Pharma. Prior to the merger of Bayer Pharmaceuticals and Schering AG in June 2006, Dr. Rubin was a member of the Executive Board of Schering AG since joining the Company in October 2003, as well as Chairman of Schering Berlin Inc. and President of Berlex Pharmaceuticals, a division of Schering AG. From 1990 until August 2003, Dr. Rubin was employed by GlaxoSmithKline where he held positions of increasing responsibility in global clinical and commercial development overseeing programs in the United States, Europe, Asia and Latin America. From 2001 through 2003, he was Senior Vice President of Global Clinical Pharmacology & Discovery Medicine. Dr. Rubin holds an M.D. from Cornell University Medical College. Dr. Rubin currently serves on the board of directors of Curis Inc. and Galectin Therapeutics. Based on Dr. Rubin's position as the executive chairman, his extensive senior management experience and service on boards of directors in the biotechnology and pharmaceutical industries and his medical background, our Board believes that Dr. Rubin has the appropriate set of skills to serve as a member of the Board.

Sunil Bhonsle served as our Executive Vice President and Chief Operating Officer from September 1995 until December 2008 and was re-engaged as our President in May 2009. Mr. Bhonsle served in various positions, including Vice President and General Manager — Plasma Supply and Manager — Inventory and Technical Planning, at Bayer Corporation from July 1975 until April 1995. Mr. Bhonsle holds an M.B.A. from the University of California at Berkeley and a B.Tech. in chemical engineering from the Indian Institute of Technology. Based on Mr. Bhonsle's position as the president and his substantial experience in the pharmaceutical industry, particularly in the areas of clinical development and manufacturing, our Board believes that Mr. Bhonsle has the appropriate set of skills to serve as a member of the Board.

Victor J. Bauer, Ph.D. serves as the President of Concordia Pharmaceuticals, LLC, a biopharmaceutical company he co-founded in 2004. From February 1997 through March 2003, Dr. Bauer was employed by Titan, most recently as our Executive Director of Corporate Development. From April 1996 until its merger into Titan, Dr. Bauer also served as a director and Chairman of Theracell. Since December 1992 Dr. Bauer has been a self-employed consultant to companies in the pharmaceutical and biotechnology industries. Prior to that time, Dr. Bauer was with Hoechst-Roussel Pharmaceuticals Inc., where he served as President from 1988 through 1992. Dr. Bauer holds an SB from MIT and a Ph.D. from the University of Wisconsin, and served as a Research Fellow at Harvard University. Based on Dr. Bauer's extensive management and consulting experience in the biotechnology and pharmaceutical industries, particularly in the areas of research and product development, our Board believes that Dr. Bauer has the appropriate set of skills to serve as a member of the Board.

Eurelio M. Cavalier was employed in various capacities by Eli Lilly & Co. from 1958 until his retirement in 1994, serving as Vice President Sales from 1976 to 1982 and Group Vice President U.S. Pharmaceutical Business Unit from 1982 to 1993. Based on Mr. Cavalier's management experience in the pharmaceutical industry, particularly in the area of sales and marketing, our Board of directors believes that Mr. Cavalier has the appropriate set of skills to serve as a member of the Board.

M. David MacFarlane, Ph.D. served as Vice President and Responsible Head of Regulatory Affairs of Genentech, Inc. from 1989 until his retirement in August 1999. Prior to joining Genentech, Inc., he served in various positions with Glaxo Inc., last as Vice President of Regulatory Affairs. Based on Dr. MacFarlane's management experience in the pharmaceutical industry, particularly in the area of clinical and regulatory affairs, our Board believes that Dr. MacFarlane has the appropriate set of skills to serve as a member of the Board.

Ley S. Smith served in various positions with The Upjohn Company and Pharmacia & Upjohn from 1958 until his retirement in November 1997. From 1991 to 1993 he served as Vice Chairman of the Board of The Upjohn Company, and from 1993 to 1995 he was President and Chief Operating Officer of The Upjohn Company. At the time of his retirement, Mr. Smith was Executive Vice President of Pharmacia & Upjohn, and President of Pharmacia & Upjohn's U.S. Pharma Product Center. Based on Mr. Smith's management experience in the pharmaceutical industry, our Board believes that Mr. Smith has the appropriate set of skills to serve as a member of the Board.

CORPORATE GOVERNANCE

Independence of Directors

The following members of our Board meet the independence requirements and standards currently established by the NYSE MKT: Victor J. Bauer, Eurelio M. Cavalier, M. David MacFarlane, and Ley S. Smith.

Board Committees

Our Board has established the following three standing committees: audit committee; compensation committee; and nominating and governance committee, or nominating committee.

The audit committee was formed in compliance with Section 3(a)(58)(A) of the Securities Exchange Act of 1934 (the "Exchange Act") and consists of Ley S. Smith, M. David MacFarlane and Victor J. Bauer, each of whom meets the independence requirements and standards currently established by the NYSE MKT and the SEC. In addition, the Board has determined that Mr. Ley S. Smith is an "audit committee financial expert" and "independent" as defined under the relevant rules of the SEC and the NYSE MKT. The audit committee assists the Board by overseeing the performance of the independent auditors and the quality and integrity of Titan's internal accounting, auditing and financial reporting practices. The audit committee is responsible for retaining (subject to stockholder ratification) and, as necessary, terminating, the independent auditors, annually reviews the qualifications, performance and independence of the independent auditors and the audit plan, fees and audit results, and pre-approves audit and non-audit services to be performed by the auditors and related fees. During the fiscal year ended December 31, 2013, the audit committee met four times.

The compensation committee makes recommendations to the Board concerning salaries and incentive compensation for our officers, including our Principal Executive Officer, and employees and administers our stock option plans. The compensation committee consists of Eurelio M. Cavalier and Victor J. Bauer, each of whom meets the independence requirements and standards currently established by the NYSE MKT. The compensation committee did not meet as a separate committee or take action by written consent during the fiscal year ended December 31, 2013.

The purpose of the nominating committee is to assist the Board in identifying qualified individuals to become board members, in determining the composition of the Board and in monitoring the process to assess Board effectiveness. The nominating committee consists of Eurelio M. Cavalier, M. David MacFarlane and Ley S. Smith, each of whom meets the independence requirements and standards currently established by the NYSE MKT. The nominating committee did not meet as a separate committee or take action by written consent during the fiscal year ended December 31, 2013.

The charters for the audit, compensation and nominating committees, which have been adopted by our Board, contain detailed descriptions of the committees' duties and responsibilities and are available in the Investor Relations section of our website at *www.titanpharm.com*.

Board Leadership Structure

Currently, our principal executive officer and chairman of the Board positions are held separately by Sunil Bhonsle and Marc Rubin, respectively.

Role of the Board in Risk Oversight

Our audit committee is primarily responsible for overseeing our risk management processes on behalf of the full Board. The audit committee receives reports from management at least quarterly regarding our assessment of risks. In addition, the audit committee reports regularly to the full Board, which also considers our risk profile. The audit committee and the full Board focus on the most significant risks we face and our general risk management strategies. While the Board oversees our risk management, management is responsible for day-to-day risk management processes. Our Board expects management to consider risk and risk management in each business decision, to proactively develop and monitor risk management strategies and processes for day-to-day activities and to effectively implement risk management strategies adopted by the audit committee and the Board. We believe this division of responsibilities is the most effective approach for addressing the risks we face and that our Board leadership structure, which also emphasizes the independence of the Board in its oversight of its business and affairs, supports this approach.

Board Meetings

Our business and affairs are managed under the direction of our Board, which is currently composed of **seven** members. The primary responsibilities of the Board are to provide oversight, strategic guidance, counseling and direction to our management. During the fiscal year ended December 31, 2013, the Board met nine times and no director attended fewer than 75% of the meetings of the Board and board committees of which the director was a member.

Code of Ethics

We adopted a Code of Business Conduct and Ethics (the "Code") in February 2013 that applies to all directors, officers and employees. The Code was filed as an exhibit to our Annual Report on Form 10-K for the year ended December 31, 2012 and is available on our website at *www.titanpharm.com*. A copy of our code of ethics will also be provided to any person without charge, upon written request sent to us at our offices located at 400 Oyster Point Blvd, Suite 505, South San Francisco, California 94080.

EXECUTIVE COMPENSATION

The following table shows information concerning the annual compensation for services provided to us by our Chief Executive Officer, our Chief Financial Officer and our other executive officers for the periods set forth.

Name and Principal Position	Year	Salary ($)	Bonus ($)	Options[1] Awards ($)	Stock Awards[1] ($)	All Other Compensation ($)	Total Compensation ($)
Marc Rubin, M.D.	2013	$210,000	$ —	$ —	$ —	$ —	$ 210,000
Executive Chairman	2012	$210,000	53,000	273,450	—	—	$ 536,450
Sunil Bhonsle	2013	300,000	—	—	—	—	300,000
President and	2012						
Chief Financial Officer		300,000	75,000	328,140	—	—	703,140

(1) Amounts shown represent the grant date fair value computed in accordance with FASB ASC 718.

For a description of the material terms of employment agreements with our current and former named executive officers, see "— Employment Agreements."

There were no grants of plan based awards to any named executive officer during the year ended December 31, 2013.

Employee Benefits Plans

The principal purpose of our stock incentive plans is to attract, motivate, reward and retain selected employees, consultants and directors through the granting of stock-based compensation awards. The stock option plans provides for a variety of awards, including non-qualified stock options, incentive stock options (within the meaning of Section 422 of the Code), stock appreciation rights, restricted stock awards, performance-based awards and other stock-based awards.

2002 Stock Incentive Plan

In July 2002, we adopted the 2002 Stock Incentive Plan, or the 2002 Plan. Under the 2002 Plan, as amended, a total of approximately 7.4 million shares of our common stock were authorized for issuance to employees, officers, directors, consultants, and advisers. The 2002 Plan expired by its terms in July 2012. On August 25, 2014, options to purchase an aggregate of 3,908,553 shares of our common stock were outstanding under the 2002 Plan.

2001 Stock Option Plan

In August 2001, we adopted the 2001 Employee Non-Qualified Stock Option Plan, or the 2001 NQ Plan, pursuant to which 1,750,000 shares of common stock were authorized for issuance for option grants to employees and consultants who are not officers or directors of Titan. The 2001 NQ Plan expired by its terms in August 2011. On August 25, 2014, options to purchase an aggregate of 1,124,000 shares of our common stock were outstanding under the 2001 NQ Plan.

2014 Incentive Plan

On February 11, 2014, our Board adopted the 2014 Incentive Plan, or the 2014 Plan, pursuant to which 2,500,000 shares of our common stock were authorized for issuance to employees, directors, officers, consultants and advisors. On August 25, 2014, restricted stock awards and options to purchase 633,500 shares of our common stock were outstanding under the 2014 Plan.

OUTSTANDING EQUITY AWARDS AT FISCAL YEAR-END

The following table summarizes the number of securities underlying outstanding plan awards for each named executive officer as of December 31, 2013.

	Option Awards			
Name	Number of Securities Underlying Unexercised Options (#) Exercisable	Number of Securities Underlying Unexercised Options (#) Unexercisable	Option Exercise Price ($)	Option Expiration Date
Marc Rubin, M.D.	437,500	—	$ 2.40	10/01/2017
	2,500	—	1.52	5/30/2018
	5,000	—	1.52	5/30/2018
	615,000	—	0.79	5/17/2019
	100,000	—	0.79	5/17/2019
	5,000	—	0.79	5/17/2019
	10,000	—	0.79	5/17/2019
	285,000	—	0.79	5/17/2019
	150,000	—	1.40	4/15/2021
	250,000	—	1.15	1/3/2022
Sunil Bhonsle	60,000	—	3.69	2/9/2014
	70,000	—	2.62	2/7/2015
	80,137	—	1.40	1/3/2016
	11,250	—	2.35	8/29/2016
	76,666	—	3.13	1/3/2017
	5,000	—	1.52	5/30/2018
	310,000	—	0.79	5/17/2019
	100,000	—	0.79	5/17/2019
	10,000	—	0.79	5/17/2019
	390,000	—	0.79	5/17/2019
	200,000	—	1.40	4/15/2021
	300,000	—	1.15	1/3/2022

The following table summarizes the option exercises by our named executive officers during 2013.

Name	Number of Shares Acquired on Exercise	Value Realized on Exercise[1]
Sunil Bhonsle	50,000	19,500

(1) Represents the amounts realized based on the difference between the market price of our common stock on the date of exercise and the exercise price.

Pension Benefits

We do not sponsor any qualified or non-qualified defined benefit plans.

Nonqualified Deferred Compensation

We do not maintain any non-qualified defined contribution or deferred compensation plans. The compensation committee, which is comprised solely of "outside directors" as defined for purposes of Section 162(m) of the Code, may elect to provide our officers and other employees with non-qualified defined contribution or deferred compensation benefits if the compensation committee determines that doing so is in our best interests. We sponsor a tax qualified defined contribution 401(k) plan in which Dr. Rubin and Mr. Bhonsle participated.

CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS

There were no related party transactions in 2013 and, as of the date of this prospectus, none have been undertaken in 2014.

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth as of August 25, 2014, the number of shares of our common stock beneficially owned by (i) each person who is known by us to be the beneficial owner of more than five percent of our common stock; (ii) each director and director nominee; (iii) each of the named executive officers in the Summary Compensation Table; and (iv) all directors and executive officers as a group. As of August 25, 2014, we had 88,997,533 shares of common stock issued and outstanding.

Beneficial ownership is determined in accordance with the rules of the Securities and Exchange Commission (the "SEC") and generally includes voting or investment power with respect to securities. Unless otherwise indicated, the stockholders listed in the table have sole voting and investment power with respect to the shares indicated.

Name and Address of Beneficial Owner[1]	Shares Beneficially Owned[2]	Percent of Shares Beneficially Owned
Victor J. Bauer, Ph.D.	296,144[3]	*
Sunil Bhonsle	1,994,310[4]	2.2%
Eurelio M. Cavalier	422,500[5]	*
M. David MacFarlane, Ph.D.	317,500[6]	*
Marc Rubin, M.D.	2,467,200[7]	2.7*
Ley S. Smith	352,500[8]	*
Braeburn Pharmaceuticals BVBA SPRL	9,650,000[9]	10.8%
Robert E. Mead	4,695,044[10]	5.3%
All executive officers and directors as a group (6) persons	5,850,154	6.4%

* Less than one percent.

(1) Unless otherwise indicated, the address of such individual is c/o Titan Pharmaceuticals, Inc., 400 Oyster Point Boulevard, Suite 505, South San Francisco, California 94080.

(2) In computing the number of shares beneficially owned by a person and the percentage ownership of a person, shares of our common stock subject to options held by that person that are currently exercisable or exercisable within 60 days of March 24, 2014 are deemed outstanding. Such shares, however, are not deemed outstanding for purposes of computing the percentage ownership of each other person. Except as indicated in the footnotes to this table and pursuant to applicable community property laws, the persons named in the table have sole voting and investment power with respect to all shares of common stock.

(3) Includes 260,000 shares issuable upon exercise of outstanding options.

(4) Includes (i) 1,553,053 shares issuable upon exercise of outstanding options and (ii) 300,757 shares held in a family trust for which he serves as trustee.

(5) Includes 240,000 shares issuable upon exercise of outstanding options.

(6) Includes 195,000 shares issuable upon exercise of outstanding options.

(7) Includes 1,860,000 shares issuable upon exercise of outstanding options.

(8) Includes 240,000 shares issuable upon exercise of outstanding options.

(9) Derived from a Schedule 13D filed by Braeburn, Apple Tree Consolidated BVBA Sprl ("ATC"), Apple Tree Investments S.a.r.l ("ATI"), Apple Tree Partners IV, L.P. ("ATP IV"), ATP III GP, Ltd. ("ATP GP") and Seth L. Harrison ("Harrison"). ATP GP is the sole general partner of ATP IV. Harrison is the sole owner and director of ATP GP. As the sole owner of Braeburn, ATC may be deemed to own beneficially such shares. As the sole owner of ATC, ATI may be deemed to own beneficially such shares. As the sole owner of ATI, ATP IV may be deemed to own beneficially such shares. As the sole general partner of ATP IV, ATP GP may be deemed to own beneficially such shares. As the sole owner and director of ATP GP, Harrison may be deemed to own beneficially such shares. Each of the foregoing persons except Braeburn, disclaims beneficial ownership of such shares except to the extent of their pecuniary interest therein, if any. The address of the principal business office of Braeburn is Brugmannlaan 147, 1190 Vorst, Belgium.

(10) Derived from a Schedule 13G filed by Mr. Mead. The address of Mr. Mead's principal business office is 3653 Maplewood Ave., Dallas, TX 75205.

DESCRIPTION OF CAPITAL STOCK

The following is a summary of all material characteristics of our capital stock as set forth in our certificate of incorporation and bylaws. The summary does not purport to be complete and is qualified in its entirety by reference to our articles of incorporation and bylaws, all of which are incorporated by reference as exhibits to the registration statement of which this prospectus is a part, and to the provisions of the Delaware General Corporation Law.

Common Stock

Our charter authorizes the issuance of up to 125,000,000 shares of common stock, par value $0.001 per share. As of August 25, 2014, there were 88,997,533 shares of common stock outstanding, as well as 12,479,445 shares of common stock subject to outstanding options and warrants and unvested restricted stock awards. Each holder of common stock is entitled to one vote for each share of common stock held on all matters submitted to a vote of the stockholders, including the election of directors. Our amended and restated certificate of incorporation and amended and restated bylaws do not provide for cumulative voting rights. Subject to preferences that may be applicable to any then outstanding preferred stock, the holders of our outstanding shares of common stock are entitled to receive dividends, if any, as may be declared from time to time by our board of directors out of legally available funds. 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, subject to the satisfaction of any liquidation preference granted to the holders of any outstanding shares of preferred stock. Holders of our 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 rights of the holders of shares of any series of our preferred stock that are outstanding or that we may designate and issue in the future. All of our outstanding shares of common stock are fully paid and nonassessable.

Preferred Stock

We are authorized to issue 5,000,000 shares of preferred stock, par value $0.0001 per share, none of which are currently outstanding. Our board of directors is empowered, without stockholder approval, to issue shares of preferred stock with dividend, liquidation, redemption, voting or other rights which could adversely affect the voting power or other rights of the holders of common stock. However, the underwriting agreement prohibits us, prior to a business combination, from issuing preferred stock which participates in any manner in the proceeds of the trust account, or which votes as a class with the common stock on a business combination. We may issue some or all of the preferred stock to effect a business combination. In addition, the preferred stock could be utilized as a method of discouraging, delaying or preventing a change in control of us. Although we do not currently intend to issue any shares of preferred stock, we cannot assure you that we will not do so in the future.

Options

As of August 25, 2014, we had outstanding options to purchase an aggregate of 6,670,053 shares of our common stock, with a weighted average exercise price of $1.25.

Restricted Stock Awards

As of August 25, 2014, we had outstanding unvested restricted stock awards representing 358,500 shares of our common stock.

Warrants

On April 9, 2012, in connection with subscription agreements with certain institutional investors for the purchase and sale of 6,517,648 shares of our common stock, we issued (i) six-year warrants (“Series A Warrants”) to purchase 6,517,648 shares of common stock at an exercise price of $1.15 per share and (ii) six-month warrants (“Series B Warrants”) to purchase 6,517,648 shares of common stock at an exercise price of $0.85 per share. During the year ended December 31, 2012, Series B Warrants to purchase 5,761,765 shares of common stock were exercised at a price of $0.85 per share. The remaining Series B

Warrants to purchase 755,883 shares of common stock expired in October 2012. During the year ended December 31, 2013, Series A Warrants to purchase 1,109,010 shares of common stock were exercised resulting in gross proceeds of approximately $1,275,000. The remaining Series A Warrants to purchase 5,408,638 shares of common stock will expire in April 2018. The Series A Warrants contain weighted average anti-dilution adjustment provisions that will result in a reduction in the exercise price as a result of this offering.

We also have outstanding warrants to purchase 42,254 shares of common stock at an exercise price of $2.13 held by a former lender which expire in December 2014.

Our Transfer Agent

The transfer agent for our common stock is Continental Stock Transfer & Trust Company, New York, New York.

Delaware Anti-Takeover Law

We will be subject to the provisions of Section 203 of the DGCL regulating corporate takeovers upon consummation of this offering. This statute prevents certain Delaware corporations, under certain circumstances, from engaging in a "business combination" with:

- a stockholder who owns 15% or more of our outstanding voting stock (otherwise known as an "interested stockholder");
- an affiliate of an interested stockholder; or
- an associate of an interested stockholder, for three years following the date that the stockholder became an interested stockholder.

A "business combination" includes a merger or sale of more than 10% of our assets. However, the above provisions of Section 203 do not apply if:

- our board of directors approves the transaction that made the stockholder an "interested stockholder," prior to the date of the transaction;
- after the completion of the transaction that resulted in the stockholder becoming an interested stockholder, that stockholder owned at least 85% of our voting stock outstanding at the time the transaction commenced, other than statutorily excluded shares of common stock; or
- on or subsequent to the date of the transaction, the business combination is approved by our board of directors and authorized at a meeting of our stockholders, and not by written consent, by an affirmative vote of at least two-thirds of the outstanding voting stock not owned by the interested stockholder.

DESCRIPTION OF SECURITIES WE ARE OFFERING

We are offering units, each unit consisting of one share of our common stock and 0.75 of a Class A Warrant, each full warrant to purchase one share of our common stock.

The units will not be issued or certificated. The shares of common stock and the Class A Warrants that we are issuing are immediately separable and will be issued separately. We are also registering the shares of common stock issuable from time to time upon exercise of the Class A Warrants offered hereby.

Common Stock

The material terms and provisions of our common stock and each other class of our securities which qualifies or limits our common stock are described under the caption "Description of Capital Stock" in this prospectus.

Class A Warrants

The following summary of certain terms and provisions of Class A Warrants that are being offered hereby is not complete and is subject to, and qualified in its entirety by the provisions of the Class A Warrant, the form of which has been filed as an exhibit to the registration statement of which this prospectus is a part. Prospective investors should carefully review the terms and provisions of the form of Class A Warrant for a complete description of the terms and conditions of the Class A Warrants.

Duration and Exercise Price

The Class A Warrants offered hereby will entitle the holders thereof to purchase an aggregate of 15,000,000 shares of our common stock at an initial exercise price per share of common stock equal to 110% of the closing price of our common stock on the date of pricing. The Class A Warrants will be exercisable beginning on the later of (i) one year and one day from the date of issuance and (ii) the date our stockholders approve either an increase in the number of our authorized shares of common stock or a reverse stock split, in either case in an amount sufficient to permit the exercise in full of the Class A Warrants and will expire on the fifth anniversary of the date they first become exercisable. The Class A Warrants will be issued separately from the common stock included in the units, and may be transferred separately immediately thereafter. Class A Warrants will be issued in certificated form only.

Exercisability

The Class A Warrants will be exercisable, at the option of each holder, in whole or in part, by delivering to us a duly executed exercise notice accompanied by payment in full for the number of shares of our common stock purchased upon such exercise (except in the case of a cashless exercise as discussed below). A holder (together with its affiliates) may not exercise any portion of the warrant to the extent that the holder would own more than 4.99% of the outstanding common stock after exercise, except that upon at least 61 days' prior notice from the holder to us, the holder may increase the amount of ownership of outstanding stock after exercising the holder's warrants up to 9.99% of the number of shares of our common stock outstanding immediately after giving effect to the exercise, as such percentage ownership is determined in accordance with the terms of the Class A Warrants.

Stockholder Approval; Payment of Liquidated Damages; Registration of Warrant Shares.

We have agreed to hold a stockholders meeting no later than March 31, 2015 in order to seek stockholder approval for an amendment to our certificate of incorporation to either (i) increase the number of shares of common stock we are authorized to issue or (ii) effect a reverse split of the common stock, in either case in an amount sufficient to permit the exercise in full of the Class A Warrants in accordance with their terms. In the event that we are unable to effect an increase in our authorized shares of common stock or effect a reverse split of our common stock prior to October , 2015, we will be required to pay liquidated damages in the aggregate amount of $2,500,000.

After the increase in the authorized shares of common stock or reverse split of our common stock, we have agreed to register under the Securities Act the shares of our common stock issuable upon exercise of the Class A Warrants. We will not be required to register the shares of our common stock issuable upon exercise of the Class A Warrants if we deliver an opinion of counsel reasonably satisfactory to the underwriter that

registration is not required because of either the cashless exercise rights described below or because an exemption from registration is available. If we deliver the opinion of counsel, we will publicly announce that no registration statement will be filed and explain how holders may exercise their Class A Warrants.

Cashless Exercise

If, at the time a holder exercises its Class A Warrant, there is no effective registration statement registering, or the prospectus contained therein is not available for an issuance of the shares underlying the Class A Warrant to the holder, then in lieu of making the cash payment otherwise contemplated to be made to us upon such exercise in payment of the aggregate exercise price, the holder may elect instead to receive upon such exercise (either in whole or in part) the net number of shares of common stock determined according to a formula set forth in the Class A Warrant.

Fundamental Transactions

In the event of any fundamental transaction, as described in the Class A Warrants and generally including any merger with or into another entity, sale of all or substantially all of our assets, tender offer or exchange offer, or reclassification of our common stock, then upon any subsequent exercise of a Class A Warrant, the holder will have the right to receive as alternative consideration, for each share of our common stock that would have been issuable upon such exercise immediately prior to the occurrence of such fundamental transaction, the number of shares of common stock of the successor or acquiring corporation or of our company, if it is the surviving corporation, and any additional consideration receivable upon or as a result of such transaction by a holder of the number of shares of our common stock for which the Class A Warrant is exercisable immediately prior to such event.

Transferability

Subject to applicable laws and the restriction on transfer set forth in the Class A Warrant, the Class A Warrant may be transferred at the option of the holder upon surrender of the Class A Warrant to us together with the appropriate instruments of transfer.

Exchange Listing

We do not intend to list the Class A Warrants on any securities exchange or other trading market.

Right as a Shareholder

Except as otherwise provided in the Class A Warrants or by virtue of such holder's ownership of shares of our common stock, the holders of the Class A Warrants do not have the rights or privileges of holders of our common stock, including any voting rights, until they exercise their Class A Warrants.

Waivers and Amendments

Subject to certain exceptions, any term of the Class A Warrants may be amended or waived with our written consent and the written consent of the holders of at least a majority of the then-outstanding Class A Warrants.

UNDERWRITING

We have entered into an underwriting agreement with Roth Capital Partners, LLC with respect to the units subject to this offering. Subject to certain conditions, we have agreed to sell to the underwriter, and the underwriter has agreed to purchase, the number of units provided below opposite its name.

Underwriter	Number of Units
Roth Capital Partners, LLC	
Total	20,000,000

The underwriter is offering the units subject to its acceptance of the units from us and subject to prior sale. The underwriting agreement provides that the obligation of the underwriter to pay for and accept delivery of the units offered by this prospectus are subject to the approval of certain legal matters by its counsel and to certain other conditions. The underwriter is obligated to take and pay for all of the units if any such units are taken.

Discounts, Commissions and Expenses

The underwriter has advised us that it proposes to offer the units to the public at the initial public offering price set forth on the cover page of this prospectus and to certain dealers at that price less a concession not in excess of $ per unit. The underwriter may allow, and certain dealers may reallow, a discount from the concession not in excess of $ per unit to certain brokers and dealers. After this offering the initial public offering price, concession and reallowance to dealers may be changed by the underwriter. No such change shall change the amount of proceeds to be received by us as set forth on the cover page of this prospectus. The units are offered by the underwriter as stated herein, subject to receipt and acceptance by it and subject to its right to reject any order in whole or in part. The underwriter has informed us that it does not intend to confirm sales to any accounts over which it exercises discretionary authority.

The following table shows the underwriting discounts and commissions payable to the underwriter by us in connection with this offering:

	Per unit[(1)]	Total
Public offering price	$	$
Underwriting discount	$	$

(1) Does not include the warrants to purchase shares of common stock equal to 3.0% of the number of shares of common stock included in the units sold in the offering (excluding the shares of common stock underlying the Class A Warrants) to be issued to the underwriter at the closing.

We estimate that expenses payable by us in connection with this offering, other than the underwriting discounts and commissions referred to above, will be approximately $255,000. We have agreed to reimburse the underwriter for certain out-of-pocket expenses provided that expenses exceeding $75,000 will require our prior approvals, such approval not to be unreasonably withheld; provided, further, that in no event will the reimbursable expenses exceed $100,000 in the aggregate.

Underwriter's Warrants

We have also agreed to issue to the underwriter warrants to purchase a number of our shares of common stock equal to an aggregate of 3.0% of the shares of common stock included in the units sold in this offering (excluding the shares of common stock underlying the Class A Warrants). The underwriter's warrants will have an exercise price equal to the public offering price of the units set forth on the cover of this prospectus and may be exercised on a cashless basis. The underwriter's warrants are not redeemable by us. This prospectus also covers the sale of the underwriter's warrants but not the shares of common stock issuable upon the exercise of the underwriter's warrants. Except as described above or as summarized below, the underwriter's warrants will be in substantially the same form as the Class A Warrants included in the units except that the underwriter's warrants will not include the liquidated damages rights contained in the Class A Warrants. The underwriter's warrants and the underlying shares of common stock have been deemed compensation by the Financial Institutions Regulatory Authority, Inc., or FINRA, and are therefore subject to

FINRA Rule 5110(g)(1). In accordance with FINRA Rule 5110(g)(1), neither the underwriter's warrants nor any shares of our common stock issued upon exercise of the underwriter's warrants may be sold, transferred, assigned, pledged, or hypothecated, or be the subject of any hedging, short sale, derivative, put, or call transaction that would result in the effective economic disposition of such securities by any person for a period of 180 days immediately following the date of effectiveness or commencement of sales of the offering pursuant to which the underwriter's warrants are being issued, except the transfer of any security:

- by operation of law or by reason of reorganization of our company;
- to any FINRA member firm participating in this offering and the officers or partners thereof, if all securities so transferred remain subject to the lock-up restriction described above for the remainder of the time period;
- if the aggregate amount of our securities held by either an underwriter or a related person do not exceed 1% of the securities being offered;
- that is beneficially owned on a pro-rata basis by all equity owners of an investment fund, provided that no participating member manages or otherwise directs investments by the fund, and participating members in the aggregate do not own more than 10% of the equity in the fund; or
- the exercise or conversion of any security, if all securities received remain subject to the lock-up restriction set forth above for the remainder of the time period.

In addition, in accordance with FINRA Rule 5110(f)(2)(G), the underwriter's warrants may not contain certain terms.

Right of First Refusal

Subject to certain limited exceptions, until November 18, 2015, Roth Capital Partners, LLC has a right of first refusal to act as our exclusive placement agent or lead underwriter and sole book runner, as applicable, in the event we decide to pursue an offering of our securities during such period.

Indemnification

We have agreed to indemnify the underwriter against certain liabilities, including liabilities under the Securities Act of 1933.

Lock-up Agreements

We, our officers, directors and certain of our shareholders have agreed, subject to limited exceptions, for a period of 90 days after the date of the underwriting agreement, not to offer, sell, contract to sell, pledge, grant any option to purchase, make any short sale or otherwise dispose of, directly or indirectly any shares of common stock or any securities convertible into or exchangeable for our common stock either owned as of the date of the underwriting agreement or thereafter acquired without the prior written consent of the underwriter. This 90-day period may be extended if (1) during the last 17 days of the 90-day period, we issue an earnings release or material news or a material event regarding us occurs or (2) prior to the expiration of the 90-day period, we announce that we will release earnings results during the 16-day period beginning on the last day of the 90-day period, then the period of such extension will be 18 days, beginning on the issuance of the earnings release or the occurrence of the material news or material event. If after any announcement described in clause (2) of the preceding sentence, we announce that we will not release earnings results during the 16-day period, the lock-up period shall expire the later of the expiration of the 90-day period and the end of any extension of such period made pursuant to clause (1) of the preceding sentence. The underwriter may, in its sole discretion and at any time or from time to time before the termination of the lock-up period, without notice, release all or any portion of the securities subject to lock-up agreements.

Price Stabilization, Short Positions and Penalty Bids

The underwriter has advised us that it does not intend to conduct any stabilization or over-allotment activities in connection with this offering.

Electronic Distribution

This prospectus in electronic format may be made available on websites or through other online services maintained by the underwriter, or by its affiliates. Other than this prospectus in electronic format, the information on the underwriter's website and any information contained in any other website maintained by the underwriter is not part of this prospectus or the registration statement of which this prospectus forms a part, has not been approved and/or endorsed by us or the underwriter in its capacity as underwriter, and should not be relied upon by investors.

Other

From time to time, the underwriter and/or its affiliates have provided, and may in the future provide, various investment banking and other financial services for us for which services it has received and, may in the future receive, customary fees. Except for services provided in connection with this offering, the underwriter has not provided any investment banking or other financial services during the 180-day period preceding the date of this prospectus and we do not expect to retain the underwriter to perform any investment banking or other financial services for at least 90 days after the date of this prospectus.

NOTICE TO INVESTORS

Notice to Investors in the United Kingdom

In relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (each, a "Relevant Member State") an offer to the public of any securities which are the subject of the offering contemplated by this prospectus may not be made in that Relevant Member State except that an offer to the public in that Relevant Member State of any such securities may be made at any time under the following exemptions under the Prospectus Directive, if they have been implemented in that Relevant Member State:

(a) to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

(b) to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000 and (3) an annual net turnover of more than €50,000,000, as shown in its last annual or consolidated accounts;

(c) by an underwriter to fewer than 100 natural or legal persons (other than qualified investors as defined in the Prospectus Directive); or

(d) in any other circumstances falling within Article 3(2) of the Prospectus Directive, provided that no such offer of these securities shall result in a requirement for the publication by the issuer or the underwriter of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer to the public" in relation to any of the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and any such securities to be offered so as to enable an investor to decide to purchase any such securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State and the expression "Prospectus Directive" means Directive 2003/71/EC and includes any relevant implementing measure in each Relevant Member State.

The underwriter has represented, warranted and agreed that:

(a) it has only communicated or caused to be communicated and will only communicate or cause to be communicated any invitation or inducement to engage in investment activity (within the meaning of section 21 of the Financial Services and Markets Act 2000 (the FSMA)) received by it in connection with the issue or sale of any of the securities in circumstances in which section 21(1) of the FSMA does not apply to the issuer; and

(b) it has complied with and will comply with all applicable provisions of the FSMA with respect to anything done by it in relation to the securities in, from or otherwise involving the United Kingdom.

European Economic Area

In particular, this document does not constitute an approved prospectus in accordance with European Commission's Regulation on Prospectuses no. 809/2004 and no such prospectus is to be prepared and approved in connection with this offering. Accordingly, in relation to each Member State of the European Economic Area which has implemented the Prospectus Directive (being the Directive of the European Parliament and of the Council 2003/71/EC and including any relevant implementing measure in each Relevant Member State) (each, a Relevant Member State), with effect from and including the date on which the Prospectus Directive is implemented in that Relevant Member State (the Relevant Implementation Date) an offer of securities to the public may not be made in that Relevant Member State prior to the publication of a prospectus in relation to such securities which has been approved by the competent authority in that Relevant Member State or, where appropriate, approved in another Relevant Member State and notified to the competent authority in that Relevant Member State, all in accordance with the Prospectus Directive, except that it may, with effect from and including the Relevant Implementation Date, make an offer of securities to the public in that Relevant Member State at any time:

- to legal entities which are authorized or regulated to operate in the financial markets or, if not so authorized or regulated, whose corporate purpose is solely to invest in securities;

- to any legal entity which has two or more of (1) an average of at least 250 employees during the last financial year; (2) a total balance sheet of more than €43,000,000; and (3) an annual net turnover of more than €50,000,000, as shown in the last annual or consolidated accounts; or
- in any other circumstances which do not require the publication by the Issuer of a prospectus pursuant to Article 3 of the Prospectus Directive.

For the purposes of this provision, the expression an "offer of securities to the public" in relation to any of the securities in any Relevant Member State means the communication in any form and by any means of sufficient information on the terms of the offer and the securities to be offered so as to enable an investor to decide to purchase or subscribe for the securities, as the same may be varied in that Member State by any measure implementing the Prospectus Directive in that Member State. For these purposes the units offered hereby are "securities."

LEGAL MATTERS

The validity of the shares of our common stock offered hereby has been passed upon for us by Loeb & Loeb LLP, New York, New York. Lowenstein Sandler LLP, New York, New York, is acting as counsel for the underwriter in this offering.

EXPERTS

The financial statements as of December 31, 2013 and 2012 and for each of the three years in the period ended December 31, 2013 have been included in this prospectus in reliance on the report of OUM & Co. LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

WHERE YOU CAN FIND MORE INFORMATION

We have filed a registration statement on Form S-1 with the SEC in connection with this offering. In addition, we file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy the registration statement and any other documents we have filed at the Securities and Exchange Commission's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for more information on its Public Reference Room. Our SEC filings are also available to the public at the SEC's Internet site at *http://www.sec.gov*. Our Internet website address is *http://www.titanpharm.com*. Information contained on the website does not constitute part of this registration statement.

This prospectus is part of the registration statement and does not contain all of the information included in the registration statement. Whenever a reference is made in this prospectus to any of our contracts or other documents, the reference may not be complete and, for a copy of the contract or document, you should refer to the exhibits that are a part of the registration statement.

You may request a copy of these filings, at no cost, by contacting us at:

Titan Pharmaceuticals, Inc.
400 Oyster Point Boulevard, Suite 550
South San Francisco, CA
(650) 989-2268
Attention: Brian Crowley

Index to Financial Statements

TITAN PHARMACEUTICALS, INC.

CONDENSED BALANCE SHEETS
(in thousands)

	June 30, 2014	December 31, 2013
	(unaudited)	(Note 1)
Assets		
Current assets:		
Cash	$ 8,853	$ 11,798
Receivables	3,743	4,818
Prepaid expenses and other current assets	216	204
Total current assets	12,812	16,820
Property and equipment, net	1,437	1,603
Total assets	$ 14,249	$ 18,423
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 3,832	$ 5,118
Accrued clinical trials expenses	131	118
Other accrued liabilities	364	293
Deferred contract revenue	3,494	5,317
Total current liabilities	7,821	10,846
Warrant liabilities	2,965	1,817
Total liabilities	10,786	12,663
Commitments and contingencies		
Stockholders' equity:		
Common stock, at amounts paid-in	284,448	284,485
Additional paid-in capital	22,078	21,692
Accumulated deficit	(303,063)	(300,417)
Total stockholders' equity	3,463	5,760
Total liabilities and stockholders' equity	$ 14,249	$ 18,423

See Notes to Condensed Financial Statements

TITAN PHARMACEUTICALS, INC.

CONDENSED STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)
(in thousands, except per share amount)
(unaudited)

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Revenues:				
License revenue	$ 911	$ 2,198	$ 1,823	$ 5,948
Royalty revenue	—	—	—	1,424
Total revenue	911	2,198	1,823	7,372
Operating expenses:				
Research and development	748	1,789	1,698	5,701
General and administrative	713	701	1,609	1,792
Total operating expenses	1,461	2,490	3,307	7,493
Loss from operations	(550)	(292)	(1,484)	(121)
Other income (expense):				
Interest expense, net	—	—	—	(1,569)
Other income (expense), net	(8)	(6)	(14)	10,438
Non-cash gain (loss) on changes in the fair value of warrants	(284)	5,362	(1,148)	2,317
Other income (expense), net	(292)	5,356	(1,162)	11,186
Net income (loss) and comprehensive income (loss)	$ (842)	$ 5,064	$ (2,646)	$11,065
Basic net income (loss) per common share	$ (0.01)	$ 0.06	$ (0.03)	$ 0.14
Diluted net income (loss) per common share	$ (0.01)	$ 0.00	$ (0.03)	$ 0.10
Weighted average shares used in computing basic net income (loss) per common share	88,998	82,527	88,964	80,403
Weighted average shares used in computing diluted net income (loss) per common share	88,998	82,559	88,964	86,271

See Notes to Condensed Financial Statements

TITAN PHARMACEUTICALS, INC.

CONDENSED STATEMENTS OF CASH FLOWS
(in thousands)
(unaudited)

	Six Months Ended June 30,	
	2014	**2013**
Cash flows from operating activities:		
Net income (loss)	$ (2,646)	$ 11,065
Adjustments to reconcile net income (loss) to net cash used in operating activities:		
Depreciation and amortization	176	12
Non-cash gain on settlement of long-term debt	—	(1,860)
Non-cash gain on termination of royalty purchase agreement	—	(8,962)
Non-cash (gain) loss on changes in fair value of warrants	1,148	(2,317)
Stock-based compensation	386	635
Changes in operating assets and liabilities:		
Receivables	1,075	795
Prepaid expenses and other assets	(12)	484
Accounts payable and other accrued liabilities	(1,202)	580
Deferred contract revenue	(1,823)	(5,948)
Net cash used in operating activities	(2,898)	(5,516)
Cash flows from investing activities:		
Purchases of furniture and equipment	(10)	(298)
Net cash used in investing activities	(10)	(298)
Cash flows from financing activities:		
Proceeds from issuing common stock from the exercise of stock options	—	113
Proceeds from the exercise of warrants, net of issuance costs	—	1,275
Issuance of common stock from the vesting of restricted shares	(37)	—
Payments on long-term debt	—	(2,500)
Net cash used in financing activities	(37)	(1,112)
Net decrease in cash and cash equivalents	(2,945)	(6,926)
Cash and cash equivalents at beginning of period	11,798	18,102
Cash and cash equivalents at end of period	$ 8,853	$ 11,176

See Notes to Condensed Financial Statements

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

1. Organization and Summary of Significant Accounting Policies

The Company

We are a specialty pharmaceutical company developing proprietary therapeutics for the treatment of serious medical disorders. Our product development programs utilize our proprietary long-term drug delivery platform, ProNeura®, and focus primarily on innovative treatments for chronic conditions with significant unmet medical needs and meaningful commercial potential. We are directly developing our product candidates and also utilize corporate, academic and government partnerships as appropriate. We operate in only one business segment, the development of pharmaceutical products.

Basis of Presentation

The accompanying unaudited condensed financial statements have been prepared in accordance with U.S. generally accepted accounting principles ("GAAP") for interim financial information and with the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statement presentation. In the opinion of management, all adjustments (consisting of normal recurring adjustments) considered necessary for a fair presentation have been included. Operating results for the three and six month periods ended June 30, 2014 are not necessarily indicative of the results that may be expected for the year ending December 31, 2014, or any future interim periods.

The balance sheet at December 31, 2013 has been derived from the audited financial statements at that date, but does not include all of the information and footnotes required by U.S. GAAP for complete financial statements. These unaudited condensed financial statements should be read in conjunction with the audited financial statements and footnotes thereto included in the Titan Pharmaceuticals, Inc. Annual Report on Form 10-K for the year ended December 31, 2013, as filed with the Securities and Exchange Commission ("SEC").

The preparation of financial statements in conformity with U.S. GAAP requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

The accompanying financial statements have been prepared assuming we will continue as a going concern. At June 30, 2014, we had cash of approximately $8.9 million, which we believe is sufficient to fund our planned operations into June 2015.

In the last several months our discussions with the FDA have focused on finalizing the clinical study design that will provide key information necessary to address the Complete Response Letter ("CRL") issued by the FDA in April 2013, and having recently reached agreement with the FDA, the Phase 3 clinical study of Probuphine began patient enrollment in July 2014, and study completion is anticipated by the middle of 2015. The clinical study is a randomized, double blind, double dummy design that is expected to enroll approximately 180 patients into two parallel treatment arms. This study is funded primarily by Braeburn Pharmaceuticals Sprl ("Braeburn") and Titan personnel provide ongoing support for the conduct of the study.

Revenue Recognition

We generate revenue principally from collaborative research and development arrangements, technology licenses, and government grants. Consideration received for revenue arrangements with multiple components is allocated among the separate units of accounting based on their respective selling prices. The selling price for each unit is based on vendor-specific objective evidence, or VSOE, if available, third party evidence if VSOE is not available, or estimated selling price if neither VSOE nor third party evidence is available. The applicable revenue recognition criteria are then applied to each of the units.

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

1. Organization and Summary of Significant Accounting Policies – (continued)

Revenue is recognized when the four basic criteria of revenue recognition are met: (1) a contractual agreement exists; (2) transfer of technology has been completed or services have been rendered; (3) the fee is fixed or determinable; and (4) collectibility is reasonably assured. For each source of revenue, we comply with the above revenue recognition criteria in the following manner:

- Technology license agreements typically consist of non-refundable upfront license fees, annual minimum access fees or royalty payments. Non-refundable upfront license fees and annual minimum payments received with separable stand-alone values are recognized when the technology is transferred or accessed, provided that the technology transferred or accessed is not dependent on the outcome of our continuing research and development efforts.
- Royalties earned are based on third-party sales of licensed products and are recorded in accordance with contract terms when third-party results are reliably measurable and collectibility is reasonably assured. We no longer recognize royalty income related to the Fanapt royalty payments received from Novartis unless Fanapt sales exceed certain thresholds (see Note 7, "Royalty Liability" for further discussion).
- Government grants, which support our research efforts in specific projects, generally provide for reimbursement of approved costs as defined in the notices of grants. Grant revenue is recognized when associated project costs are incurred.
- Collaborative arrangements typically consist of non-refundable and/or exclusive technology access fees, cost reimbursements for specific research and development spending, and various milestone and future product royalty payments. If the delivered technology does not have stand-alone value, the amount of revenue allocable to the delivered technology is deferred. Non-refundable upfront fees with stand-alone value that are not dependent on future performance under these agreements are recognized as revenue when received, and are deferred if we have continuing performance obligations and have no evidence of fair value of those obligations. Cost reimbursements for research and development spending are recognized when the related costs are incurred and when collections are reasonably expected. Payments received related to substantive, performance-based "at-risk" milestones are recognized as revenue upon achievement of the clinical success or regulatory event specified in the underlying contracts, which represent the culmination of the earnings process. Amounts received in advance are recorded as deferred revenue until the technology is transferred, costs are incurred, or a milestone is reached.

Research and Development Costs and Related Accrual

Research and development expenses include internal and external costs. Internal costs include salaries and employment related expenses, facility costs, administrative expenses and allocations of corporate costs. External expenses consist of costs associated with outsourced clinical research organization activities, sponsored research studies, product registration, patent application and prosecution, and investigator sponsored trials. We also record accruals for estimated ongoing clinical trial costs. Clinical trial costs represent costs incurred by clinical research organizations ("CROs") and clinical sites. These costs are recorded as a component of research and development expenses. Under our agreements, progress payments are typically made to investigators, clinical sites and CROs. We analyze the progress of the clinical trials, including levels of patient enrollment, invoices received and contracted costs when evaluating the adequacy of accrued liabilities. Significant judgments and estimates must be made and used in determining the accrued balance in any accounting period. Actual results could differ from those estimates under different assumptions. Revisions are charged to expense in the period in which the facts that give rise to the revision become known.

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

1. Organization and Summary of Significant Accounting Policies – (continued)

Recent Accounting Pronouncements

In July 2013, the FASB issued ASU No. 2013-11, *Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists*, providing guidance on the presentation of unrecognized tax benefits in the financial statements as either a reduction to a deferred tax asset or either a liability to better reflect the manner in which an entity would settle at the reporting date any additional income taxes that would result from the disallowance of a tax position when net operating loss carryforwards, similar tax losses or tax credit carryforwards exist. The amendments in this ASU do not require new recurring disclosures. The amendments in this ASU are effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. The amendments in this ASU should be applied prospectively to all unrecognized tax benefits that exist at the effective date. The adoption of the amendments in this ASU did not have a significant impact on our financial statements.

In May 2014, the FASB issued ASU No. 2014-09, *Revenue from Contracts with Customers* ("ASU 2014-09"), which supersedes nearly all existing revenue recognition guidance under U.S. GAAP. The core principle of ASU 2014-09 is to recognize revenues when promised goods or services are transferred to customers in an amount that reflects the consideration to which an entity expects to be entitled for those goods or services. ASU 2014-09 defines a five step process to achieve this core principle and, in doing so, more judgment and estimates may be required within the revenue recognition process than are required under existing U.S. GAAP.

The standard is effective for annual periods beginning after December 15, 2016, and interim periods therein, using either of the following transition methods: (i) a full retrospective approach reflecting the application of the standard in each prior reporting period with the option to elect certain practical expedients, or (ii) a retrospective approach with the cumulative effect of initially adopting ASU 2014-09 recognized at the date of adoption (which includes additional footnote disclosures). We are currently evaluating the impact of our pending adoption of ASU 2014-09 on our financial statements and have not yet determined the method by which we will adopt the standard.

In June 2014, the FASB issued ASU No. 2014-12, *Accounting for Share-Based Payments When the Terms of an Award Provide That a Performance Target Could Be Achieved after the Requisite Service Period* ("ASU 2014-12"). The standard provides guidance that a performance target that affects vesting of a share-based payment and that could be achieved after the requisite service condition is a performance condition. As a result, the target is not reflected in the estimation of the award's grant date fair value. Compensation cost for such award would be recognized over the required service period, if it is probably that the performance condition will be achieved. ASU 2014-12 is effective for annual reporting periods beginning after December 15, 2015. Early adoption is permitted. The guidance should be applied on a prospective basis to awards that are granted or modified on or after the effective date. Companies also have the option to apply the amendments on a modified retrospective basis for performance targets outstanding on or after the beginning of the first annual period presented as of the adoption date. We are currently evaluating the impact of our pending adoption of ASU 2014-12 on our financial statements and the method by which we will adopt the standard.

Subsequent Events

We have evaluated events that have occurred after June 30, 2014 and through the date that the financial statements are issued.

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

1. Organization and Summary of Significant Accounting Policies – (continued)

Fair Value Measurements

We measure the fair value of financial assets and liabilities based on authoritative guidance which defines fair value, establishes a framework consisting of three levels for measuring fair value, and expands disclosures about fair value measurements. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. There are three levels of inputs that may be used to measure fair value:

Level 1 — quoted prices in active markets for identical assets or liabilities

Level 2 — quoted prices for similar assets and liabilities in active markets or inputs that are observable;

Level 3 — inputs that are unobservable (for example cash flow modeling inputs based on assumptions).

Financial instruments, including cash, receivables, accounts payable and accrued liabilities are carried at cost, which we believe approximates fair value due to the short-term nature of these instruments. Our warrant liabilities are classified within level 3 of the fair value hierarchy because the value is calculated using significant judgment based on our own assumptions in the valuation of these liabilities.

As a result of the fair value adjustment of the warrant liabilities, we recorded a non-cash loss on an increase in the fair value of $0.3 million and $1.1 million for the three and six months ended June 30, 2014, respectively, in our Condensed Statements of Operations and Comprehensive Income (Loss). See Note 8, “Warrant Liability” for further discussion on the calculation of the fair value of the warrant liabilities.

(in thousands)	Warrant Liability
Total warrant liability at December 31, 2013	$ 1,817
Adjustment to record warrants at fair value	1,148
Total warrant liability at June 30, 2014	$ 2,965

2. Stock Plans

The following table summarizes the stock-based compensation expense recorded for awards under the stock option plans for the three and six month periods ended June 30, 2014 and 2013:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except per share amounts)	2014	2013	2014	2013
Research and development	$ 28	$ 52	$ 173	$ 356
General and administrative	32	78	213	279
Total stock-based compensation expenses	$ 60	$ 130	$ 386	$ 635

No tax benefit was recognized related to stock-based compensation expense since we have incurred operating losses and we have established a full valuation allowance to offset all the potential tax benefits associated with our deferred tax assets.

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

2. Stock Plans – (continued)

We use the Black-Scholes-Merton option-pricing model with the following assumptions to estimate the stock-based compensation expense for the three and six month periods ended June 30, 2014 and 2013:

	Three Months Ended June 30,		Six Months Ended June 30,	
	2014	2013	2014	2013
Weighted-average risk-free interest rate	1.7%	1.0%	2.0%	0.8%
Expected dividend payments	—	—	—	—
Expected holding period (years)[1]	4.2	3.9	6.5	4.2
Weighted-average volatility factor[2]	1.67	1.56	1.66	1.70
Estimated forfeiture rates[3]	31%	32%	31%	32%

(1) Expected holding periods are based on the simplified method provided in Staff Accounting Bulletin No. 107 for "plain vanilla options."

(2) Weighted average volatility is based on the historical volatility of our common stock.

(3) Estimated forfeiture rates are based on historical data.

No options were granted during the three month periods ended June 30, 2014 and 2013.

The following table summarizes option activity for the six month period ended June 30, 2014:

(in thousands, except per share amounts)	Options	Weighted Average Exercise Price	Weighted Average Remaining Option Term	Aggregate Intrinsic Value
Outstanding at January 1, 2014	6,732	$ 1.31	5.75	$ —
Granted	275	0.66		
Exercised	—	—		
Expired or cancelled	(310)	2.05		
Forfeited	(27)	1.66		
Outstanding at June 30, 2014	6,670	$ 1.25	5.53	$ 37
Exercisable at June 30, 2014	6,595	$ 1.26	5.48	$ 28

The following table summarizes restricted stock activity for the six month period ended June 30, 2014:

(in thousands, except per share amounts)	Restricted Stock	Weighted Average Exercise Price	Weighted Average Remaining Term	Aggregate Intrinsic Value
Outstanding at January 1, 2014	—	$ —	—	$ —
Granted	617	—		
Released	(259)	—		
Expired or cancelled	—	—		
Forfeited	—	—		
Outstanding at June 30, 2014	358	$ —	9.62	$ 281
Exercisable at June 30, 2014	—	$ —	—	$ —

No shares of restricted stock were awarded to employees, directors and consultants during the three month periods ended June 30, 2014 and 2013.

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

2. Stock Plans – (continued)

As of June 30, 2014, there was approximately $141,000 of total unrecognized compensation expense related to non-vested options and restricted stock. This expense is expected to be recognized over a weighted-average period of 0.6 years.

3. Net Income (Loss) Per Share

Basic net income (loss) per share excludes the effect of dilution and is computed by dividing net income (loss) by the weighted-average number of shares outstanding for the period. Diluted net income (loss) per share reflects the potential dilution that could occur if securities or other contracts to issue shares were exercised into shares. In calculating diluted net income (loss) per share, the numerator is adjusted for the change in the fair value of the warrant liability (only if dilutive) and the denominator is increased to include the number of potentially dilutive common shares assumed to be outstanding during the period using the treasury stock method.

The following table sets forth the reconciliation of the numerator and denominator used in the computation of basic and diluted net income (loss) per common share for the three and six months ended June 30, 2014 and 2013:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands, except per share amounts)	2014	2013	2014	2013
Numerator:				
Net income (loss) used for basic earnings per share	$ (842)	$ 5,064	$ (2,646)	$ 11,065
Less change in fair value of warrant liability	—	5,362	—	2,317
Net (loss) income used for diluted earnings per share	$ (842)	$ (298)	$ (2,646)	$ 8,748
Denominator:				
Basic weighted-average outstanding common shares	88,998	82,527	88,964	80,403
Effect of dilutive potential common shares resulting from options	—	—	—	1,226
Effect of dilutive potential common shares resulting from warrants	—	32	—	4,642
Weighted-average shares outstanding – diluted	88,998	82,559	88,964	86,271
Net income (loss) per common share:				
Basic	$ (0.01)	$ 0.06	$ (0.03)	$ 0.14
Diluted	$ (0.01)	$ 0.00	$ (0.03)	$ 0.10

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

3. Net Income (Loss) Per Share – (continued)

The table below presents common shares underlying stock options and warrants that are excluded from the calculation of the weighted average number of common shares outstanding used for the calculation of diluted net income (loss) per common share. These are excluded from the calculation due to their anti-dilutive effect for the three and six months ended June 30, 2014 and 2013:

	Three Months Ended June 30,		Six Months Ended June 30,	
(in thousands)	2014	2013	2014	2013
Weighted-average anti-dilutive common shares resulting from options	6,485	3,302	7,077	1,175
Weighted-average anti-dilutive common shares resulting from warrants	4,110	1,334	3,967	23
	10,595	4,636	11,044	1,198

4. Comprehensive Income (Loss)

Comprehensive income and loss for the periods presented is comprised solely of our net income and loss. We had no items of other comprehensive income (loss) during the three and six-month periods ended June 30, 2014 and 2013. Comprehensive loss for the three and six-month periods ended June 30, 2014 was $0.8 million and $2.6 million, respectively. Comprehensive income for the three and six-month periods ended June 30, 2013 was $5.1 million and $11.1 million, respectively.

5. Braeburn License

In December 2012, we entered into the Agreement with Braeburn granting Braeburn exclusive commercialization rights to Probuphine in the United States and its territories, including Puerto Rico, and Canada. As part of the Agreement, we received a non-refundable up-front license fee of $15.75 million (approximately $15.0 million, net of expenses), and would have received $45.0 million upon approval by the FDA of the NDA as well as up to an additional $130.0 million upon achievement of specified sales milestones and up to $35.0 million in regulatory milestones for additional indications, including chronic pain. We would have received tiered royalties on net sales of Probuphine ranging from the mid-teens to the low twenties.

On May 28, 2013, we entered into the Amendment to the Agreement primarily to modify certain of the termination provisions of the Agreement. The Amendment gives Braeburn the right to terminate the Agreement in the event that (A) after May 28, 2013, based on written or oral communications from or with the FDA, Braeburn reasonably determines either that the FDA will require significant development to be performed before approval of the Probuphine™ NDA can be given, such as, but not limited to, one or more additional controlled clinical studies with a clinical efficacy endpoint, or substantial post-approval commitments that may materially impact the product's financial returns or that the FDA will require one or more changes in the proposed label, which change(s) Braeburn reasonably determines will materially reduce the authorized prescribed patient base, or (B) the NDA has not been approved by the FDA on or before June 30, 2014. The Amendment also provides that we will share in legal and consulting expenses in excess of a specified amount prior to approval of the NDA.

On July 2, 2013, we entered into the Second Amendment to the Agreement primarily to establish and provide the parameters for a committee comprised of representatives of Titan and Braeburn responsible for and with the authority to make all decisions regarding the development and implementation of a strategic plan to seek approval from the FDA of Probuphine® for subdermal use in the maintenance treatment of adult patients with opioid dependence, including development of the strategy for all written and oral communications with the FDA. The Second Amendment also makes Braeburn the primary contact for FDA communications regarding the Probuphine NDA.

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

5. Braeburn License – (continued)

On November 12, 2013, we entered into the stock purchase agreement pursuant to which Braeburn made a $5 million equity investment in our company and the Third Amendment primarily to modify the amount and timing of the approval and sales milestone payments payable under the Agreement. Under the Third Amendment, we are entitled to receive a $15 million payment upon FDA approval of the NDA, up to $165 million in sales milestones and $35 million in regulatory milestones. We are entitled to receive a tiered royalty in the mid-teens to low twenties on all net sales of Probuphine. In addition, we are entitled to receive a low single digit royalty on sales by Braeburn, if any, of other continuous delivery treatments for opioid dependence as defined in the Third Amendment and can elect to receive a low single digit royalty on sales by Braeburn, if any, of other products in the addiction market in exchange for a similar reduction in our royalties on Probuphine.

6. Commitments and Contingencies

Financing Agreements

On March 15, 2011, we entered into several agreements with Deerfield, including a facility agreement (the "Facility Agreement"), pursuant to which we issued Deerfield promissory notes in the aggregate principal amount of $20.0 million. The long-term debt bore interest at 8.5% per annum, payable quarterly, and was originally repayable over five years, with 10% of the principal amount due on the first anniversary, 15% due on the second anniversary, and 25% due on each of the next three anniversaries. In connection with the Facility Agreement, we issued Deerfield six-year warrants (the "Deerfield Warrants") to purchase 6,000,000 shares of our common stock at an exercise price of $1.57 per share. See Note 8, "Warrant Liability" for further discussion. As a result of our April 2012 sale of equity, and pursuant to the terms of the Deerfield Warrants, the exercise price of the Deerfield Warrants was adjusted to $1.25 per share. We also entered into a royalty agreement with Deerfield (the "Royalty Agreement") in exchange for $3.0 million. See Note 7, "Royalty Liability" for further discussion.

We recorded the promissory notes with an aggregate principal amount of $20.0 million at its face value less a note discount consisting of (i) $3.0 million cash discount, (ii) a $500,000 loan fee, and (iii) the $5.5 million fair value of the associated warrants. The note discount totaling $9.0 million was amortized using the interest method.

On November 14, 2011, we entered into several agreements with Deerfield pursuant to which we agreed to pay a substantial portion of the remaining future royalties on the sales of Fanapt to Deerfield in exchange for $5.0 million in cash that was recorded as royalty liability (see Note 7, "Royalty Liability" for further discussion), a $10.0 million reduction in the principal amount owed to Deerfield under the existing facility agreement and a revised principal repayment schedule of $2.5 million per year for four years commencing in April 2013 to retire the remaining long-term debt of $10.0 million. We evaluated the November 2011 principal reduction and other amendments to the $20.0 million facility agreement and determined that the modifications should be accounted for as a troubled debt restructuring on a prospective basis. As a result, we recognized the difference between the carrying value of the long-term debt and the total required future principal and interest payments as interest expense over the remaining term using the interest method.

On February 6, 2013, the Facility Agreement was amended to provide that the exercise price of the Deerfield Warrants could be satisfied through a reduction in the principal amount of our outstanding indebtedness to Deerfield. In February and March 2013, Deerfield exercised all of the Deerfield Warrants resulting in a reduction of our outstanding indebtedness to Deerfield of $7.5 million and, accordingly, cancellation of our obligation to make the 2014, 2015 and 2016 installment payments under the Facility Agreement. This resulted in a gain of $1.9 million which was recorded in Other Income (Expense). On April 1, 2013, we made the final principal payment of $2.5 million under the facility agreement.

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

6. Commitments and Contingencies – (continued)

In 1997, we entered into an exclusive license agreement with Sanofi-Aventis SA (formerly Hoechst Marion Roussel, Inc.). The agreement gave us a worldwide license to the patent rights and know-how related to the antipsychotic agent Fanapt (iloperidone), including the ability to develop, use, sublicense, manufacture and sell products and processes claimed in the patent rights. Upon commercialization of the product, the license agreement provides that we will pay royalties based on net sales. Net sales of Fanapt by Novartis during the three-month periods ended June 30, 2014 and 2013 were approximately $15.7 million and $16.7 million, respectively, and we were obligated to pay royalties of approximately $2.4 million and $3.1 million to Sanofi-Aventis on June 30, 2014 and December 31, 2013, respectively, which were included in Accounts Receivable and Accounts Payable on the Condensed Balance Sheets.

Legal Proceedings

There are no ongoing legal proceedings against our company.

7. Royalty Liability

On March 15, 2011, under the Royalty Agreement with Deerfield, in exchange for $3.0 million that was recorded as royalty liability, we agreed to pay Deerfield 2.5% of the net sales of Fanapt, constituting a portion of the royalty revenue that we are entitled to under our sublicense agreement with Novartis. The agreements with Deerfield also provided us with the option to repurchase the royalty rights for $40.0 million.

The $3.0 million received under the Royalty Agreement was recorded as a royalty liability in accordance with the appropriate accounting guidance as the related agreement includes a provision which allowed us to repurchase the royalty rights from Deerfield through a payment of a lump sum. Interest on the royalty liability was recognized using the interest method based on the estimated future royalties expected to be paid under the Royalty Agreement.

Under the November 14, 2011 amended and restated royalty agreement, in exchange for an additional $5.0 million royalty liability, Deerfield is entitled to our portion of the royalties on Fanapt (5.5% to 7.5% of net sales, net of the 2.5% previously agreed to have been provided to Deerfield) up to specified threshold levels of net sales of Fanapt and 40% of the royalties above the threshold level. We retain 60% of the royalties on net sales of Fanapt above the threshold levels. The $5.0 million received was recorded as a royalty liability in accordance with the appropriate accounting guidance as the related agreement included a provision which allowed us to repurchase the royalty rights from Deerfield through a payment of a lump sum. Interest on this royalty obligation was recognized using the interest method based on the estimated future royalties expected to be paid under the royalty agreement.

On March 28, 2013, we amended the agreements with Deerfield terminating our option to repurchase the royalty rights. As a result, we recognized a gain on the extinguishment of the royalty liability of approximately $9.0 million, which was recorded in other income, because we are no longer required to account for it as a liability. Additionally, we will no longer recognize royalty income related to the Fanapt royalty payments received from Novartis unless Fanapt sales exceed certain thresholds.

8. Warrant Liability

On March 15, 2011, in connection with the Facility Agreement, we issued Deerfield six-year warrants to purchase 6,000,000 shares of our common stock at an initial exercise price of $1.57 per share. As a result of our April 2012 sale of equity, and pursuant to the terms of the Deerfield Warrants, the exercise price of the Deerfield Warrants was adjusted to $1.25 per share. The Deerfield Warrants expire on March 15, 2017. The Deerfield Warrants contain a provision where the warrant holder has the option to receive cash, equal to the Black-Scholes fair value of the remaining unexercised portion of the warrant, as cash settlement in the event that there is a fundamental transaction (contractually defined to include various merger, acquisition or stock transfer activities). Due to this provision, ASC 480 *Distinguishing Liabilities from Equity* requires that these

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

8. Warrant Liability – (continued)

warrants be classified as liabilities. The fair values of these warrants have been determined using the Binomial Lattice ("Lattice") valuation model, and the changes in the fair value are recorded in the Condensed Statements of Operations and Comprehensive Income (Loss). The Lattice model provides for assumptions regarding volatility and risk-free interest rates within the total period to maturity.

On February 6, 2013, the Facility Agreement was amended to provide that the exercise price of the Deerfield Warrants could be satisfied through a reduction in the principal amount of our outstanding indebtedness to Deerfield. In February and March 2013, Deerfield exercised all of the Deerfield Warrants resulting in a $7.5 million reduction in the amount owed to Deerfield. See Note 6, "Commitments and Contingencies" for further discussion.

On April 9, 2012, in connection with subscription agreements with certain institutional investors for the purchase and sale of 6,517,648 shares of our common stock, we issued (i) six-year warrants ("Series A Warrants") to purchase 6,517,648 shares of common stock at an exercise price of $1.15 per share and (ii) six-month warrants ("Series B Warrants") to purchase 6,517,648 shares of common stock at an exercise price of $0.85 per share. The Series A Warrants and Series B Warrants contain a provision where the warrant holder has the option to receive cash, equal to the Black Scholes fair value of the remaining unexercised portion of the warrant, as cash settlement in the event that there is a fundamental transaction (contractually defined to include various merger, acquisition or stock transfer activities). Due to this provision, ASC 480 *Distinguishing Liabilities from Equity* requires that these warrants be classified as liabilities. The fair values of these warrants have been determined using the Lattice valuation model, and the changes in the fair value are recorded in the Condensed Statements of Operations and Comprehensive Income (Loss). The Lattice model provides for assumptions regarding volatility and risk-free interest rates within the total period to maturity.

In September and October 2012, Series B Warrants to purchase 5,761,765 shares of common stock were exercised at a price of $0.85 per share. The remaining Series B Warrants to purchase 755,883 shares of common stock expired in October 2012.

In January and March 2013, Series A Warrants to purchase 1,109,010 shares of common stock were exercised resulting in gross proceeds of approximately $1,275,000. The remaining Series A Warrants to purchase 5,408,638 shares of common stock will expire in April 2018.

The key assumptions used to value the Series A Warrants were as follows:

Assumption	June 30, 2014	December 31, 2013
Expected price volatility	115%	90%
Expected term (in years)	3.78	4.27
Risk-free interest rate	1.17%	1.40%
Dividend yield	0.00%	0.00%
Weighted-average fair value of warrants	$ 0.55	$ 0.34

TITAN PHARMACEUTICALS, INC.

NOTES TO CONDENSED FINANCIAL STATEMENTS
(unaudited)

9. Stockholders' Equity

Common Stock

In November 2013, we entered into a stock purchase agreement with Braeburn pursuant to which we sold 6,250,000 shares of our common stock for an aggregate purchase price of $5.0 million, or $0.80 per share.

In April 2013, 144,499 shares of common stock were issued to a former lender upon the cashless net exercise of 287,356 warrants in accordance with the terms of the warrants.

In January and March 2013, Series A Warrants to purchase 1,109,010 shares of common stock were exercised resulting in gross proceeds of approximately $1,275,000.

On February 6, 2013, the Facility Agreement with Deerfield was amended to provide that the exercise price of the Deerfield Warrants could be satisfied through a reduction in the principal amount of our outstanding indebtedness to Deerfield. In February and March 2013, Deerfield exercised the 6,000,000 Deerfield Warrants resulting in a $7.5 million reduction in the amount owed to Deerfield.

REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

The Board of Directors and Stockholders of
Titan Pharmaceuticals, Inc.

We have audited the accompanying balance sheets of Titan Pharmaceuticals, Inc. as of December 31, 2013 and 2012, the related statements of operations and comprehensive income (loss), stockholders' equity (deficit) and cash flows for each of the three years in the period ended December 31, 2013. 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 conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit also includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements audited by us present fairly, in all material respects, the financial position of Titan Pharmaceuticals, Inc. at December 31, 2013 and 2012, and the results of its operations and its cash flows for each of the three years in the period ended December 31, 2013, in conformity with U.S. generally accepted accounting principles.

/s/ OUM & Co. LLP

San Francisco, California
March 31, 2014

TITAN PHARMACEUTICALS, INC.

BALANCE SHEETS

	December 31, 2013	December 31, 2012
	(in thousands, except share and per share data)	
Assets		
Current assets:		
Cash	$ 11,798	$ 18,102
Receivables	4,818	4,646
Prepaid expenses and other current assets	204	687
Total current assets	16,820	23,435
Property and equipment, net	1,603	1,392
Total Assets	$ 18,423	$ 24,827
Liabilities and Stockholders' Equity (Deficit)		
Current liabilities:		
Accounts payable	$ 5,118	$ 3,767
Accrued clinical trials expenses	118	532
Other accrued liabilities	293	219
Deferred contract revenue	5,317	14,375
Current portion of long-term debt	—	2,500
Total current liabilities	10,846	21,393
Warrant liability	1,817	8,240
Royalty liability	—	8,962
Long-term debt, net of discount	—	9,360
Total Liabilities	12,663	47,955
Commitments and contingencies		
Stockholders' equity (deficit):		
Preferred stock, $0.001 par value per share; 5,000,000 shares authorized, none issued and outstanding at December 31, 2013 and 2012	—	—
Common stock, at amounts paid-in, $0.001 par value per share; 125,000,000 shares authorized, 88,794,222 and 75,215,713 shares issued and outstanding at December 31, 2013 and 2012, respectively	284,485	265,986
Additional paid-in capital	21,692	21,014
Accumulated deficit	(300,417)	(310,128)
Total stockholders' equity (deficit)	5,760	(23,128)
Total Liabilities and Stockholders' Equity (Deficit)	$ 18,423	$ 24,827

See accompanying notes to financial statements.

TITAN PHARMACEUTICALS, INC.

STATEMENTS OF OPERATIONS AND COMPREHENSIVE INCOME (LOSS)

	Years ended December 31,		
	2013	2012	2011
	(in thousands, except per share amount)		
Revenue:			
License revenue	$ 9,057	$ 2,325	$ —
Royalty revenue	1,424	4,750	3,585
Grant revenue	—	42	483
Total revenue	10,481	7,117	4,068
Operating expenses:			
Research and development	8,309	10,610	11,206
General and administrative	3,063	4,877	3,368
Total operating expenses	11,372	15,487	14,574
Loss from operations	(891)	(8,370)	(10,506)
Other income (expense):			
Interest expense, net	(1,568)	(4,861)	(6,430)
Other income (expense), net	10,433	(183)	(129)
Non-cash gain (loss) on changes in the fair value of warrants	1,737	(1,766)	1,862
Other income (expense), net	10,602	(6,810)	(4,697)
Net income (loss) and comprehensive income (loss) applicable to common stockholders	$ 9,711	$(15,180)	$(15,203)
Basic net income (loss) per common share	$ 0.12	$ (0.23)	$ (0.26)
Diluted net income (loss) per common share	$ 0.10	$ (0.23)	$ (0.28)
Weighted average shares used in computing basic net income (loss) per common share	82,099	66,509	59,324
Weighted average shares used in computing diluted net income (loss) per common share	82,659	66,509	60,392

See accompanying notes to financial statements.

TITAN PHARMACEUTICALS, INC

STATEMENTS OF STOCKHOLDERS' EQUITY (DEFICIT)
(in thousands)

	Common Stock		Additional Paid-In Capital	Accumulated Deficit	Accumulated Other Comprehensive Income (Loss)	Total Stockholders' Equity (Deficit)
	Shares	Amount				
Balances at December 31, 2010	**59,248**	**$256,436**	**$ 17,256**	**$(279,745)**	**$ —**	**$ (6,053)**
Net loss				(15,203)		(15,203)
Issuance of common stock upon vesting of restricted stock awards	139					—
Compensation related to stock options			1,177			1,177
Balances at December 31, 2011	**59,387**	**256,436**	**18,433**	**(294,948)**	**—**	**(20,079)**
Net loss				(15,180)		(15,180)
Issuance of common stock, net of issuance costs	9,917	4,653				4,653
Issuance of common stock upon exercise of warrants	5,762	4,897				4,897
Issuance of common stock upon vesting of restricted stock awards, net	150					—
Compensation related to stock options			2,581			2,581
Balances at December 31, 2012	**75,216**	**265,986**	**21,014**	**(310,128)**	**—**	**(23,128)**
Net income				9,711		9,711
Issuance of common stock, net of issuance costs	6,250	4,925				4,925
Issuance of common stock upon exercise of options	75	113				113
Issuance of common stock upon exercise of warrants	7,253	13,461				13,461
Compensation related to stock options			678			678
Balances at December 31, 2013	**88,794**	**$284,485**	**$ 21,692**	**$(300,417)**	**$ —**	**$ 5,760**

See accompanying notes to financial statements.

TITAN PHARMACEUTICALS, INC.

STATEMENTS OF CASH FLOWS

	Years ended December 31,		
	2013	2012	2011
		(in thousands)	
Cash flows from operating activities:			
Net income (loss)	$ 9,711	$(15,180)	$(15,203)
Adjustments to reconcile net income (loss) to net cash used in operating activities:			
Depreciation and amortization	107	17	32
Non-cash gain on settlement of long-term debt	(1,860)	—	—
Non-cash gain on termination of royalty purchase agreement	(8,962)	—	—
Amortization of discount on long-term debt	—	—	1,520
Interest on royalty liability	—	(347)	1,309
Non-cash (gain) loss on changes in fair value of warrants	(1,737)	1,766	(1,862)
Stock-based compensation	678	2,581	1,177
Changes in operating assets and liabilities:			
Receivables	(172)	(926)	(2,495)
Prepaid expenses and other assets	483	149	(542)
Accounts payable	1,351	(1,022)	2,332
Other accrued liabilities	(340)	417	(744)
Deferred contract revenue	(9,058)	14,375	—
Net cash provided by (used in) operating activities	(9,799)	1,830	(14,476)
Cash flows from investing activities:			
Purchases of furniture and equipment	(318)	(1,154)	(236)
Disposals of furniture and equipment	—	—	2
Net cash used in investing activities	(318)	(1,154)	(234)
Cash flows from financing activities:			
Proceeds from issuance of common stock from the exercise of stock options	113	—	—
Proceeds from issuance of common stock and warrants, net of issuance costs	4,925	7,516	—
Proceeds from the exercise of warrants, net of issuance costs	1,275	4,897	—
Proceeds from royalty financing	—	—	8,000
Proceeds from long-term debt, net	—	—	16,500
Payments on long-term debt	(2,500)	(393)	(7,564)
Net cash provided by financing activities	3,813	12,020	16,936
Net increase (decrease) in cash	(6,304)	12,696	2,226
Cash at beginning of period	18,102	5,406	3,180
Cash at end of period	$11,798	$ 18,102	$ 5,406
Supplemental disclosure of cash flow information			
Interest paid	$ 1,568	$ 2,576	$ 1,652
Schedule of non-cash transactions			
Settlement of long-term debt	$ 7,500	$ —	$ —
Fair value of warrants at the time of exercise	$ 4,686	$ —	$ —

See accompanying notes to financial statements.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

1. Organization and Summary of Significant Accounting Policies

The Company

We are a specialty pharmaceutical company developing proprietary therapeutics for the treatment of serious medical disorders. Our product development programs focus primarily on important pharmaceutical markets with significant unmet medical needs and commercial potential. We are directly developing our product candidates and also utilize corporate, academic and government partnerships as appropriate. Such collaborations have helped to fund product development and have enabled us to retain significant economic interest in our products. We operate in only one business segment, the development of pharmaceutical products.

Our principal asset is Probuphine®, the first slow release implant formulation of buprenorphine in development for the long term maintenance treatment of opioid dependence. It is designed to maintain a stable, around the clock blood level of the medicine in patients for six months following a single treatment. Upon completion of the Phase 3 clinical studies of Probuphine, we participated in a pre- NDA meeting with the FDA, and subsequently prepared and submitted the NDA in October 2012. On April 30, 2013, the FDA issued a complete response letter to our NDA stating that it cannot approve the application in its present form and outlining the FDA's request for additional clinical data demonstrating adequate clinical benefit to patients from this treatment, data from human factors testing of the training program for insertion and removal of the implants, as well as recommendations regarding product labeling, Risk Evaluation and Mitigation Strategy and non-clinical safety data. We are committed to addressing these issues and have been working diligently with our commercialization partner in the United States and Canada, Braeburn Pharmaceuticals Sprl ("Braeburn"), and a team of proven, expert clinical and regulatory advisors with experience in assisting companies through similar regulatory processes. Following a meeting with the FDA on November 19, 2013 and subsequent discussions, we and Braeburn have agreed in principle with the FDA on a path forward, which along with other steps includes conducting an additional clinical study that is designed to provide a non-inferiority comparison of treatment with a dose of four Probuphine implants in stable patients undergoing maintenance treatment with 8mg or less per day of an FDA approved sublingual formulation of buprenorphine. The clinical study protocol has been submitted for FDA review and further details of the study and implementation plans will be available after completion of the FDA review.

In December 2012, we entered into a license agreement with Braeburn Pharmaceuticals Sprl that grants Braeburn exclusive commercialization rights to Probuphine in the United States and Canada. We received a non-refundable up-front license fee of $15.75 million (approximately $15.0 million, net of expenses) and will receive a $15 million milestone payment upon approval by the FDA of the NDA. Additionally, we will be eligible to receive up to $165 million upon achievement of specified sales milestones and up to $35 million in regulatory milestones for additional indications, including chronic pain and tiered royalties on net sales ranging from the mid-teens to the low twenties.

The accompanying financial statements have been prepared assuming we will continue as a going concern. At December 31, 2013, we had cash of approximately $11.8 million, which we believe is sufficient to fund our planned operations into April 2015. While an agreement in principle with respect to a path forward has been reached with the FDA, details of the required additional clinical study in support of the Probuphine NDA, including size and the data analysis plan, have not yet been established. Accordingly, we cannot predict the timing of commencement or completion of the study.

Under the Agreement, as amended, Braeburn has the right to terminate based on the requirement for an additional clinical study in support of the NDA. If Braeburn were to exercise its right to terminate the Agreement, we would not have sufficient funds available to us to complete the FDA regulatory process and, in the event of ultimate approval, commercialize Probuphine without raising additional capital. If we are unable to complete a debt or equity offering, or otherwise obtain sufficient financing in such event, our business and prospects would be materially adversely impacted. Furthermore, in light of the substantial reduction in the milestone payment payable to us if the FDA ultimately approves Probuphine under the Third Amendment we

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

1. Organization and Summary of Significant Accounting Policies – (continued)

may be unable to continue our current Parkinson's disease development program and will not be able to pursue any additional programs beyond the very initial stages without obtaining additional financing, either through the sale of debt or equity securities, a corporate partnership or otherwise. We cannot assure you that the financing we need will be available on acceptable terms.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States requires management to make estimates and assumptions that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ from those estimates.

Stock-Based Compensation

We recognize compensation expense using a fair-value based method, for all stock-based payments including stock options and restricted stock awards and stock issued under an employee stock purchase plan. These standards require companies to estimate the fair value of stock-based payment awards on the date of grant using an option pricing model. See Note 12 "Stock Plans," for a discussion of our stock-based compensation plans. Our non-cash stock-based compensation expense related to employees and non-employee members of our board of directors totaled $0.7 million, $2.6 million and $1.2 million for the years ended December 31, 2013, 2012 and 2011, respectively.

Warrants Issued in Connection with Equity Financing

We generally account for warrants issued in connection with equity financings as a component of equity, unless there is a deemed possibility that we may have to settle warrants in cash. For warrants issued with deemed possibility of cash settlement, we record the fair value of the issued warrants as a liability at each reporting period and record changes in the estimated fair value as a non-cash gain or loss in the Statements of Operations and Comprehensive Income (Loss).

Cash, Cash Equivalents and Marketable Securities

Our investment policy emphasizes liquidity and preservation of principal over other portfolio considerations. We select investments that maximize interest income to the extent possible given these two constraints. We satisfy liquidity requirements by investing excess cash in securities with different maturities to match projected cash needs and limit concentration of credit risk by diversifying our investments among a variety of high credit-quality issuers and limit the amount of credit exposure to any one issuer. The estimated fair values have been determined using available market information. We do not use derivative financial instruments in our investment portfolio.

All investments with original maturities of three months or less are considered to be cash equivalents. Marketable securities, consisting primarily of high-grade debt securities including money market funds, U.S. government and corporate notes and bonds, and commercial paper, are classified as available-for-sale at time of purchase and carried at fair value. If the fair value of a security is below its amortized cost and we plan to sell the security before recovering its cost, the impairment is considered to be other-than-temporary. Other-than-temporary declines in fair value of our marketable securities are charged against interest income. We did not have cash equivalents or marketable securities as of December 31, 2013 and 2012 and for any of the periods presented.

Property and Equipment

Property and equipment are recorded at cost and depreciated using the straight-line method over the estimated useful lives of the assets ranging from three to five years. Leasehold improvements are amortized over the shorter of the lease term or the estimated useful life of the assets.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

1. Organization and Summary of Significant Accounting Policies – (continued)

Revenue Recognition

We generate revenue principally from collaborative research and development arrangements, technology licenses, and government grants. Consideration received for revenue arrangements with multiple components is allocated among the separate units of accounting based on their respective selling prices. The selling price for each unit is based on vendor-specific objective evidence, or VSOE, if available, third party evidence if VSOE is not available, or estimated selling price if neither VSOE nor third party evidence is available. The applicable revenue recognition criteria are then applied to each of the units.

Revenue is recognized when the four basic criteria of revenue recognition are met: (1) a contractual agreement exists; (2) transfer of technology has been completed or services have been rendered; (3) the fee is fixed or determinable; and (4) collectibility is reasonably assured. For each source of revenue, we comply with the above revenue recognition criteria in the following manner:

- Royalties earned are based on third-party sales of licensed products and are recorded in accordance with contract terms when third-party results are reliably measurable and collectibility is reasonably assured. Pursuant to certain license agreements, we earn royalties on the sale of Fanapt™ by Novartis in the U.S. As described in Note 4, “Agreement with Sanofi-Aventis SA” and Note 8, “Royalty Liability”, we are obligated to pay royalties on such sales to Sanofi-Aventis and Deerfield. As we have no performance obligations under the license agreements, we have recorded the royalties earned, net of royalties we are obligated to pay, as revenue in our Statement of Operations and Comprehensive Income (Loss).
- Collaborative arrangements typically consist of non-refundable and/or exclusive technology access fees, cost reimbursements for specific research and development spending, and various milestone and future product royalty payments. If the delivered technology does not have stand-alone value, the amount of revenue allocable to the delivered technology is deferred. Non-refundable upfront fees with stand-alone value that are not dependent on future performance under these agreements are recognized as revenue when received, and are deferred if we have continuing performance obligations and have no evidence of fair value of those obligations. Cost reimbursements for research and development spending are recognized when the related costs are incurred and when collections are reasonably expected. Payments received related to substantive, performance-based “at-risk” milestones are recognized as revenue upon achievement of the clinical success or regulatory event specified in the underlying contracts, which represent the culmination of the earnings process. Amounts received in advance are recorded as deferred revenue until the technology is transferred, costs are incurred, or a milestone is reached.
- Technology license agreements typically consist of non-refundable upfront license fees, annual minimum access fees or royalty payments. Non-refundable upfront license fees and annual minimum payments received with separable stand-alone values are recognized when the technology is transferred or accessed, provided that the technology transferred or accessed is not dependent on the outcome of our continuing research and development efforts.
- Government grants, which support our research efforts in specific projects, generally provide for reimbursement of approved costs as defined in the notices of grants. Grant revenue is recognized when associated project costs are incurred.

Research and Development Costs and Related Accrual

Research and development expenses include internal and external costs. Internal costs include salaries and employment related expenses, facility costs, administrative expenses and allocations of corporate costs. External expenses consist of costs associated with outsourced clinical research organization activities, sponsored research studies, product registration, patent application and prosecution, and investigator sponsored

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

1. Organization and Summary of Significant Accounting Policies – (continued)

trials. We also record accruals for estimated ongoing clinical trial costs. Clinical trial costs represent costs incurred by CROs, and clinical sites. These costs are recorded as a component of research and development expenses. Under our agreements, progress payments are typically made to investigators, clinical sites and CROs. We analyze the progress of the clinical trials, including levels of patient enrollment, invoices received and contracted costs when evaluating the adequacy of accrued liabilities. Significant judgments and estimates must be made and used in determining the accrued balance in any accounting period. Actual results could differ from those estimates under different assumptions. Revisions are charged to expense in the period in which the facts that give rise to the revision become known.

Net Income (Loss) Per Share

Basic net income (loss) per share excludes the effect of dilution and is computed by dividing net income (loss) by the weighted-average number of shares outstanding for the period. Diluted net income (loss) per share reflects the potential dilution that could occur if securities or other contracts to issue shares were exercised into shares. In calculating diluted net income (loss) per share, the numerator is adjusted for the change in the fair value of the warrant liability (only if dilutive) and the denominator is increased to include the number of potentially dilutive common shares assumed to be outstanding during the period using the treasury stock method.

The following table sets forth the reconciliation of the numerator and denominator used in the computation of basic and diluted net income (loss) per common share for the years ended December 31, 2013, 2012 and 2011:

	Years ended December 31,		
(in thousands, except per share amounts)	**2013**	**2012**	**2011**
Numerator:			
Net income (loss) used for basic earnings per share	$ 9,711	$(15,180)	$ (15,203)
Less change in fair value of warrant liability	1,737	—	1,862
Net (loss) income used for diluted earnings per share	$ 7,974	$(15,180)	$ (17,065)
Denominator:			
Basic weighted-average outstanding common shares	82,099	66,509	59,234
Effect of dilutive potential common shares resulting from options	493	—	906
Effect of dilutive potential common shares resulting from warrants	67	—	162
Weighted-average shares outstanding – diluted	82,659	66,509	60,392
Net income (loss) per common share:			
Basic	$ 0.12	$ (0.23)	$ (0.26)
Diluted	$ 0.10	$ (0.23)	$ (0.28)

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

1. Organization and Summary of Significant Accounting Policies – (continued)

The table below presents common shares underlying stock options and warrants that are excluded from the calculation of the weighted average number of shares of common stock outstanding used for the calculation of diluted net income (loss) per common share. These are excluded from the calculation due to their anti-dilutive effect for the years ended December 31, 2013, 2012 and 2011:

	Years ended December 31,		
(in thousands)	2013	2012	2011
Weighted-average anti-dilutive common shares resulting from options	2,628	4,213	2,399
Weighted-average anti-dilutive common shares resulting from warrants	675	3,011	1,841
	3,303	7,224	4,240

Comprehensive Income (Loss)

Comprehensive income and loss for the periods presented is comprised solely of our net income and loss. Comprehensive income for the year ended December 31, 2013 was $9.7 million. Comprehensive loss for the years ended December 31, 2012 and 2011 was $15.2 million.

Recent Accounting Pronouncements

In July 2013, the FASB issued ASU No. 2013-11, *Income Taxes (Topic 740): Presentation of an Unrecognized Tax Benefit When a Net Operating Loss Carryforward, a Similar Tax Loss, or a Tax Credit Carryforward Exists*, providing guidance on the presentation of unrecognized tax benefits in the financial statements as either a reduction to a deferred tax asset or either a liability to better reflect the manner in which an entity would settle at the reporting date any additional income taxes that would result from the disallowance of a tax position when net operating loss carryforwards, similar tax losses or tax credit carryforwards exist. The amendments in this ASU do not require new recurring disclosures. The amendments in this ASU are effective for fiscal years, and interim periods within those years, beginning after December 15, 2013. The amendments in this ASU should be applied prospectively to all unrecognized tax benefits that exist at the effective date. We do not expect the adoption of the amendments in this ASU will have a significant impact on our financial statements.

Subsequent Events

We have evaluated events that have occurred subsequent to December 31, 2013 and through the date that the financial statements are issued.

Fair Value Measurements

We measure the fair value of financial assets and liabilities based on authoritative guidance which defines fair value, establishes a framework consisting of three levels for measuring fair value, and requires disclosures about fair value measurements. Fair value is defined as the exchange price that would be received for an asset or paid to transfer a liability (an exit price) in the principal or most advantageous market for the asset or liability in an orderly transaction between market participants on the measurement date. There are three levels of inputs that may be used to measure fair value:

Level 1 — quoted prices in active markets for identical assets or liabilities;

Level 2 — quoted prices for similar assets and liabilities in active markets or inputs that are observable;

Level 3 — inputs that are unobservable (for example cash flow modeling inputs based on assumptions).

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

1. Organization and Summary of Significant Accounting Policies – (continued)

Financial instruments, including cash, receivables, accounts payable and accrued liabilities are carried at cost, which we believe approximates fair value due to the short-term nature of these instruments. Our warrant liabilities are classified within level 3 of the fair value hierarchy because the value is calculated using significant judgment based on our own assumptions in the valuation of these liabilities.

During the years ended December 31, 2013 and 2012, as a result of the fair value adjustment of the warrant liabilities, we recorded a non-cash gain on a decrease in the fair value of $1,737,000 and a non-cash loss on an increase in the fair value of $1,766,000, respectively, in our statements of operations and comprehensive income (loss). See Note 9, "Warrant Liability" for further discussion on the calculation of the fair value of the warrant liability.

The following table rolls forward the fair value of the Company's warrant liability, the fair value of which is determined by Level 3 inputs for the years ended December 31, 2013 and 2012 (in thousands):

	December 31,	
	2013	2012
Fair value, beginning of period	$ 8,240	$ 3,611
Issuance of warrants	—	2,863
Exercise of warrants	(4,686)	—
Change in fair value	(1,737)	1,766
Fair value, end of period	$ 1,817	$ 8,240

2. Property and Equipment

Property and equipment consisted of the following at December 31, 2013 and 2012 (in thousands):

	2013	2012
Furniture and office equipment	$ 388	$ 388
Leasehold improvements	408	408
Laboratory equipment	2,318	2,047
Computer equipment	1,043	996
	4,157	3,839
Less accumulated depreciation and amortization	(2,554)	(2,447)
Property and equipment, net	$ 1,603	$ 1,392

Depreciation and amortization expense was $107,000, $17,000 and $32,000 for the years ended December 31, 2013, 2012 and 2011, respectively.

3. Research and License Agreements

We have entered into various agreements with research institutions, universities, clinical research organizations and other entities for the performance of research and development activities and for the acquisition of licenses related to those activities. Expenses under these agreements totaled approximately $3,000, $3,000, and $36,000 in the years ended December 31, 2013, 2012 and 2011, respectively.

We have no annual payment requirements to maintain our current licenses after 2015. Certain licenses provide for the payment of royalties by us on future product sales, if any. In addition, in order to maintain these licenses and other rights during product development, we must comply with various conditions including the payment of patent-related costs.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

4. Agreement with Sanofi-Aventis SA

In 1997, we entered into an exclusive license agreement with Sanofi-Aventis. The agreement gave us a worldwide license to the patent rights and know-how related to the antipsychotic agent iloperidone, including the ability to develop, use, sublicense, manufacture and sell products and processes claimed in the patent rights. We are required to make additional benchmark payments as specific milestones are met. Upon commercialization of the product, the license agreement provides that we will pay royalties based on net sales.

5. Iloperidone Sublicense to Novartis Pharma AG

We are party to an agreement with Novartis, which, as amended, grants Novartis a worldwide sublicense to iloperidone (Fanapt®) in exchange for tiered royalties on net sales ranging from 8% to 10% and assumption of responsibility for all clinical development, registration, manufacturing and marketing of the product. Novartis currently has the right to commercialize Fanapt in the United States and Canada. Pursuant to agreements entered into during 2011, we sold substantially all of our remaining future royalties on the sales of Fanapt® to Deerfield, and accordingly the future royalty payments owed to us by Novartis will continue to be transmitted to Deerfield upon receipt from Novartis per the terms of the agreement with Deerfield. See Note 8, “Royalty Liability” for further discussion of our royalty liabilities.

6. Braeburn License

In December 2012, we entered into the Agreement with Braeburn granting Braeburn exclusive commercialization rights to Probuphine in the United States and its territories, including Puerto Rico, and Canada. As part of the Agreement, we received a non-refundable up-front license fee of $15.75 million (approximately $15.0 million, net of expenses), and would have received $45.0 million upon approval by the FDA of the NDA as well as up to an additional $130.0 million upon achievement of specified sales milestones and up to $35.0 million in regulatory milestones for additional indications, including chronic pain. We would have received tiered royalties on net sales of Probuphine ranging from the mid-teens to the low twenties.

On May 28, 2013, we entered into the Amendment to the Agreement primarily to modify certain of the termination provisions of the Agreement. The Amendment gives Braeburn the right to terminate the Agreement in the event that (A) after May 28, 2013, based on written or oral communications from or with the FDA, Braeburn reasonably determines either that the FDA will require significant development to be performed before approval of the Probuphine™ NDA can be given, such as, but not limited to, one or more additional controlled clinical studies with a clinical efficacy endpoint, or substantial post-approval commitments that may materially impact the product’s financial returns or that the FDA will require one or more changes in the proposed label, which change(s) Braeburn reasonably determines will materially reduce the authorized prescribed patient base, or (B) the NDA has not been approved by the FDA on or before June 30, 2014. The Amendment also provides that we will share in legal and consulting expenses in excess of a specified amount prior to approval of the NDA.

On July 2, 2013, we entered into the Second Amendment to the Agreement primarily to establish and provide the parameters for a committee comprised of representatives of Titan and Braeburn responsible for and with the authority to make all decisions regarding the development and implementation of a strategic plan to seek approval from the FDA of Probuphine® for subdermal use in the maintenance treatment of adult patients with opioid dependence, including development of the strategy for all written and oral communications with the FDA. The Second Amendment also makes Braeburn the primary contact for FDA communications regarding the Probuphine NDA.

On November 12, 2013, we entered into the stock purchase agreement pursuant to which Braeburn made a $5 million equity investment in our company and the Third Amendment primarily to modify the amount and timing of the approval and sales milestone payments payable under the Agreement. Under the Third Amendment, we are entitled to receive a $15 million payment upon FDA approval of the NDA, up to $165 million in sales milestones and $35 million in regulatory milestones. In addition, we are entitled to receive a low single digit royalty on sales by Braeburn, if any, of other continuous delivery treatments for

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

6. Braeburn License – (continued)

opioid dependence as defined in the Third Amendment and can elect to receive a low single digit royalty on sales by Braeburn, if any, of other products in the addiction market in exchange for a similar reduction in our royalties on Probuphine.

We have evaluated the revenue components of the agreement, which includes multiple elements, to determine whether the components of the arrangement represent separate units of accounting. We have determined that the non-refundable, up-front license fee of $15.75 million (approximately $15.0 million, net of expenses) and our costs up to the PDUFA date to be one deliverable which will be accounted for as a single unit of accounting. This amount will be recognized on a straight-line basis over the estimated period to reach FDA approval and meet the contract deliverables, including the transition of production and supply services of the product to Braeburn. Based on our understanding of subsequent steps to be performed following the PDUFA date related to the completion of the transition of production and supply services to Braeburn, we estimated the revenue recognition period from the up-front payment to be approximately 12 months from the date of the agreement. Accordingly, we recognized revenue for the up-front payment ratably from December 14, 2012, the date of the agreement, through March 31, 2013 at an amount equal to approximately $1.25 million per month. Following the receipt of the CRL in April 2013, we estimated the revenue recognition period for the up-front payment would be approximately 18 months from the date of the agreement. Accordingly, we recognized the remaining revenue from the up-front payment ratably from April 1, 2013 through September 30, 2013 at an amount equal to approximately $733,000 per month. Following our meeting with the FDA in November 2013 and subsequent discussions in which an agreement in principle with respect to a path forward has been reached with the FDA, we estimate the revenue recognition period for the up-front payment to be approximately 30 months from the date of the agreement. Accordingly, we will recognize the remaining revenue from the up-front payment ratably from September 30, 2013 at an amount equal to approximately $304,000 per month. As of December 31, 2013, we have recognized approximately $9.7 million in license revenue and recorded deferred revenues of $5.3 million related to the up-front payment. Internal and external research and development costs related to this product will be expensed in the period incurred.

Under the Agreement, we will receive a $15.0 million milestone payment from Braeburn within 10 days following the achievement of FDA approval of the product NDA. As such, upon receipt of FDA approval our obligation will be fulfilled. As the milestone payment relates solely to past performance, i.e. FDA approval, we will recognize the $15.0 million regulatory milestone payment from Braeburn on the date of achievement of FDA approval in accordance with the milestone method of revenue recognition. Following FDA approval, we will be reimbursed by Braeburn for any development services and activities performed by us at Braeburn's request.

The Agreement also provides for a development committee. The duties of the development committee are to periodically report to each other, exchange information, and confer with and review the clinical development of the product and matters pertaining to regulatory approval. The development committee has no authority to approve or direct either party to take action, approve or withhold approval for any plan, budget, timeline or strategies, amend, modify or waive compliance with the Agreement, create new obligations or alter, increase or expand, or waive compliance with the Agreement, create new obligations not specified in the Agreement, or alter, increase or expand, or waive compliance by a party with obligations under the Agreement. The development committee can be disbanded upon mutual agreement of the parties and shall automatically disband six years after the NDA transfer date. Based on the above, we have determined that participation in the development committee is perfunctory and inconsequential, and is not considered a separate deliverable in the Agreement.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

7. Commitments and Contingencies

Financing Agreements

On March 15, 2011, we entered into several agreements pursuant to which Deerfield agreed to provide $20.0 million in funding to us. Funding occurred on April 5, 2011 and we used approximately $7.6 million of proceeds from the Deerfield funding to repay a prior lender in full, including required final payments aggregating $480,000. Pursuant to the terms of a facility agreement, we issued Deerfield promissory notes in the aggregate principal amount of $20.0 million. The long-term debt bears interest at 8.5% per annum, payable quarterly, and was originally repayable over five years, with 10% of the principal amount due on the first anniversary, 15% due on the second anniversary, and 25% due on each of the next three anniversaries. We paid Deerfield a facility fee of $0.5 million. The long-term debt is secured by our assets and has a provision for pre-payment. Deerfield has the right to have the long-term debt repaid at 110% of the principal amount in the event we complete a major transaction, which includes, but was not limited to, a merger or sale of our company or the sale of Probuphine. In connection with the facility agreement, we issued Deerfield six-year warrants to purchase 6,000,000 shares of our common stock at an exercise price of $1.57 per share (See Note 9, “Warrant Liability” for further discussion). As a result of our April 2012 subscription agreements, and pursuant to the terms of the Deerfield Warrants, the exercise price of the Deerfield Warrants was adjusted to $1.25 per share. (see Note 11, “Stockholders’ Equity (Deficit)” for further discussion). We also entered into a royalty agreement with Deerfield in exchange for $3.0 million (see Note 8, “Royalty Liability” for further discussion).

We recorded the promissory notes with an aggregate principal amount of $20.0 million at its face value less a note discount consisting of (i) $3.0 million cash discount, (ii) a $500,000 loan fee, and (iii) the $5.5 million fair value of the associated warrants. The note discount totaling $9.0 million was amortized using the interest method.

On November 14, 2011, we entered into several agreements with Deerfield pursuant to which we agreed to pay a substantial portion of the remaining future royalties on the sales of Fanapt to Deerfield in exchange for $5.0 million in cash that was recorded as royalty liability (see Note 8, “Royalty Liability” for further discussion), a $10.0 million reduction in the principal amount owed to Deerfield under the existing facility agreement and a revised principal repayment schedule of $2.5 million per year for four years commencing in April 2013 to retire the remaining long-term debt of $10.0 million. We evaluated the November 2011 principal reduction and other amendments to the $20.0 million facility agreement and determined that the modifications should be accounted for as a troubled debt restructuring on a prospective basis. As a result, we recognized the difference between the carrying value of the long-term debt and the total required future principal and interest payments as interest expense over the remaining term using the interest method.

On February 6, 2013, the facility agreement was amended to provide that the exercise price of the Deerfield Warrants could be satisfied through a reduction in the principal amount of our outstanding indebtedness to Deerfield. In February and March 2013, Deerfield exercised all of the Deerfield Warrants resulting in a reduction of our outstanding indebtedness to Deerfield of $7.5 million and, accordingly, cancellation of our obligation to make the 2014, 2015 and 2016 installment payments under the Facility Agreement. This resulted in a gain of $1.9 million which was recorded in Other Income (Expense). On April 1, 2013, we made the final principal payment of $2.5 million under the facility agreement.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

7. Commitments and Contingencies – (continued)

Lease Commitments

We lease facilities under operating leases that expire at various dates through June 2016. Rent expense was $210,000, $203,000, and $214,000 for years ended December 31, 2013, 2012, and 2011, respectively.

The following is a schedule of future minimum lease payments at December 31, 2013 (in thousands):

2014	$ 208
2015	211
2016 and thereafter	106
	$ 525

Legal Proceedings

There are no ongoing legal proceedings against our company.

8. Royalty Liability

On March 15, 2011, under the royalty agreement with Deerfield, in exchange for $3.0 million that was recorded as royalty liability, we agreed to pay Deerfield 2.5% of the net sales of Fanapt, constituting a portion of the royalty revenue that we are entitled to under our sublicense agreement with Novartis. The agreements with Deerfield also provided us with the option to repurchase the royalty rights for $40.0 million.

The $3.0 million received under the royalty agreement was recorded as a royalty liability in accordance with the appropriate accounting guidance as the related agreement includes a provision which allowed us to repurchase the royalty rights from Deerfield through a payment of a lump sum. Interest on the royalty liability was recognized using the interest method based on the estimated future royalties expected to be paid under the Royalty Agreement.

Under the November 14, 2011 amended and restated royalty agreement, in exchange for an additional $5.0 million royalty liability, Deerfield is entitled to our portion of the royalties on Fanapt (5.5% to 7.5% of net sales, net of the 2.5% previously agreed to have been provided to Deerfield) up to specified threshold levels of net sales of Fanapt and 40% of the royalties above the threshold level. We retain 60% of the royalties on net sales of Fanapt above the threshold levels. The $5.0 million received was recorded as a royalty liability in accordance with the appropriate accounting guidance as the related agreement included a provision which allowed us to repurchase the royalty rights from Deerfield through a payment of a lump sum. Interest on this royalty obligation was recognized using the interest method based on the estimated future royalties expected to be paid under the royalty agreement.

On March 28, 2013, we amended the agreements with Deerfield terminating our option to repurchase the royalty rights. As a result, we recognized a gain on the extinguishment of the royalty liability of approximately $9.0 million, which was recorded in other income, because we are no longer required to account for it as a liability. Additionally, we will no longer recognize royalty income related to the Fanapt royalty payments received from Novartis unless Fanapt sales exceed certain thresholds.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

9. Warrant Liability

On March 15, 2011, in connection with the facility agreement, we issued Deerfield six-year warrants to purchase 6,000,000 shares of our common stock at an initial exercise price of $1.57 per share. As a result of our April 2012 sale of equity, and pursuant to the terms of the Deerfield Warrants, the exercise price of the Deerfield Warrants was adjusted to $1.25 per share. The Deerfield Warrants contain a provision where the warrant holder has the option to receive cash, equal to the Black-Scholes fair value of the remaining unexercised portion of the warrant, as cash settlement in the event that there is a fundamental transaction (contractually defined to include various merger, acquisition or stock transfer activities). Due to this provision, ASC 480, *Distinguishing Liabilities from Equity* requires that these warrants be classified as liabilities. The fair values of these warrants have been determined using the Binomial Lattice ("Lattice") valuation model, and the changes in the fair value are recorded in the Statements of Operations and Comprehensive Income (Loss). The Lattice model provides for assumptions regarding volatility and risk-free interest rates within the total period to maturity.

On February 6, 2013, the facility agreement was amended to provide that the exercise price of the Deerfield Warrants could be satisfied through a reduction in the principal amount of our outstanding indebtedness to Deerfield. In February and March 2013, Deerfield exercised all of the Deerfield Warrants resulting in a $7.5 million reduction in the amount owed to Deerfield.

On April 9, 2012, in connection with subscription agreements with certain institutional investors for the purchase and sale of 6,517,648 shares of our common stock, we issued (i) six-year warrants ("Series A Warrants") to purchase 6,517,648 shares of common stock at an exercise price of $1.15 per share and (ii) six-month warrants ("Series B Warrants") to purchase 6,517,648 shares of common stock at an exercise price of $0.85 per share. The Series A Warrants and Series B Warrants contain a provision where the warrant holder has the option to receive cash, equal to the Black Scholes fair value of the remaining unexercised portion of the warrant, as cash settlement in the event that there is a fundamental transaction (contractually defined to include various merger, acquisition or stock transfer activities). Due to this provision, ASC 480, *Distinguishing Liabilities from Equity* requires that these warrants be classified as liabilities. The fair values of these warrants have been determined using the Lattice valuation model, and the changes in the fair value are recorded in the Statements of Operations and Comprehensive Income (Loss). The Lattice model provides for assumptions regarding volatility and risk-free interest rates within the total period to maturity.

During the year ended December 31, 2012, Series B Warrants to purchase 5,761,765 shares of common stock were exercised at a price of $0.85 per share. The remaining Series B Warrants to purchase 755,883 shares of common stock expired in October 2012.

During the year ended December 31, 2013, Series A Warrants to purchase 1,109,010 shares of common stock were exercised resulting in gross proceeds of approximately $1,275,000. The remaining Series A Warrants to purchase 5,408,638 shares of common stock will expire in April 2018.

The key assumptions used to value the Series A Warrants were as follows:

Assumption	December 31, 2013
Expected price volatility	90%
Expected term (in years)	4.27
Risk-free interest rate	1.4%
Dividend yield	0.00%
Weighted-average fair value of warrants	$ 0.34

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

10. Guarantees and Indemnifications

As permitted under Delaware law and in accordance with our Bylaws, we indemnify our officers and directors for certain events or occurrences while the officer or director is or was serving at our request in such capacity. The term of the indemnification period is for the officer's or director's lifetime. The maximum amount of potential future indemnification is unlimited; however, we have a director and officer insurance policy that limits our exposure and may enable us to recover a portion of any future amounts paid. We believe the fair value of these indemnification agreements is minimal. Accordingly, we have not recorded any liabilities for these agreements as of December 31, 2013.

In the normal course of business, we have commitments to make certain milestone payments to various clinical research organizations in connection with our clinical trial activities. Payments are contingent upon the achievement of specific milestones or events as defined in the agreements, and we have made appropriate accruals in our financial statements for those milestones that were achieved as of December 31, 2013. We also provide indemnifications of varying scope to our CROs and investigators against claims made by third parties arising from the use of our products and processes in clinical trials. Historically, costs related to these indemnification provisions were immaterial. We also maintain various liability insurance policies that limit our exposure. We are unable to estimate the maximum potential impact of these indemnification provisions on our future results of operations.

11. Stockholders' Equity (Deficit)

Common Stock

In November 2013, we entered into a stock purchase agreement with Braeburn pursuant to which we sold 6,250,000 shares of our common stock for an aggregate purchase price of $5.0 million, or $0.80 per share.

In April 2013, 144,499 shares of common stock were issued to a former lender upon the cashless net exercise of 287,356 warrants in accordance with the terms of the warrants.

In January and March 2013, Series A Warrants to purchase 1,109,010 shares of common stock were exercised resulting in gross proceeds of approximately $1,275,000.

On February 6, 2013, the facility agreement with Deerfield was amended to provide that the exercise price of the Deerfield Warrants could be satisfied through a reduction in the principal amount of our outstanding indebtedness to Deerfield. In February and March 2013, Deerfield exercised the 6,000,000 Deerfield Warrants resulting in a $7.5 million reduction in the amount owed to Deerfield.

In October 2012, Series B Warrants to purchase 4,627,941 shares of common stock were exercised resulting in gross proceeds of approximately $3,934,000.

In September 2012, Series B Warrants to purchase 1,133,824 shares of common stock were exercised resulting in gross proceeds of approximately $964,000.

In September 2012, we entered into a stock purchase and option agreement with an affiliate of Braeburn pursuant to which we sold 3,400,000 shares of our common stock for an aggregate purchase price of $4.25 million, or $1.25 per share, and agreed to an exclusive option period for execution of the proposed license agreement. The $1.7 million premium, or $0.50 per share, has been allocated to the fair value of the option agreement and was recorded as license revenue in 2012.

In April 2012, we entered into subscription agreements with certain institutional investors for the purchase and sale, in a registered direct offering, of (i) 6,517,648 shares of our common stock, (ii) 6,517,648 Series A Warrants and (iii) 6,517,648 Series B Warrants for gross proceeds of $5,540,000 (the "Offering"). As a result of the Offering, and pursuant to the terms of the Deerfield Warrants, the exercise price of the Deerfield Warrants (See Note 9, "Warrant Liability" for further discussion) was adjusted to $1.25 per share.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

11. Stockholders' Equity (Deficit) – (continued)

We recorded the gross proceeds from the Offering, net of (i) issuance costs of $0.5 million and (ii) the fair value of the Warrants of $2.9 million (see Note 9, "Warrant Liability"), as common stock paid-in in the Balance Sheets.

As of December 31, 2013, warrants to purchase shares of common stock consisted of the following (in thousands, except per share price):

Date Issued	Expiration Date	Exercise Price	Outstanding at December 31, 2013
12/18/2009	12/18/2014	$ 2.13	42
04/13/2012	04/13/2018	$ 1.15	5,409
			5,451

Shares Reserved for Future Issuance

As of December 31, 2013, shares of common stock reserved by us for future issuance consisted of the following (in thousands):

Stock options outstanding	6,732
Shares issuable upon the exercise of warrants	5,451
	12,183

12. Stock Plans

In July 2002, we adopted the 2002 Stock Incentive Plan ("2002 Plan"). The 2002 Plan assumed the options which remained available for grant under our option plans previously approved by stockholders. Under the 2002 Plan and predecessor plans, a total of 7.4 million shares of our common stock were authorized for issuance to employees, officers, directors, consultants, and advisers. In August 2005, we adopted an amendment to the 2002 Stock Incentive Plan ("2002 Plan") to (i) permit the issuance of shares of restricted stock and stock appreciation rights to participants under the 2002 Plan, and (ii) increase the number of shares issuable pursuant to grants under the 2002 Plan from 2,000,000 to 3,000,000. Options granted under the 2002 Plan and predecessor plans may either be incentive stock options within the meaning of Section 422 of the Internal Revenue Code and/or options that do not qualify as incentive stock options; however, only employees are eligible to receive incentive stock options. Options granted under the option plans generally expire no later than ten years from the date of grant. Option vesting schedule and exercise price are determined at time of grant by the board of directors or compensation committee. Historically, the exercise prices of options granted under the 2002 Plan were 100% of the fair market value of our common stock on the date of grant. The 2002 Plan expired by its terms in July 2012. On December 31, 2013, options to purchase an aggregate of 4,280,153 shares of our common stock were outstanding under the 2002 Plan.

In August 2001, we adopted the 2001 Employee Non-Qualified Stock Option Plan ("2001 NQ Plan") pursuant to which 1,750,000 shares of common stock were authorized for issuance for option grants to employees and consultants who are not officers or directors of Titan. Options granted under the option plans generally expire no later than ten years from the date of grant. Option vesting schedule and exercise price were determined at time of grant by the board of directors or compensation committee. Historically, the exercise prices of options granted under the 2001 NQ Plan were 100% of the fair market value of our common stock on the date of grant. The 2001 Stock Option Plan expired by its terms in August 2011. On December 31, 2013, options to purchase an aggregate of 1,199,500 shares of our common stock were outstanding under the 2001 NQ Plan.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

12. Stock Plans – (continued)

Activity under our stock plans, as well as non-plan activity, is summarized below (shares in thousands):

	Shares or Awards Available For Grant	Number of Options and Awards Outstanding	Weighted Average Exercise Price
Balance at December 31, 2010	3,393	5,115	$ 2.29
Options granted	(734)	734	$ 1.44
Options cancelled and expired	45	(241)	$ 15.01
Options forfeited	55	(55)	$ 1.77
Awards granted	(181)	181	$ 0.00
Awards issued	—	(139)	$ 0.00
Balance at December 31, 2011	2,578	5,595	$ 1.56
Options granted	(1,718)	1,718	$ 1.14
Options cancelled and expired	290	(290)	$ 5.54
Awards issued	—	(181)	$ 0.00
Expiration of option plan	(1,150)	—	$ 0.00
Balance at December 31, 2012	—	6,842	$ 1.33
Options exercised	—	(75)	$ 1.50
Options cancelled and expired	—	(35)	$ 3.29
Balance at December 31, 2013	—	6,732	$ 1.31

The 2002 Plan and the 2001 NQ Plan allow for stock options issued as the result of a merger or consolidation of another entity, including the acquisition of the minority interest of our former subsidiaries, to be added to the maximum number of shares provided for in the plan ("Substitute Options"). Consequently, Substitute Options are not returned to the shares reserved under the plan when cancelled. During 2013, 2012 and 2011, the number of Substitute Options cancelled was immaterial.

Options for 6.7 million and 6.0 million shares were exercisable at December 31, 2013 and 2012, respectively. The options outstanding at December 31, 2013 have been segregated into four ranges for additional disclosure as follows (options in thousands):

	Options Outstanding			Options Exercisable	
Range of Exercise Prices	Number Outstanding	Weighted Average Remaining Life (Years)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
$0.69 – $1.53	5,423	6.32	$ 1.05	5,422	$ 1.05
$1.54 – $2.38	604	3.85	$ 2.19	601	$ 2.19
$2.39 – $3.22	643	3.27	$ 2.52	643	$ 2.52
$3.23 – $4.06	62	0.11	$ 3.70	62	$ 3.70
$0.69 – $4.06	6,732	5.75	$ 1.31	6,728	$ 1.31

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

12. Stock Plans – (continued)

We use the Black-Scholes-Merton option-pricing model with the following assumptions to estimate the stock-based compensation expense for the years ended December 31, 2013, 2012 and 2011:

	Years Ended December 31,		
	2013	2012	2011
Weighted-average risk-free interest rate	0.92%	0.91%	2.3%
Expected dividend payments	—	—	—
Expected holding period (years)[1]	3.9	5.1	5.4
Weighted-average volatility factor[2]	1.38	1.75	1.71
Estimated forfeiture rates for options granted to management[3]	23%	23%	23%
Estimated forfeiture rates for options granted to non-management[3]	41%	41%	41%

(1) Expected holding period is based on historical experience of similar awards, giving consideration to the contractual terms of the stock-based awards, vesting schedules and the expectations of future employee behavior.

(2) Weighted average volatility is based on the historical volatility of our common stock.

(3) Estimated forfeiture rates are based on historical data.

No options or awards were granted during the year ended December 31, 2013. Based upon the above methodology, the weighted-average fair value of options and awards granted during the years ended December 31, 2012 and 2011 was $1.09 and $1.38, respectively.

The following table summarizes the stock-based compensation expense and impact on our basic and diluted loss per share for the years ended December 31, 2013, 2012 and 2011:

	Years Ended December 31,		
(in thousands, except per share amounts)	2013	2012	2011
Research and development	$ 378	$ 1,021	$ 371
General and administrative	300	1,560	806
Total stock-based compensation expenses	$ 678	$ 2,581	$ 1,177
Increase in basic net income (loss) per share	$ (0.01)	$ (0.04)	$ (0.02)
Increase in diluted net income (loss) per share	$ (0.01)	$ (0.04)	$ (0.02)

No tax benefit was recognized related to stock-based compensation expense since we have incurred operating losses and we have established a full valuation allowance to offset all the potential tax benefits associated with our deferred tax assets.

No options to purchase common stock were granted to employees, directors and consultants during the year ended December 31, 2013. The following table summarizes option activity for the year ended December 31, 2013:

(in thousands, except per share amounts)	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Outstanding at January 1, 2012	6,842	$ 133		
Exercised	(75)	1.50		
Cancelled	(35)	3.29		
Outstanding at December 31, 2013	6,732	$ 1.31	5.75	$ —
Exercisable at December 31, 2013	6,728	$ 1.31	5.75	$ —

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

12. Stock Plans – (continued)

As of December 31, 2013, there was approximately $2,000 of total unrecognized compensation expense related to non-vested stock options. This expense is expected to be recognized over a weighted-average period of 0.24 years.

There were no awards of restricted stock during the year ended December 31, 2013.

There were no outstanding awards of restricted stock at December 31, 2013 that had not vested.

13. Income Taxes

As of December 31, 2013, we had net operating loss carryforwards for federal income tax purposes of approximately $225.6 million that expire at various dates through 2033, and federal research and development tax credits of approximately $8.2 million that expire at various dates through 2033. We also had net operating loss carryforwards for California income tax purposes of approximately $157.7 million that expire at various dates through 2033 and state research and development tax credits of approximately $8.0 million which do not expire. Approximately $12.4 million of federal and state net operating loss carryforwards represent stock option deductions arising from activity under our stock option plans, the benefit of which will increase additional paid in capital when realized.

Current federal and California tax laws include substantial restrictions on the utilization of net operating losses and tax credits in the event of an ownership change of a corporation. We have performed a change in ownership analysis through December 31, 2013 and, accordingly, all of our net operating loss and tax credit carryforwards are available to offset future taxable income, if any.

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes and operating loss and credit carryforwards. Significant components of our deferred tax assets are as follows (in thousands):

	December 31,	
	2013	2012
Deferred tax assets:		
Net operating loss carryforwards	$ 85,912	$ 81,127
Research credit carryforwards	13,481	12,750
Other, net	3,962	4,190
Deferred revenue	2,116	5,749
Total deferred tax assets	105,471	103,816
Valuation allowance	(105,471)	(103,816)
Net deferred tax assets	$ —	$ —

Realization of deferred tax assets is dependent upon future earnings, if any, the timing and amount of which are uncertain. Accordingly, the net deferred tax assets have been fully offset by a valuation allowance. The valuation allowance increased by $1.7 million during 2013, increased by $3.1 million during 2012 and decreased by $1.3 million during 2011.

Under ASC 718, the deferred tax asset for net operating losses as of December 31, 2013 excludes deductions for excess tax benefits related to stock based compensation.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

13. Income Taxes – (continued)

The provision for income taxes consists of state minimum taxes due. The effective tax rate of our provision (benefit) for income taxes differs from the federal statutory rate as follows (in thousands):

	Year Ending December 31,		
	2013	2012	2011
Computed at 34%	$ 3,301	$ (5,134)	$ (5,168)
State taxes	213	(234)	(228)
Book gains (losses) not currently benefited	1,656	3,120	(1,264)
Other	(476)	1,901	2,746
Disallowed interest expense	160	1,363	1,457
Income from debt restructuring	—	(1,615)	2,462
Revaluation of warrant liability	(591)	600	—
Research and development credits	(583)	—	—
Non-cash gain from termination of royalty purchase agreement	(3,047)	—	—
Non-cash gain on settlement of long-term debt	(632)	—	—
Total	$ 1	$ 1	$ 5

We had no unrecognized tax benefits or any amounts accrued for interest and penalties for the three year period ended December 31, 2013. Our policy will be to recognize interest and penalties related to income taxes as a component of income tax expense.

We file tax returns in the U.S. Federal jurisdiction and some state jurisdictions. We are subject to the U.S. federal and state income tax examination by tax authorities for such years 1995 through 2013, due to net operating losses that are being carried forward for tax purposes.

The Credit for Increasing Research Activities expired for amounts incurred after December 31, 2011. However, The American Taxpayer Relief Act of 2012, which was signed into law on January 2, 2013, extended the credit for amounts incurred before January 1, 2014. The Act also retroactively restored the credit for amounts incurred in 2012. However, since the Act was not signed until January 2, 2013 the amount of credit generated in 2012 was not reflected in the deferred tax amounts as of December 31, 2012. The amount of this credit that was generated in 2012 was approximately $340,000. The deferred tax asset for this credit was increased by this amount in 2013.

TITAN PHARMACEUTICALS, INC.

NOTES TO FINANCIAL STATEMENTS

14. Quarterly Financial Data (Unaudited)

	First Quarter	Second Quarter	Third Quarter	Fourth Quarter
	(in thousands, except per share amount)			
2013				
Total revenue	$ 5,174	$ 2,198	$ 2,198	$ 911
Net income (loss)	$ 6,001	$ 5,064	$ (1,145)	$ (209)
Basic net income (loss) per share	$ 0.08	$ 0.06	$ (0.01)	$ (0.00)
Diluted net income (loss) per share	$ 0.07	$ 0.00	$ (0.01)	$ (0.00)
2012				
Total revenue	$ 1,270	$ 1,360	$ 1,228	$ 3,259
Net loss	$ (5,163)	$ (1,724)	$ (8,013)	$ (280)
Basic net loss per share	$ (0.09)	$ (0.03)	$ (0.12)	$ (0.00)
Diluted net loss per share	$ (0.09)	$ (0.06)	$ (0.12)	$ (0.00)

15. Subsequent events

In February 2014, we adopted the 2014 Incentive Plan ("2014 Plan"). Under the 2014 Plan, a total of 2.5 million shares of our common stock were authorized for issuance to employees, officers, directors, consultants, and advisers.

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20,000,000 Units

Each Unit Consisting of One Share of Common Stock

and

0.75 of a Class A Warrant, Each to Purchase One Share of Common Stock

TITAN PHARMACEUTICALS, INC.

Common Stock

PROSPECTUS

, 2014

Roth Capital Partners

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distribution.

The following table sets forth the various expenses, all of which will be borne by the registrant, in connection with the sale and distribution of the securities being registered, other than the underwriting discounts and commissions. All amounts shown are estimates except for the SEC registration fee.

SEC registration fee	$ 2,365
FINRA fees	$ 3,254
Printing and engraving expenses	$ 20,000
Accounting fees and expenses	$ 20,000
Legal fees and expenses	$ 175,000
Miscellaneous	$ 34,381
Total	$ 255,000

Item 14. Indemnification of Directors and Officers.

Amended and Restated Bylaws

Pursuant to our bylaws, our directors and officers will be indemnified to the fullest extent allowed under the laws of the State of Delaware for their actions in their capacity as our directors and officers.

We must indemnify any person made a party to any threatened, pending, or completed action, suit, or proceeding, whether civil, criminal, administrative, or investigative ("Proceeding") by reason of the fact that he is or was a director, against judgments, penalties, fines, settlements and reasonable expenses (including attorney's fees) ("Expenses") actually and reasonably incurred by him in connection with such Proceeding if: (a) he conducted himself in good faith, and: (i) in the case of conduct in his own official capacity with us, he reasonably believed his conduct to be in our best interests, or (ii) in all other cases, he reasonably believes his conduct to be at least not opposed to our best interests; and (b) in the case of any criminal Proceeding, he had no reasonable cause to believe his conduct was unlawful.

We must indemnify any person made a party to any Proceeding by or in the right of us, by reason of the fact that he is or was a director, against reasonable expenses actually incurred by him in connection with such proceeding if he conducted himself in good faith, and: (a) in the case of conduct in his official capacity with us, he reasonably believed his conduct to be in our best interests; or (b) in all other cases, he reasonably believed his conduct to be at least not opposed to our best interests; provided that no such indemnification may be made in respect of any proceeding in which such person shall have been adjudged to be liable to us.

No indemnification will be made by unless authorized in the specific case after a determination that indemnification of the director is permissible in the circumstances because he has met the applicable standard of conduct.

Reasonable expenses incurred by a director who is party to a proceeding may be paid or reimbursed by us in advance of the final disposition of such Proceeding in certain cases.

We have the power to purchase and maintain insurance on behalf of any person who is or was our director, officer, employee, or agent or is or was serving at our request as an officer, employee or agent of another corporation, partnership, joint venture, trust, other enterprise, or employee benefit plan against any liability asserted against him and incurred by him in any such capacity or arising out of his status as such, whether or not we would have the power to indemnify him against such liability under the provisions of the amended and restated bylaws.

Delaware Law

We are incorporated under the laws of the State of Delaware. Section 145 of the Delaware General Corporation Law provides that a Delaware corporation may indemnify any persons who are, or are threatened to be made, parties to any threatened, pending or completed action, suit or proceeding, whether civil, criminal,

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

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

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

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

Section 174 of the Delaware General Corporation Law provides, among other things, that a director who willfully or negligently approves of an unlawful payment of dividends or an unlawful stock purchase or redemption may be held liable for such actions. A director who was either absent when the unlawful actions were approved, or dissented at the time, may avoid liability by causing his or her dissent to such actions to be entered in the books containing minutes of the meetings of the board of directors at the time such action occurred or immediately after such absent director receives notice of the unlawful acts.

Indemnification Agreements

As permitted by the Delaware General Corporation Law, we have entered, and intend to continue to enter, into separate indemnification agreements with each of our directors and executive officers, that require us to indemnify such persons against any and all expenses (including attorneys' fees), witness fees, damages, judgments, fines, settlements and other amounts incurred (including expenses of a derivative action) in connection with any action, suit or proceeding, whether actual or threatened, to which any such person may be made a party by reason of the fact that such person is or was a director, an officer or an employee of us or any of our affiliated enterprises, provided that such person acted in good faith and in a manner such person reasonably believed to be in or not opposed to our best interests and, with respect to any criminal proceeding,

had no reasonable cause to believe his or her conduct was unlawful. The indemnification agreements also set forth certain procedures that will apply in the event of a claim for indemnification thereunder.

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

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

Insofar as indemnification for liabilities arising under the Securities Act may be permitted to our directors, officers or controlling persons, we have been advised that in the opinion of the SEC this indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Item 15. Recent Sales of Unregistered Securities.

The information below lists all of the securities sold by us during the past three years which were not registered under the Securities Act:

1. In November 2013, we sold 6,250,000 shares of common stock to Braeburn Pharmaceuticals Sprl for an aggregate purchase price of $5.0 million.
2. In September 2012, we sold 3,400,000 shares to Braeburn Pharmaceuticals Sprl for an aggregate purchase price of $4.25 million.

Item 16. Exhibits and Financial Statement Schedules.

(a) The following exhibits are filed as part of this Registration Statement:

1.1	Form of Underwriting Agreement
3.1	Amended and Restated Certificate of Incorporation of the Registrant, as amended[9]
3.2	By-laws of the Registrant[1]
3.3	Certificate of Designations of Junior Participating Preferred Stock of Titan Pharmaceuticals, Inc.[15]
4.1	Registration Rights Agreement dated as of December 17, 2007[2]
4.2	Registration Rights Agreement dated as of December 8, 2009[9]
4.3	Warrant to Purchase Common Stock dated December 23, 2009 issued to Oxford Finance Corporation[9]
4.4	Form of Warrant[13]
4.5	Registration Rights Agreement, dated as of March 15, 2011[13]
4.6	Form of Series A Warrant[18]
4.7	Form of Class A Warrant
4.8	Form of Underwriter's Warrant
5.1	Opinion of Loeb & Loeb LLP
10.1	1998 Stock Option Plan[3]
10.2	2001 Non-Qualified Employee Stock Option Plan[4]
10.3	2002 Stock Option Plan[5]
10.4	Employment Agreement between the Registrant and Sunil Bhonsle, dated May 16, 2009, as amended by agreements dated February 17, 2010, December 30, 2011 and December 31, 2012[9],[16],[19]
10.5	Employment Agreement between the Registrant and Marc Rubin, dated May 16, 2009, as amended by agreements dated February 17, 2010, December 30, 2011 and December 31, 2012[9],[16],[19]
10.6	Lease for the Registrant's facilities, amended as of October 1, 2004[6]

10.7	Amendments to lease for Registrant's facilities dated May 21, 2007 and March 12, 2009[9]
10.8**	License Agreement between the Registrant and Sanofi-Aventis SA effective as of December 31, 1996[7]
10.9**	Sublicense Agreement between the Registrant and Novartis Pharma AG dated November 20, 1997[8]
10.10	Loan and Security Agreement between the Registrant and Oxford Finance Corporation dated December 18, 2009[9]
10.11	Stock Purchase Agreement between the Registrant and certain investors dated December 8, 2009[9]
10.12	Amendment to Employment Agreement dated June 15, 2010 between the Registrant and Marc Rubin[10]
10.13	Amendment to Employment Agreement dated June 15, 2010 between the Registrant and Sunil Bhonsle[10]
10.14	Amendment to lease for Registrant's facilities dated June 15, 2010[11]
10.15	Amended and Restated Loan and Security Agreement between the Registrant and Oxford Finance Corporation dated September 27, 2010[12]
10.16	Facility Agreement, dated as of March 15, 2011, by and among the Company, Deerfield Private Design Fund II, L.P., Deerfield Private Design International II, L.P., Deerfield Special Situations Fund, L.P., and Deerfield Special Situations Fund International Limited, as amended on February 6, 2013[13][26]
10.17	Security Agreement, dated as of March 15, 2011, by and among the Company, Deerfield Private Design Fund II, L.P., Deerfield Private Design International II, L.P., Deerfield Special Situations Fund, L.P., and Deerfield Special Situations Fund International Limited[13]
10.18	Royalty Purchase Agreement, dated November 14, 2011, by and among the Company, Deerfield Private Design Fund II, L.P., Deerfield Special Situations Fund, L.P. and Horizon Sante TTNP SARL[14]
10.19	Amended and Restated Royalty Agreement, dated November 14, 2011 by and among the Company, Deerfield Private Design Fund II, L.P., Deerfield Special Situations Fund, L.P. and Horizon Sante TTNP SARL[14]
10.20	Amended and Restated Royalty Repurchase Agreement, dated November 14, 2011, by and among the Company, Deerfield Private Design Fund II, L.P., and Horizon Sante TTNP SARL[14]
10.21	Cash Management Agreement, dated November 14, 2011, by and among the Company, Deerfield Private Design Fund II, L.P., Deerfield Special Situations Fund, L.P. and Horizon Sante TTNP SARL[14]
10.22	Paying Agent Agreement, dated November 14, 2011, by and among the Company, Deerfield Management Company, L.P. and U.S. Bank National Association[14]
10.23	Agreement, dated as of November 14, 2011, by and among the Company, Deerfield Private Design Fund II, L.P., Deerfield Private Design International II, L.P., Deerfield Special Situations Fund, L.P., and Deerfield Special Situations Fund International Limited[14]
10.24	Form of Subscription Agreement dated April 9, 2012[18]
10.25**	License Agreement by and between Titan Pharmaceuticals, Inc. and Braeburn Pharmaceuticals Sprl, dated December 14, 2012[20]
10.26	Amendment dated May 28, 2013 to License Agreement by and between Titan Pharmaceuticals, Inc. and Braeburn Pharmaceuticals Sprl[21]
10.27	Second Amendment dated July 2, 2013 to License Agreement by and between Titan Pharmaceuticals, Inc. and Braeburn Pharmaceuticals Sprl[22]

10.28	Third Amendment dated November 12, 2013 to License Agreement by and between Titan Pharmaceuticals, Inc. and Braeburn Pharmaceuticals Sprl[23]
10.29	Stock Purchase Agreement dated November 12, 2013 by and between Titan Pharmaceuticals, Inc. and Braeburn Pharmaceuticals Sprl[23]
10.30	2014 Incentive Plan[24]
14.1	Code of Business Conduct and Ethics[25]
23.1	Consent of OUM & Co., LLP, Independent Registered Public Accounting Firm
23.2	Consent of Loeb & Loeb LLP (included in Exhibit 5.1)
24.1#	Power of Attorney (included in signature page to this Registration Statement)
101.INS***	XBRL Instance Document
101.SCH***	XBRL Taxonomy Extension Schema Document
101.CAL***	XBRL Taxonomy Extension Calculation Linkbase Document
101.DEF***	XBRL Taxonomy Extension Definition Linkbase Document
101.LAB***	XBRL Taxonomy Extension Label Linkbase Document
101.PRE***	XBRL Taxonomy Extension Presentation Linkbase Document

(1) Incorporated by reference from the Registrant's Registration Statement on Form SB-2 (File No. 33-99386).

(2) Incorporated by reference from the Registrant's Current Report on Form 8-K dated December 27, 2007.

(3) Incorporated by reference from the Registrant's definitive Proxy Statement filed on July 28, 2000.

(4) Incorporated by reference from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2001.

(5) Incorporated by reference from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2002.

(6) Incorporated by reference from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2005.

(7) Incorporated by reference from the Registrant's Annual Report on Form 10-KSB for the year ended December 31, 1996.

(8) Incorporated by reference from the Registrant's Registration Statement on Form S-3 (File No. 333-42367).

(9) Incorporated by reference from the Registrant's Registration Statement on Form 10.

(10)Incorporated by reference from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2003.

(11)Incorporated by reference from the Registrant's Quarterly Report on Form 10-Q for the period ended June 30, 2010.

(12)Incorporated by reference from the Registrant's Quarterly Report on Form 10-Q for the period ended September 30, 2010.

(13)Incorporated by reference from the Registrant's Current Report on Form 8-K filed on March 18, 2011.

(14)Incorporated by reference from the Registrant's Current Report on Form 8-K filed on November 17, 2011.

(15)Incorporated by reference from the Registrant's Current Report on Form 8-K filed on December 21, 2011.

(16)Incorporated by reference from the Registrant's Current Report on Form 8-K filed on January 4, 2012.

(17)Incorporated by reference from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2011.

(18)Incorporated by reference from the Registrant's Current Report on Form 8-K filed on April 10, 2013.

(19)Incorporated by reference from the Registrant's Current Report on Form 8-K filed on January 2, 2013.

(20)Incorporated by reference from the Registrant's Current Report on Form 8-K/A filed on February 28, 2013.

(21)Incorporated by reference from the Registrant's Current Report on Form 8-K dated May 29, 2013.

(22)Incorporated by reference from the Registrant's Current Report on Form 8-K dated July 5, 2013.

(23)Incorporated by reference from the Registrant's Current Report on Form 8-K dated November 13, 2013.

(24)Incorporated by reference from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2013.

(25)Incorporated by reference from the Registrant's Annual Report on Form 10-K for the year ended December 31, 2012.

(26)Incorporated by reference from the Registrant's Current Report on Form 8-K filed on February 7, 2014.

Previously filed.

** Confidential treatment has been granted with respect to portions of this exhibit.

***Pursuant to Rule 406T of Regulation S-T, the interactive files on Exhibit 101.1 hereto are deemed not filed or part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Act of 1933, as amended, are deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise are not subject to liability under those sections.

Item 17. Undertakings.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

i. To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

ii. To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement.

iii. To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment 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.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(4) That for the purpose of determining any liability under the Securities Act of 1933 in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following

communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

(i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;

(ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

(iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and

(iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser

(b) The undersigned hereby undertakes to provide to the underwriter at the closing specified in the underwriting agreements, certificates in such denominations and registered in such names as required by the underwriter to permit prompt delivery to each purchaser.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 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 Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

(d) The undersigned registrant hereby undertakes that:

(1) For purposes of determining any liability under the Securities Act of 1933, 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 of 1933, each post-effective amendment that contains a form of prospectus shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-1 and has duly caused this registration statement or amendment thereto to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Francisco, State of California, on September 30, 2014.

TITAN PHARMACEUTICALS, INC.

By: /s/ Sunil Bhonsle
Name: Sunil Bhonsle
Title: President

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities held on the dates indicated.

Signature	Title	Date
/s/ Marc Rubin Marc Rubin, M.D.	Executive Chairman of the Board of Directors	September 30, 2014
/s/ Sunil Bhonsle Sunil Bhonsle, Ph.D.	President and Director (principal executive and principal financial officer)	September 30, 2014
/s/ Brian Crowley Brian Crowley	Vice President Finance (principal accounting officer)	September 30, 2014
* Victor J. Bauer	Director	September 30, 2014
* Eurelio Cavalier, M.D.	Director	September 30, 2014
* M. David MacFarlane	Director	September 30, 2014
* Ley Smith	Director	September 30, 2014

*
By: Sunil Bhonsle, attorney in fact

Exhibit 1.1

TITAN PHARMACEUTICALS, INC.

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Each Unit Consisting of One Share of Common Stock and
0.75 of a Class A Warrant, Each to Purchase One Share of Common Stock

UNDERWRITING AGREEMENT

October •, 2014

Roth Capital Partners, LLC
888 San Clemente Drive
Newport Beach, CA 92660

Ladies and Gentlemen:

Titan Pharmaceuticals, Inc., a Delaware corporation (the "Company"), proposes, subject to the terms and conditions stated herein, to issue and sell to you (the "Underwriter"), an aggregate of • units (the "Units"), each Unit consisting of (i) one share (collectively, the "Shares") of common stock, par value $0.001 per share (the "Common Stock"), of the Company, and (ii) 0.75 of a Class A warrant (collectively, the "Warrants"), each to purchase one share of Common Stock (collectively, the "Warrant Shares"). The Units, the Shares, the Warrants and the Underwriter Warrants (as defined below) are collectively referred to as the "Securities". No Units will be issued. The Shares and the Warrants will be separately issued and will be immediately separable and transferable upon issuance. The terms of the Warrants are set forth in the form of Warrant attached as Exhibit A hereto.

The Company and the Underwriter hereby confirm their agreement as follows:

1. Registration Statement and Prospectus. The Company has prepared and filed with the Securities and Exchange Commission (the "Commission") a registration statement covering the Securities on Form S-1 (File No. 333-198476) under the Securities Act of 1933, as amended (the "Securities Act") and the rules and regulations (the "Rules and Regulations") of the Commission thereunder, and such amendments to such registration statement (including post effective amendments) as may have been required to the date of this Agreement. Such registration statement, as amended (including any post effective amendments), has been declared effective by the Commission. Such registration statement, including amendments thereto (including post effective amendments thereto) at the time of effectiveness thereof (the "Effective Time"), the exhibits and any schedules thereto at the Effective Time or thereafter during the period of effectiveness and the documents and information otherwise deemed to be a part thereof or included therein by the Securities Act or otherwise pursuant to the Rules and Regulations at the Effective Time or thereafter during the period of effectiveness, is herein called the "Registration Statement." If the Company has filed or files an abbreviated registration statement pursuant to Rule 462(b) under the Securities Act (the "Rule 462 Registration Statement"), then any reference herein to the term Registration Statement shall include such Rule 462 Registration Statement. Any preliminary prospectus included in the Registration Statement or filed with the Commission pursuant to Rule 424(a) under the Securities Act is hereinafter called a "Preliminary Prospectus." The Preliminary Prospectus relating to the Securities that was included in the Registration Statement immediately prior to the pricing of the offering contemplated hereby is hereinafter called the "Pricing Prospectus."

The Company is filing with the Commission pursuant to Rule 424 under the Securities Act a final prospectus relating to the Securities, which includes the information permitted to be omitted therefrom at the Effective Time by Rule 430A under the Securities Act, and such final prospectus, as filed, is hereinafter called the "Final Prospectus." The Final Prospectus, the Pricing Prospectus and any preliminary prospectus in the form in which they were included in the Registration Statement or filed with the Commission pursuant to Rule 424 under the Securities Act is hereinafter called a "Prospectus."

For purposes of this Agreement, all references to the Registration Statement, the Rule 462 Registration Statement, the Pricing Prospectus, the Final Prospectus, the Prospectus or any amendment or supplement to any of the foregoing shall be deemed to include the copy filed with the Commission pursuant to its Interactive Data Electronic Applications system. All references in this Agreement to amendments or supplements to the Registration Statement, the Rule 462 Registration Statement, the Pricing Prospectus, the Final Prospectus or the Prospectus shall be deemed to mean and include the subsequent filing of any document under the Securities Exchange Act of 1934, as amended (the "Exchange Act"), that is deemed to be incorporated therein by reference therein or otherwise deemed by the Rules and Regulations to be a part thereof.

2. Representations and Warranties of the Company Regarding the Offering.

(a) The Company represents and warrants to, and agrees with, the Underwriter, as of the date hereof and as of the Closing Date (as defined in Section 4(b) below), except as otherwise indicated, as follows:

(i) At each time of effectiveness, at the date hereof and at the Closing Date, the Registration Statement and any post-effective amendment thereto complied or will comply in all material respects with the requirements of the Securities Act and the Rules and Regulations and did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein not misleading. The Time of Sale Disclosure Package (as defined in Section 2(a)(iii)(A)(1) below) as of the date hereof and at the Closing Date, any roadshow or investor presentations delivered to and approved by the Underwriter for use in connection with the marketing of the offering of the Securities (the "Marketing Materials") as of the time of their use and at the Closing Date, and the Prospectus, as amended or supplemented, as of its date, at the time of filing pursuant to Rule 424(b) under the Securities Act and at the Closing Date did not and will not contain any untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in the light of the circumstances under which they were made, not misleading. The representations and warranties set forth in the two immediately preceding sentences shall not apply to statements in or omissions from the Registration Statement, the Time of Sale Disclosure Package or any Prospectus in reliance upon, and in conformity with, written information furnished to the Company by the Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f). The Registration Statement contains all exhibits and schedules required to be filed by the Securities Act or the Rules and Regulations. No order preventing or suspending the effectiveness or use of the Registration Statement or any Prospectus is in effect and no proceedings for such purpose have been instituted or are pending, or, to the knowledge of the Company, are contemplated or threatened by the Commission.

(ii) The Company has not distributed any prospectus or other offering material in connection with the offering and sale of the Securities other than the Time of Sale Disclosure Package and the Marketing Materials.

(iii) (A) The Company has provided a copy to the Underwriter of each Issuer Free Writing Prospectus (as defined below) used in the sale of the Securities. The Company has filed all Issuer Free Writing Prospectuses required to be so filed with the Commission, and no order preventing or suspending the effectiveness or use of any Issuer Free Writing Prospectus is in effect and no proceedings for such purpose have been instituted or are pending, or, to the knowledge of the Company, are contemplated or threatened by the Commission. When taken together with the rest of the Time of Sale Disclosure Package or the Final Prospectus, since its first use and at all relevant times since then, no Issuer Free Writing Prospectus has, does or will include (1) any untrue statement of a material fact or omission to state any material fact necessary in order to make the statements therein, in the light of the circumstances under which they were made, not misleading, or (2) information that conflicted, conflicts or will conflict with the information contained in the Registration Statement or the Final Prospectus. The representations and warranties set forth in the immediately preceding sentence shall not apply to statements in or omissions from the Time of Sale Disclosure Package, the Final Prospectus or any Issuer Free Writing Prospectus in reliance upon, and in conformity with, written information furnished to the Company by the Underwriter specifically for use in the preparation thereof. As used in this paragraph and elsewhere in this Agreement:

(1) "Time of Sale Disclosure Package" means the Pricing Prospectus, each Issuer Free Writing Prospectus, and the description of the transaction provided by the Underwriter included on **Schedule II**.

(2) "Issuer Free Writing Prospectus" means any "issuer free writing prospectus," as defined in Rule 433 under the Securities Act, relating to the Securities that (A) is required to be filed with the Commission by the Company, or (B) is exempt from filing pursuant to Rule 433(d)(5)(i) or (d)(8) under the Securities Act, in each case in the form filed or required to be filed with the Commission or, if not required to be filed, in the form retained in the Company's records pursuant to Rule 433(g) under the Securities Act.

(B) At the time of filing of the Registration Statement and at the date hereof, the Company was not and is not an "ineligible issuer," as defined in Rule 405 under the Securities Act or an "excluded issuer" as defined in Rule 164 under the Securities Act.

(C) Each Issuer Free Writing Prospectus satisfied, as of its issue date and at all subsequent times through the Prospectus Delivery Period (as defined below in Section 4(a)(i)), all other conditions as may be applicable to its use as set forth in Rules 164 and 433 under the Securities Act, including any legend, record-keeping or other requirements.

(iv) The financial statements of the Company, together with the related notes, included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus comply in all material respects with the applicable requirements of the Securities Act the Exchange Act and fairly present the financial condition of the Company as of the dates indicated and the results of operations and changes in cash flows for the periods therein specified in conformity with U.S. generally accepted accounting principles consistently applied throughout the periods involved; and the supporting schedules included in the Registration Statement present fairly the information required to be stated therein. No other financial statements, pro forma financial information or schedules are required under the Securities Act to be included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus.

(v) To the Company's knowledge, OUM & Co. LLP, which has expressed its opinion with respect to the financial statements and schedules incorporated by reference as a part of the Registration Statement and incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Final Prospectus, is an independent public accounting firm with respect to the Company within the meaning of the Securities Act and the Rules and Regulations.

(vi) The Company had a reasonable basis for, and made in good faith, each "forward-looking statement" (within the meaning of Section 27A of the Securities Act or Section 21E of the Exchange Act) contained or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package, the Final Prospectus or the Marketing Materials, in each case at the time such "forward-looking statement" was made.

(vii) All statistical or market-related data included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package or the Final Prospectus, or included in the Marketing Materials, are based on or derived from sources that the Company reasonably believes to be reliable and accurate, and the Company has obtained the written consent to the use of such data from such sources, to the extent required.

(viii) The Common Stock is registered pursuant to Section 12(g) of the Exchange Act and is approved for quotation on the OTCBB. Except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, there is no action pending by the Company or, to the Company's knowledge, by OTC Markets Inc. or the Financial Institutions Regulatory Authority, Inc. ("FINRA") to remove the Common Stock from quotation on the OTCBB, nor has the Company received any notification that OTC Markets Inc. or FINRA is contemplating terminating such quotation.

(ix) The Company has not taken, directly or indirectly, any action that is designed to or that has constituted or that would reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(x) The Company is not and, after giving effect to the offering and sale of the Securities and the application of the net proceeds thereof, including the proceeds received upon the exercise of the Warrants and the Underwriter Warrants, will not be an "investment company," as such term is defined in the Investment Company Act of 1940, as amended.

(b) Any certificate signed by any officer of the Company and delivered to the Underwriter or to the Underwriter's counsel shall be deemed a representation and warranty by the Company to the Underwriter as to the matters covered thereby.

3. Representations and Warranties Regarding the Company.

(a) The Company represents and warrants to and agrees with, the Underwriter, except as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, as follows:

(i) The Company has been duly organized and is validly existing as a corporation or other entity in good standing under the laws of its jurisdiction of organization. The Company has the power and authority (corporate or otherwise) to own its properties and conduct its business as currently being carried on and as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, and is duly qualified to do business as a foreign corporation or other entity in good standing in each jurisdiction in which it owns or leases real property or in which the conduct of its business makes such qualification necessary and in which the failure to so qualify would have or is reasonably likely to result in a material adverse effect upon the business, prospects, properties, operations, condition (financial or otherwise) or results of operations of the Company and its subsidiaries, taken as a whole, or in its ability to perform its obligations under this Agreement ("Material Adverse Effect"). The Company does not have any subsidiaries.

(ii) The Company has the power and authority to enter into this Agreement, the Warrants and the Underwriter Warrants (as defined below), to authorize, issue and sell the Securities as contemplated by this Agreement and, subject to effecting the Capital Event (as defined below), to issue the Warrant Shares and Underwriter Warrant Shares (as defined below) upon the due exercise of the Warrants and the Underwriter Warrants. Each of this Agreement, the Warrants and the Underwriter Warrants has been duly authorized, executed and delivered by the Company, and constitutes a valid, legal and binding obligation of the Company, enforceable against the Company in accordance with its terms, except as rights to indemnity hereunder may be limited by federal or state securities laws and except as such enforceability may be limited by bankruptcy, insolvency, reorganization or similar laws affecting the rights of creditors generally and subject to general principles of equity.

(iii) The execution, delivery and performance of this Agreement, the Warrants and the Underwriter Warrants and the consummation of the transactions herein contemplated will not (A) result in a breach or violation of any of the terms and provisions of, or constitute a default under, any law, order, rule or regulation to which the Company or any subsidiary is subject, or by which any property or asset of the Company or any subsidiary is bound or affected, except to the extent such breach, violation or default is not reasonably likely to have a Material Adverse Effect, (B) conflict with, result in any violation or breach of, or constitute a default (or an event that with notice or lapse of time or both would become a default) under, or give to others any right of termination, amendment, acceleration or cancellation (with or without notice, lapse of time or both) (a "Default Acceleration Event") of, any agreement, lease, credit facility, debt, note, bond, mortgage, indenture or other instrument (the "Contracts") or obligation or other understanding to which the Company or any subsidiary is a party or by which any property or asset of the Company or any subsidiary is bound or affected, except to the extent that such conflict, default or Default Acceleration Event is not reasonably likely to result in a Material Adverse Effect, or (C) subject to effecting the Capital Event, result in a breach or violation of any of the terms and provisions of, or constitute a default under, the Company's certificate of incorporation, as amended, or by-laws, as amended.

(iv) The Company is not in violation, breach or default under its certificate of incorporation, as amended, by-laws, as amended, or other equivalent organizational or governing documents.

(v) No consents, approvals, orders, authorizations or filings are required on the part of the Company in connection with the execution, delivery or performance of this Agreement, the Warrants and the Underwriter Warrants and the issue and sale of the Securities, except (A) the registration under the Securities Act of the Securities (which has been effected) and, to the extent required, the Warrant Shares and the Underwriter Warrant Shares under the Securities Act, (B) the approval of the Company's stockholders of the Capital Event (as defined below), (C) effecting the Capital Event, (D) such consents, approvals, authorizations, registrations or qualifications as may be required under state or foreign securities or Blue Sky laws and the rules of the FINRA in connection with the purchase and distribution of the Securities by the Underwriter, and (E) such consents, approvals, orders, authorizations and filings the failure of which to make or obtain is not reasonably likely to result in a Material Adverse Effect.

(vi) The Company has an authorized capitalization as set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. All of the issued and outstanding shares of capital stock of the Company are duly authorized and validly issued, fully paid and nonassessable, and have been issued in compliance with all applicable securities laws, and conform in all material respects to the description thereof in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. Except for the issuances of options or restricted stock in the ordinary course of business, since the respective dates as of which information is provided in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, the Company has not entered into or granted any convertible or exchangeable securities, options, warrants, agreements, contracts or other rights in existence to purchase or acquire from the Company any shares of the capital stock of the Company. The Shares, when issued, will be duly authorized and validly issued, fully paid and nonassessable, will be issued in compliance with all applicable securities laws, and will be free of preemptive, registration or similar rights and will conform to the description of the capital stock of the Company contained in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. From and after the Capital Event Date (as defined below), the Warrant Shares and the shares of Common Stock underlying the Underwriter Warrants (the "Underwriter Warrant Shares"), when issued, paid for and delivered upon due exercise of the Warrants and the Underwriter Warrants, as applicable, will be duly authorized and validly issued, fully paid and nonassessable, will be issued in compliance with all applicable securities laws, and will be free of preemptive, registration or similar rights. From and after the Capital Event Date, the Warrant Shares and the Underwriter Warrant Shares will be reserved for issuance. The Securities, when issued, will conform in all material respects to the descriptions thereof set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus.

(vii) Each of the Company and its former subsidiaries has (A) filed all returns (as hereinafter defined) required to be filed with taxing authorities prior to the date hereof or has duly obtained extensions of time for the filing thereof and (B) paid all taxes (as hereinafter defined) shown as due on such returns that were filed and has paid all taxes imposed on or assessed against the Company or such respective former subsidiary, except, in all cases, for any such amounts that the Company or any former subsidiary is contesting in good faith and except in any case in which the failure to so file or pay would not reasonably be expected to have a Material Adverse Effect. The provisions for taxes payable, if any, shown on the financial statements filed with or as part of the Registration Statement are sufficient for all accrued and unpaid taxes, whether or not disputed, and for all periods to and including the dates of such consolidated financial statements. No issues have been raised and are currently pending by any taxing authority in connection with any of the returns or taxes asserted as due from the Company or its former subsidiaries, and no waivers of statutes of limitation with respect to the returns or collection of taxes have been given by or requested from the Company or its former subsidiaries. The term "taxes" mean all federal, state, local, foreign, and other net income, gross income, gross receipts, sales, use, ad valorem, transfer, franchise, profits, license, lease, service, service use, withholding, payroll, employment, excise, severance, stamp, occupation, premium, property, windfall profits, customs, duties or other taxes, fees, assessments, or charges of any kind whatever, together with any interest and any penalties, additions to tax, or additional amounts with respect thereto. The term "returns" means all returns, declarations, reports, statements, and other documents required to be filed in respect to taxes.

(viii) Since the respective dates as of which information is given (including by incorporation by reference) in the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, (a) the Company has not incurred any material liabilities or obligations, direct or contingent, or entered into any material transactions other than in the ordinary course of business, (b) the Company has not declared or paid any dividends or made any distribution of any kind with respect to its capital stock, (c) except for the Capital Event, there has not been any change in the capital stock of the Company (other than a change in the number of outstanding shares of Common Stock due to the issuance of shares upon the exercise of outstanding options or warrants or the issuance of restricted stock awards or restricted stock units under the Company's existing stock awards plan, or any new grants thereof in the ordinary course of business), (d) there has not been any material change in the Company's long-term or short-term debt, and (e) there has not been the occurrence of any Material Adverse Effect.

(ix) Except as a set forth or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, there is not pending or, to the knowledge of the Company, threatened, any action, suit or proceeding to which the Company is a party or of which any property or assets of the Company is the subject before or by any court or governmental agency, authority or body, or any arbitrator or mediator, which is reasonably likely to result in a Material Adverse Effect or adversely affect the consummation of the transactions contemplated by this Agreement.

(x) The Company holds, and is in compliance with, all franchises, grants, authorizations, licenses, permits, easements, consents, certificates and orders ("Permits") of any governmental or self-regulatory agency, authority or body required for the conduct of its business, and all such Permits are in full force and effect, in each case except where the failure to hold, or comply with, any of them is not reasonably likely to result in a Material Adverse Effect.

(xi) The Company has good and marketable title to all property (whether real or personal) described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus as being owned by them that is material to the business of the Company, in each case free and clear of all liens, claims, security interests, other encumbrances or defects, except those that are not reasonably likely to result in a Material Adverse Effect. The property held under lease by the Company is held by it under valid, subsisting and enforceable leases with only such exceptions with respect to any particular lease as do not interfere in any material respect with the conduct of the business of the Company.

(xii) The Company owns or possesses or has valid right to use all patents, patent applications, trademarks, service marks, trade names, trademark registrations, service mark registrations, copyrights, licenses, inventions, trade secrets and similar rights ("Intellectual Property") necessary for the conduct of the business of the Company as currently carried on and as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus. To the knowledge of the Company, no action or use by the Company will involve or give rise to any infringement of, or license or similar fees for, any Intellectual Property of others, except where such action, use, license or fee is not reasonably likely to result in a Material Adverse Effect. The Company has not received any notice alleging any such infringement or fee.

(xiii) The Company has complied with, is not in violation of, and has not received any notice of violation relating to any law, rule or regulation relating to the conduct of its business, or the ownership or operation of its property and assets, including, without limitation, (A) the Currency and Foreign Transactions Reporting Act of 1970, as amended, or any money laundering laws, rules or regulations, (B) any laws, rules or regulations related to health, safety or the environment, including those relating to the regulation of hazardous substances, (C) the Sarbanes-Oxley Act and the rules and regulations of the Commission thereunder, (D) the Foreign Corrupt Practices Act of 1977 and the rules and regulations thereunder, and (E) the Employment Retirement Income Security Act of 1974 and the rules and regulations thereunder, in each case except where the failure to be in compliance is not reasonably likely to result in a Material Adverse Effect.

(xiv) Neither the Company nor, to the knowledge of the Company, any director, officer, employee, representative, agent or affiliate of the Company is currently subject to any U.S. sanctions administered by the Office of Foreign Assets Control of the U.S. Treasury Department ("OFAC"); and the Company will not directly or indirectly use the proceeds of the offering of the Securities contemplated hereby, or lend, contribute or otherwise make available such proceeds to any person or entity, for the purpose of financing the activities of any person currently subject to any U.S. sanctions administered by OFAC.

(xv) The Company carries, or is covered by, insurance in such amounts and covering such risks as, in the Company's reasonable judgment, is adequate for the conduct of its business and the value of its properties and as is customary for similarly sized companies engaged in similar businesses in similar industries.

(xvi) No labor dispute with the employees of the Company exists or, to the knowledge of the Company, is imminent, that is reasonably likely to result in a Material Adverse Effect.

(xvii) Except as set forth or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, neither the Company nor, to its knowledge, any other party is in violation, breach or default of any Contract that is reasonably likely to result in a Material Adverse Effect.

(xviii) No supplier, customer, distributor or sales agent of the Company has notified the Company that it intends to discontinue or decrease the rate of business done with the Company, except where such decrease is not reasonably likely to result in a Material Adverse Effect.

(xix) There are no claims, payments, issuances, arrangements or understandings for services in the nature of a finder's, consulting or origination fee with respect to the introduction of the Company to the Underwriter or the sale of the Securities hereunder or any other arrangements, agreements, understandings, payments or issuances with respect to the Company that may affect the Underwriter's compensation, as determined by FINRA.

(xx) Except as set forth or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, the Company has not made any direct or indirect payments (in cash, securities or otherwise) to (i) any person, as a finder's fee, investing fee or otherwise, in consideration of such person raising capital for the Company or introducing to the Company persons who provided capital to the Company, (ii) any FINRA member, or (iii) any person or entity that has any direct or indirect affiliation or association with any FINRA member within the 12-month period prior to the date on which the Registration Statement was filed with the Commission ("Filing Date") or thereafter.

(xxi) None of the net proceeds of the offering will be paid by the Company to any participating FINRA member or any affiliate or associate of any participating FINRA member, except as specifically authorized herein.

(xxii) Except as set forth or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, to the Company's knowledge, no (i) officer or director of the Company, (ii) owner of 5% or more of the Company's unregistered securities or (iii) owner of any amount of the Company's unregistered securities acquired within the 180-day period prior to the Filing Date, has any direct or indirect affiliation or association with any FINRA member. The Company will advise the Underwriter and its counsel if it becomes aware that any officer, director or stockholder of the Company is or becomes an affiliate or associated person of a FINRA member participating in the offering.

(xxiii) Other than the Underwriter, no person has the right to act as an underwriter or as a financial advisor to the Company in connection with the transactions contemplated hereby.

(xxiv) The statements set forth in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus under the captions "Risk Factors- Health care reform measures and changes in policies, funding, staffing and leadership at the FDA and other agencies could hinder or prevent the commercial success of our products," "Business – License Agreements," "Business – Government Regulation and Product Approval," "Certain Relationships and Related Transactions," and "Underwriting," insofar as they purport to describe the provisions of the laws and documents referred to therein, are accurate, complete and fair, and under the captions "Description of Capital Stock" and "Description of Securities We Are Offering" insofar as they purport to constitute a summary of the terms of the Securities, are accurate, complete and fair.

(xxv) Except as set forth or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, and except as set forth in the Warrants and the Underwriter Warrants, there are no contracts, agreements or understandings between the Company and any person granting such person the right (other than rights which have been waived in writing or otherwise satisfied) to require the Company to file a registration statement under the Securities Act with respect to any securities of the Company owned or to be owned by such person or to require the Company to include such securities in the securities registered pursuant to the Registration Statement or in any securities being registered pursuant to any other registration statement filed by the Company under the Securities Act.

(xxvi) Except as set forth or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, the Company has not sold or issued any shares of Common Stock during the six-month period preceding the date of the Prospectus, including any sales pursuant to Rule 144A under, or Regulations D or S of, the Securities Act, other than shares issued pursuant to employee benefit plans, stock option plans or other employee compensation plans or pursuant to outstanding options, rights or warrants.

(xxvii) The Company (i) is in compliance with all, and have not violated any, laws, regulations, ordinances, rules, orders, judgments, decrees, permits or other legal requirements of any governmental authority, including without limitation any international, national, state, provincial, regional, or local authority, relating to the protection of human health or safety, the environment, or natural resources, or to hazardous or toxic substances or wastes, pollutants or contaminants (including, without limitation, all health and safety laws) ("Environmental Laws") applicable to such entity, which compliance includes, without limitation, obtaining, maintaining and complying with all permits and authorizations and approvals required by Environmental Laws to conduct their respective businesses as described in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, except where the failure to comply would not, singularly or in the aggregate, have a Material Adverse Effect, and (ii) has not received notice of any actual or alleged violation of Environmental Laws, or of any potential liability for or other obligation concerning the presence, disposal or release of hazardous or toxic substances or wastes, pollutants or contaminants.

(A) There are no proceedings that are pending, or known to be contemplated, against the Company under Environmental Laws in which a governmental authority is also a party.

(B) The Company is not aware of any existing liabilities concerning hazardous or toxic substances or wastes, pollutants or contaminants that could reasonably be expected to have a Material Adverse Effect on the capital expenditures, earnings or competitive position of the Company.

(C) To the knowledge of the Company, no property which is or has been owned, leased, used, operated or occupied by the Company or its former subsidiaries has been designated as a Superfund site pursuant to the Comprehensive Environmental Response, Compensation of Liability Act of 1980, as amended (42 U.S.C. Section 9601, et. seq.), or otherwise designated as a contaminated site under applicable state or local law.

(xxviii) The Company maintains a system of internal control over financial reporting (as such term is defined in Rule 13a-15(f) under the Exchange Act) that complies in all material respects with the requirements of the Exchange Act and has been designed by the Company's principal executive and principal financial officer and principal accounting officer, or under their supervision, to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with U.S. generally accepted accounting principles. The Company's internal control over financial reporting is effective and the Company is not aware of any material weaknesses in its internal control over financial reporting.

(xxix) Since the date of the latest audited financial statements included or incorporated by reference in the Registration Statement, the Time of Sale Disclosure Package and the Prospectus, there has been no change in the Company's internal control over financial reporting that has materially affected, or is reasonably likely to materially affect, the Company's internal control over financial reporting.

(xxx) The Company maintains disclosure controls and procedures (as such term is defined in Rule 13a-15(e) under the Exchange Act) that comply with the requirements of the Exchange Act; such disclosure controls and procedures have been designed to ensure that material information relating to the Company is made known to the Company's principal executive officer and principal financial officer by others within those entities; and such disclosure controls and procedures are effective.

(xxxi) The operations of the Company are being conducted in material compliance with applicable employment laws, the rules and regulations thereunder and any related or similar rules, regulations or guidelines, issued, administered or enforced by any governmental agency (collectively, the "Employee Benefit Laws") and no action, suit or proceeding by or before any court or governmental agency, authority or body or any arbitrator involving the Company with respect to the Employee Benefit Laws is pending or, to the knowledge of the Company, threatened.

(xxxii) Neither the Company nor any director, officer, or employee, nor, to the Company's knowledge, any agent or representative of the Company or of any of its affiliates, has taken any action in furtherance of an offer, payment, promise to pay, or authorization or approval of the payment or giving of money, property, gifts or anything else of value, directly or indirectly, to any "government official" (including any officer or employee of a government or government-owned or controlled entity or of a public international organization, or any person acting in an official capacity for or on behalf of any of the foregoing, or any political party or party official or candidate for political office) to influence official action or secure an improper advantage; and the Company and its affiliates conduct their businesses in compliance in all material respects with applicable anti-corruption laws and have instituted and maintain and will continue to maintain policies and procedures designed to promote and achieve compliance in all material respects with such laws and with the representation and warranty contained herein.

4. Purchase, Sale and Delivery of Securities.

(a) On the basis of the representations, warranties and agreements herein contained, but subject to the terms and conditions herein set forth, the Company agrees to issue and sell the Units to the Underwriter, and the Underwriter agrees to purchase the Units set forth opposite its name in **Schedule I** hereto. The purchase price for each Unit shall be $• per Unit.

(b) The Shares and the Warrants comprising the Units will be delivered by the Company to the Underwriter, for its account, against payment of the purchase price therefor by wire transfer of same day funds payable to the order of the Company at the offices of Roth Capital Partners, LLC, 888 San Clemente Drive, Newport Beach, CA 92660, or such other location as may be mutually acceptable, at 6:00 a.m. PDT, on the third (or if the Units are priced, as contemplated by Rule 15c6-1(c) under the Exchange Act, after 4:30 p.m. Eastern time, the fourth) full business day following the date hereof, or at such other time and date as the Underwriter and the Company determine pursuant to Rule 15c6-1(a) under the Exchange Act. The time and date of delivery of the Shares and the Warrants comprising the Units is referred to herein as the "Closing Date." On the Closing Date, the Company shall deliver the Shares and the Warrants comprising the Units, which shall be registered in the name or names and shall be in such denominations as the Underwriter may request at least one (1) business day before the Closing Date, to the account of the Underwriter, which delivery shall (a) with respect to the Shares, be made through the facilities of the Depository Trust Company's DWAC system, and (b) with respect to the Warrants, be made by physical delivery to be received or directed by the Underwriter no later than one (1) business day following the respective Closing Date.

(c) On the Closing Date, the Company hereby agrees to issue and sell to the Underwriter (and/or its designees) at the Closing, warrants (the "Underwriter Warrants"), in the form attached as Exhibit B hereto, for the purchase of an aggregate of • shares of Common Stock for an aggregate purchase price of $100.00.

5. Covenants.

(a) The Company covenants and agrees with the Underwriter as follows:

(i) To prepare the Prospectus in a form approved by the Underwriter and to file such Prospectus pursuant to Rule 424(b) under the Securities Act not later than the Commission's close of business on the second business day following the execution and delivery of this Agreement, or, if applicable, such earlier time as may be required by Rule 430A(a)(3) under the Securities Act.

(ii) During the period beginning on the date hereof and ending on the date that the Prospectus is no longer required by law to be delivered in connection with sales by an underwriter or dealer (the "Prospectus Delivery Period"), prior to amending or supplementing the Registration Statement, including any Rule 462 Registration Statement, the Time of Sale Disclosure Package or the Prospectus, the Company shall furnish to the Underwriter for review and comment a copy of each such proposed amendment or supplement, and the Company shall not file any such proposed amendment or supplement to which the Underwriter reasonably objects.

(iii) From the date of this Agreement until the end of the Prospectus Delivery Period, the Company shall promptly advise the Underwriter in writing (A) of the receipt of any comments of, or requests for additional or supplemental information from, the Commission, (B) of the time and date of any filing of any post-effective amendment to the Registration Statement or any amendment or supplement to the Time of Sale Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, (C) of the time and date that any post-effective amendment to the Registration Statement becomes effective and (D) of the issuance by the Commission of any stop order suspending the effectiveness of the Registration Statement or of any order preventing or suspending its use or the use of the Time of Sale Disclosure Package or any Issuer Free Writing Prospectus, or of any proceedings to remove, suspend or terminate from listing or quotation the Common Stock from any securities exchange upon which it is listed for trading or included or designated for quotation, or of the threatening or initiation of any proceedings for any of such purposes. If the Commission shall enter any such stop order at any time during the Prospectus Delivery Period, the Company will use its reasonable efforts to obtain the lifting of such order at the earliest possible moment. Additionally, the Company agrees that it shall comply with the provisions of Rules 424(b), 430A and 430B, as applicable, under the Securities Act and will use its reasonable efforts to confirm that any filings made by the Company under Rule 424(b) or Rule 433 were received in a timely manner by the Commission (without reliance on Rule 424(b)(8) or 164(b) of the Securities Act).

(iv) (A) During the Prospectus Delivery Period, the Company will comply with all requirements imposed upon it by the Securities Act, as now and hereafter amended, and by the Rules and Regulations, as from time to time in force, and by the Exchange Act, as now and hereafter amended, so far as necessary to permit the continuance of sales of or dealings in the Securities as contemplated by the provisions hereof, the Time of Sale Disclosure Package, the Registration Statement and the Prospectus. If during such period any event occurs as the result of which the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) would include an untrue statement of a material fact or omit to state a material fact necessary to make the statements therein, in the light of the circumstances under which such statement was made, not misleading, or if during such period it is necessary or appropriate in the opinion of the Company or its counsel or the Underwriter or its counsel to amend the Registration Statement or supplement the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) to comply with the Securities Act, the Company will promptly notify the Underwriter, allow the Underwriter the opportunity to provide reasonable comments on such amendment, Prospectus supplement or document, and will amend the Registration Statement or supplement the Prospectus (or if the Prospectus is not yet available to prospective purchasers, the Time of Sale Disclosure Package) so as to correct such statement or omission or effect such compliance.

(B) If during the Prospectus Delivery Period there occurred or occurs an event or development the result of which is that such Issuer Free Writing Prospectus conflicted or would conflict with the information contained in the Registration Statement or any Prospectus or included or would include an untrue statement of a material fact or omitted or would omit to state a material fact necessary in order to make the statements therein, in the light of the circumstances prevailing at that subsequent time, not misleading, the Company has promptly notified or promptly will notify the Underwriter and has promptly amended or will promptly amend or supplement, at its own expense, such Issuer Free Writing Prospectus to eliminate or correct such conflict, untrue statement or omission.

(v) The Company shall take or cause to be taken all necessary action to qualify the Securities, the Warrant Shares and the Underwriter Warrant Shares for sale under the securities laws of such jurisdictions as the Underwriter reasonably designates and to continue such qualifications in effect so long as required for the distribution of the Securities, the Warrant Shares and the Underwriter Warrant Shares, except that the Company shall not be required in connection therewith to qualify as a foreign corporation or as a dealer in securities in any jurisdiction in which it is not so qualified, to execute a general consent to service of process in any state or to subject itself to taxation in respect of doing business in any jurisdiction in which it is not otherwise subject.

(vi) The Company will furnish to the Underwriter and counsel for the Underwriter copies of the Registration Statement, each Prospectus, any Issuer Free Writing Prospectus, and all amendments and supplements to such documents, in each case as soon as available and in such quantities as the Underwriter may from time to time reasonably request.

(vii) The Company will make generally available to its security holders as soon as practicable, but in any event not later than 15 months after the end of the Company's current fiscal quarter, an earnings statement (which need not be audited) covering a 12-month period that shall satisfy the provisions of Section 11(a) of the Securities Act and Rule 158 of the Rules and Regulations.

(viii) The Company, whether or not the transactions contemplated hereunder are consummated or this Agreement is terminated, will pay or cause to be paid (A) all expenses (including transfer taxes allocated to the respective transferees) incurred in connection with the delivery to the Underwriter of the Securities, (B) all expenses and fees (including, without limitation, fees and expenses of the Company's counsel) in connection with the preparation, printing, filing, delivery, and shipping of the Registration Statement (including the financial statements therein and all amendments, schedules, and exhibits thereto), the Securities, the Time of Sale Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus and any amendment thereof or supplement thereto, (C) all reasonable filing fees and reasonable fees and disbursements of the Underwriter's counsel incurred in connection with the qualification of the Securities, the Warrant Shares and the Underwriter Warrant Shares for offering and sale by the Underwriter or by dealers under the securities or blue sky laws of the states and other jurisdictions that the Underwriter shall designate, (D) the fees and expenses of any transfer agent or registrar, (E) the reasonable filing fees and reasonable fees and disbursements of Underwriter's counsel incident to any required review and approval by FINRA of the terms of the sale of the Securities, (F) listing fees, if any, and (G) all other costs and expenses incident to the performance of its obligations hereunder that are not otherwise specifically provided for herein. In addition, the Company will reimburse the Underwriter for its reasonable out-of-pocket expenses, including its legal fees and disbursements, in connection with the purchase and sale of the Securities contemplated hereby up to an aggregate of $75,000 (including amounts payable pursuant to clauses (C) and (E) above) without the Company's prior consent, which shall not be unreasonably withheld, but in no event to exceed $100,000 in the aggregate. If this Agreement is terminated by the Underwriter in accordance with the provisions of Section 6 or Section 9, the Company will reimburse the Underwriter for all out-of-pocket disbursements (including, but not limited to, reasonable fees and disbursements of counsel, travel expenses, postage, facsimile and telephone charges) fees and disbursements incurred by the Underwriter in connection with its investigation, preparing to market and marketing the Securities or in contemplation of performing its obligations hereunder.

(ix) The Company intends to apply the net proceeds from the sale of the Securities to be sold by it hereunder for the purposes set forth in the Time of Sale Disclosure Package and in the Final Prospectus.

(x) The Company has not taken and will not take, directly or indirectly, during the Prospectus Delivery Period, any action designed to or which might reasonably be expected to cause or result in, or that has constituted, the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of the Securities.

(xi) The Company represents and agrees that, unless it obtains the prior written consent of the Underwriter, and the Underwriter represents and agrees that, unless it obtains the prior written consent of the Company, it has not made and will not make any offer relating to the Securities that would constitute an Issuer Free Writing Prospectus; provided that the prior written consent of the parties hereto shall be deemed to have been given in respect of the free writing prospectuses included in **Schedule III**. Any such free writing prospectus consented to by the Company and the Underwriter is hereinafter referred to as a "Permitted Free Writing Prospectus." The Company represents that it has treated or agrees that it will treat each Permitted Free Writing Prospectus as an "issuer free writing prospectus," as defined in Rule 433, and has complied or will comply with the requirements of Rule 433 applicable to any Permitted Free Writing Prospectus, including timely Commission filing where required, legending and record-keeping.

(xii) The Company hereby agrees that, without the prior written consent of the Underwriter, it will not, during the period ending 90 days after the date hereof ("Lock-Up Period"), (i) offer, pledge, issue, sell, contract to sell, purchase, contract to purchase, lend, or otherwise transfer or dispose of, directly or indirectly, any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock; 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 the Common Stock, whether any such transaction described in clause (i) or (ii) above is to be settled by delivery of Common Stock or such other securities, in cash or otherwise; or (iii) file any registration statement with the Commission relating to the offering of any shares of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock (other than a registration statement on Form S-4 and Form S-8 or a post-effective amendment to any previously filed registration statement required to maintain the effectiveness thereof). The restrictions contained in the preceding sentence shall not apply to (1) the Securities to be sold hereunder, (2) the Warrant Shares and the Underwriter Warrant Shares, (3) the issuance of Common Stock upon the exercise of options, warrants or other exchange rights as disclosed as outstanding in the Registration Statement (excluding exhibits thereto) or the Prospectus, or (4) the issuance of employee stock options not exercisable during the Lock-Up Period and the grant of restricted stock awards or restricted stock units pursuant to equity incentive plans described in the Registration Statement (excluding exhibits thereto) and the Prospectus. Notwithstanding the foregoing, if (x) the Company issues an earnings release or material news, or a material event relating to the Company occurs, during the last 17 days of the Lock-Up Period, or (y) prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results during the 16-day period beginning on the last day of the Lock-Up Period, the restrictions imposed by this clause shall continue to apply until the expiration of the 18-day period beginning on the issuance of the earnings release or the occurrence of the material news or material event, unless the Underwriter waives such extension in writing.

(xiii) To engage and maintain, at its expense, a registrar and transfer agent for the Common Stock.

(xiv) To not take, directly or indirectly, any action designed to cause or result in, or that has constituted or might reasonably be expected to constitute, under the Exchange Act or otherwise, the stabilization or manipulation of the price of any securities of the Company to facilitate the sale or resale of the Securities.

(xv) Promptly following the Closing Date, the Company shall take all corporate action necessary to call a meeting of its stockholders (which may be its annual meeting) (the "Stockholders Meeting"), which shall occur not later than March 31, 2015, for the purpose of seeking approval of the Company's stockholders to either (i) increase the number of shares of Common Stock the Company is authorized to issue or (ii) effect a reverse split of the Common Stock, in either event sufficient to permit the exercise in full of the Warrants and the Underwriter Warrants in accordance with their terms (a "Capital Event"). In connection therewith, the Company will as soon as reasonably practicable after the Closing Date file with the Commission proxy materials (including a proxy statement and form of proxy) for use at the Stockholders Meeting and, after receiving and promptly responding to any comments of the Commission thereon, shall as soon as reasonably practicable mail such proxy materials to the stockholders of the Company. The Company will comply with Section 14(a) of the Exchange Act and the rules promulgated thereunder in relation to any proxy statement (as amended or supplemented, the "Proxy Statement") and any form of proxy to be sent to the stockholders of the Company in connection with the Stockholders Meeting, and the Proxy Statement shall not, on the date that the Proxy Statement (or any amendment thereof or supplement thereto) is first mailed to stockholders or at the time of the Stockholders Meeting, contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein not false or misleading, or omit to state any material fact necessary to correct any statement in any earlier communication with respect to the solicitation of proxies or the Stockholders Meeting which has become false or misleading. If the Company should discover at any time prior to the Stockholders Meeting, any event relating to the Company or the Subsidiary or any of their respective affiliates, officers or directors that is required to be set forth in a supplement or amendment to the Proxy Statement, in addition to the Company's obligations under the Exchange Act, the Company will promptly inform the Underwriter thereof. The Company's Board of Directors shall recommend to the Company's stockholders that the stockholders vote in favor of the Capital Event at the Stockholders Meeting and take all commercially reasonable action (including, without limitation, the hiring of a proxy solicitation firm of nationally recognized standing) to solicit the approval of the stockholders for the Capital Event. No later than two (2) business days following stockholder approval of the Capital Event, the Company shall file with the Secretary of State of Delaware a certificate of amendment to the Company's Certificate of Incorporation to effect the Capital Event, which certificate of amendment shall provide that it shall become immediately effective upon filing. The Company shall issue a press release announcing the effectiveness of the Capital Event no later than one (1) business day after such filing. The date on which the Capital Event becomes effective is referred to herein as the "Capital Event Date."

(xvi) No later than five (5) business days after the Capital Event Date, the Company shall file with the Commission a registration statement (which shall be on Form S-3 unless the Company is not then eligible to use Form S-3 to register the Warrant Shares and the Underwriter Warrant Shares) for the registration under the Securities Act of the Warrant Shares and the Underwriter Warrant Shares (the "Additional Registration Statement"). The Company shall use its commercially reasonable efforts to cause the Additional Registration Statement to become effective as promptly as practicable and in no event later than the time that the Warrants and the Underwriter Warrants first become exercisable in accordance with their terms and shall use its commercially reasonable efforts to maintain the effectiveness and availability of such registration statement until the earlier of (i) the expiration of the Warrants and the Underwriter Warrants in accordance with their terms or (ii) the time no Warrants and Underwriter Warrants remain outstanding. The indemnification provisions contained in Section 7 hereof shall apply to the Additional Registration Statement. The Company shall take all commercially reasonable action to include the Warrant Shares and the Underwriter Warrant Shares for listing or quotation on such exchange or trading market on which the Common Stock is then listed or quoted on or prior to the date that the Warrants and the Underwriter Warrants first become exercisable in accordance with their terms. Notwithstanding the provisions of this clause (xvi), the Company shall not be required to file or maintain the effectiveness of an Additional Registration Statement in the event that the Company delivers to the Underwriter an opinion (in form and substance reasonably satisfactory to the Underwriter) of outside counsel to the Company reasonably satisfactory to the Underwriter to the effect that the issuance of the Warrant Shares and Underwriter Warrant Shares to the holders of the Warrants and the Underwriter Warrants, as applicable, is exempt from the registration requirements of the Securities Act and may be freely resold by any holder of Warrants or Underwriter Warrants that is not an affiliate of the Company at the time of exercise without further registration under the Securities Act pursuant to either (i) a cashless exercise effected pursuant to Section 1(d) of the Warrants and the Underwriter Warrants or (ii) an exemption from registration under the Securities Act (the "Opinion of Counsel"). In the event that the Company determines that it does not wish to file and maintain the effectiveness of an Additional Registration Statement in compliance with the terms of this paragraph and delivers the Opinion of Counsel, no later than two (2) business days after the delivery of such Opinion of Counsel, the Company shall issue a press release announcing that it has determined not to file and maintain the effectiveness of an Additional Registration Statement, and explaining in reasonable detail the basis on which the Warrant Shares and Underwriter Warrant Shares may be issued to and freely resold by holders of the Warrants and the Underwriter Warrants who are not affiliates of the Company upon the exercise of the Warrants and the Underwriter Warrants, as applicable.

6. Conditions of the Underwriter's Obligations. The obligations of the Underwriter to purchase the Securities are subject to the accuracy, as of the date hereof, and at the Closing Date (as if made on the Closing Date), of and compliance in all material respects with all representations, warranties and agreements of the Company contained herein, the performance by the Company of its obligations hereunder and the following additional conditions:

(a) If filing of the Prospectus, or any amendment or supplement thereto, or any Issuer Free Writing Prospectus, is required under the Securities Act or the Rules and Regulations, the Company shall have filed the Prospectus (or such amendment or supplement) or such Issuer Free Writing Prospectus with the Commission in the manner and within the time period so required (without reliance on Rule 424(b)(8) or 164(b) under the Securities Act); the Registration Statement shall remain effective; no stop order suspending the effectiveness of the Registration Statement or any part thereof, any Rule 462 Registration Statement, or any amendment thereof, nor suspending or preventing the use of the Time of Sale Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus shall have been issued; no proceedings for the issuance of such an order shall have been initiated or threatened; any request of the Commission or the Underwriter for additional information (to be included in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, any Issuer Free Writing Prospectus or otherwise) shall have been complied with to the Underwriter's satisfaction.

(b) FINRA shall have raised no objection to the fairness and reasonableness of the underwriting terms and arrangements.

(c) The Underwriter shall not have reasonably determined, and advised the Company, that the Registration Statement, the Time of Sale Disclosure Package or the Prospectus, or any amendment thereof or supplement thereto, or any Issuer Free Writing Prospectus, contains an untrue statement of fact which, in the Underwriter's reasonable opinion, is material, or omits to state a fact which, in the Underwriter's reasonable opinion, is material and is required to be stated therein or necessary to make the statements therein not misleading.

(d) On the Closing Date, there shall have been furnished to the Underwriter the opinion and negative assurance letter of Loeb & Loeb LLP, corporate counsel for the Company dated the Closing Date, and addressed to the Underwriter, in form and substance reasonably satisfactory to the Underwriter.

(e) On the Closing Date, there shall have been furnished to the Underwriter the opinion and negative assurance letter of Morrison & Foerster LLP, as intellectual property counsel for the Company dated the Closing Date, and addressed to the Underwriter, in form and substance reasonably satisfactory to the Underwriter.

(f) On the Closing Date, there shall have been furnished to the Underwriter the negative assurance letter of Lowenstein Sandler LLP, counsel to the Underwriter, dated the Closing Date, and addressed to the Underwriter, in form and substance reasonably satisfactory to the Underwriter.

(g) The Underwriter shall have received a letter of OUM & Co. LLP on the date hereof and on the Closing Date, addressed to the Underwriter, confirming that they are independent public accountants within the meaning of the Securities Act and are in compliance with the applicable requirements relating to the qualifications of accountants under Rule 2-01 of Regulation S-X of the Commission, and confirming, as of the date of each such letter (or, with respect to matters involving changes or developments since the respective dates as of which specified financial information is given in the Time of Sale Disclosure Package, as of a date not prior to the date hereof or more than five days prior to the date of such letter), the conclusions and findings of said firm with respect to the financial information and other matters required by the Underwriter.

(h) On the Closing Date, there shall have been furnished to the Underwriter a certificate, dated the Closing Date, and addressed to the Underwriter, signed by the President and the Vice President, Finance of the Company, in their capacity as officers of the Company, to the effect that:

(i) The representations and warranties of the Company in this Agreement that are qualified by materiality or by reference to any Material Adverse Effect are true and correct in all respects, and all other representations and warranties of the Company in this Agreement are true and correct, in all material respects, as if made at and as of the Closing Date, and the Company has complied with all the agreements and satisfied all the conditions on its part to be performed or satisfied at or prior to the Closing Date;

(ii) No stop order or other order (A) suspending the effectiveness of the Registration Statement or any part thereof or any amendment thereof, (B) suspending the qualification of the Securities for offering or sale, or (C) suspending or preventing the use of the Time of Sale Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, has been issued, and no proceeding for that purpose has been instituted or, to their knowledge, is contemplated by the Commission or any state or regulatory body; and

(iii) There has been no occurrence of any event resulting or reasonably likely to result in a Material Adverse Effect during the period from and after the date of this Agreement and prior to the Closing Date.

(i) On or before the date hereof, the Underwriter shall have received duly executed "lock-up" agreements, in a form set forth on **Schedule IV**, between the Underwriter and each of the individuals specified in **Schedule V**.

(j) The Company shall have furnished to the Underwriter and its counsel such additional documents, certificates and evidence as the Underwriter or its counsel may have reasonably requested.

If any condition specified in this Section 6 shall not have been fulfilled when and as required to be fulfilled, this Agreement may be terminated by the Underwriter by notice to the Company at any time at or prior to the Closing Date and such termination shall be without liability of any party to any other party, except that Section 5(a)(viii), Section 7 and Section 8 shall survive any such termination and remain in full force and effect.

7. Indemnification and Contribution.

(a) The Company agrees to indemnify, defend and hold harmless the Underwriter, its affiliates, directors and officers and employees, and each person, if any, who controls the Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities to which the Underwriter or such person may become subject, under the Securities Act or otherwise (including in settlement of any litigation if such settlement is effected with the written consent of the Company), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon (i) an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, including the information deemed to be a part of the Registration Statement at the time of effectiveness and at any subsequent time pursuant to Rules 430A and 430B of the Rules and Regulations, or arise out of or are based upon the omission from the Registration Statement, or alleged omission to state therein, a material fact required to be stated therein or necessary to make the statements therein not misleading, (ii) an untrue statement or alleged untrue statement of a material fact contained in the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto (including any documents filed under the Exchange Act and deemed to be incorporated by reference into the Registration Statement or the Prospectus), any Issuer Free Writing Prospectus or the Marketing Materials or in any other materials used in connection with the offering of the Securities, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading, (iii) in whole or in part, any inaccuracy in the representations and warranties of the Company contained herein, or (iv) in whole or in part, any failure of the Company to perform its obligations hereunder or under law, and will reimburse the Underwriter for any legal or other expenses reasonably incurred by it in connection with evaluating, investigating or defending against such loss, claim, damage, liability or action; *provided, however*, that the Company shall not be liable in any such case to the extent that any such loss, claim, damage, liability or action arises out of or is based upon an untrue statement or alleged untrue statement or omission or alleged omission made in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, in reliance upon and in conformity with written information furnished to the Company by the Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f).

(b) The Underwriter will indemnify, defend and hold harmless the Company, its affiliates, directors, officers and employees, and each person, if any, who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act, from and against any losses, claims, damages or liabilities to which the Company may become subject, under the Securities Act or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Underwriter), insofar as such losses, claims, damages or liabilities (or actions in respect thereof) arise out of or are based upon an untrue statement or alleged untrue statement of a material fact contained in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus, or arise out of or are based upon the omission or alleged omission to state therein a material fact required to be stated therein or necessary to make the statements therein not misleading, in each case to the extent, but only to the extent, that such untrue statement or alleged untrue statement or omission or alleged omission was made in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus, or any amendment or supplement thereto or any Issuer Free Writing Prospectus in reliance upon and in conformity with written information furnished to the Company by the Underwriter specifically for use in the preparation thereof, which written information is described in Section 7(f), and will reimburse the Company for any legal or other expenses reasonably incurred by the Company in connection with defending against any such loss, claim, damage, liability or action.

(c) Promptly after receipt by an indemnified party under subsection (a) or (b) above of notice of the commencement of any action, such indemnified party shall, if a claim in respect thereof is to be made against the indemnifying party under such subsection, notify the indemnifying party in writing of the commencement thereof; but the failure to notify the indemnifying party shall not relieve the indemnifying party from any liability that it may have to any indemnified party except to the extent such indemnifying party has been materially prejudiced by such failure. In case any such action shall be brought against any indemnified party, and it shall notify the indemnifying party of the commencement thereof, the indemnifying party shall be entitled to participate in, and, to the extent that it shall wish, jointly with any other indemnifying party similarly notified, to assume the defense thereof, with counsel satisfactory to such indemnified party, and after notice from the indemnifying party to such indemnified party of the indemnifying party's election so to assume the defense thereof, the indemnifying party shall not be liable to such indemnified party under such subsection for any legal or other expenses subsequently incurred by such indemnified party in connection with the defense thereof; *provided*, *however*, that if (i) the indemnified party has reasonably concluded (based on advice of counsel) that there may be legal defenses available to it or other indemnified parties that are different from or in addition to those available to the indemnifying party, (ii) a conflict or potential conflict exists (based on advice of counsel to the indemnified party) between the indemnified party and the indemnifying party (in which case the indemnifying party will not have the right to direct the defense of such action on behalf of the indemnified party), or (iii) the indemnifying party has not in fact employed counsel reasonably satisfactory to the indemnified party to assume the defense of such action within a reasonable time after receiving notice of the commencement of the action, the indemnified party shall have the right to employ a single counsel to represent it in any claim in respect of which indemnity may be sought under subsection (a) or (b) of this Section 7, in which event the reasonable fees and expenses of such separate counsel shall be borne by the indemnifying party or parties and reimbursed to the indemnified party as incurred.

The indemnifying party under this Section 7 shall not be liable for any settlement of any proceeding effected without its written consent, but if settled with such consent or if there be a final judgment for the plaintiff, the indemnifying party agrees to indemnify the indemnified party against any loss, claim, damage, liability or expense by reason of such settlement or judgment. No indemnifying party shall, without the prior written consent of the indemnified party, effect any settlement, compromise or consent to the entry of judgment in any pending or threatened action, suit or proceeding in respect of which any indemnified party is a party or could be named and indemnity was or would be sought hereunder by such indemnified party, unless such settlement, compromise or consent (a) includes an unconditional release of such indemnified party from all liability for claims that are the subject matter of such action, suit or proceeding and (b) does not include a statement as to or an admission of fault, culpability or a failure to act by or on behalf of any indemnified party.

(d) If the indemnification provided for in this Section 7 is unavailable or insufficient to hold harmless an indemnified party under subsection (a) or (b) above, then each indemnifying party shall contribute to the amount paid or payable by such indemnified party as a result of the losses, claims, damages or liabilities referred to in subsection (a) or (b) above, (i) in such proportion as is appropriate to reflect the relative benefits received by the Company on the one hand and the Underwriter on the other from the offering and sale of the Securities or (ii) if the allocation provided by clause (i) above is not permitted by applicable law, in such proportion as is appropriate to reflect not only the relative benefits referred to in clause (i) above but also the relative fault of the Company on the one hand and the Underwriter on the other in connection with the statements or omissions that resulted in such losses, claims, damages or liabilities, as well as any other relevant equitable considerations. The relative benefits received by the Company on the one hand and the Underwriter on the other shall be deemed to be in the same proportion as the total net proceeds from the offering (before deducting expenses) received by the Company bear to the total underwriting discounts and commissions received by the Underwriter, in each case as set forth in the table on the cover page of the Final Prospectus. The relative fault shall be determined by reference to, among other things, whether the untrue or alleged untrue statement of a material fact or the omission or alleged omission to state a material fact relates to information supplied by the Company or the Underwriter and the parties' relevant intent, knowledge, access to information and opportunity to correct or prevent such untrue statement or omission. The Company and the Underwriter agree that it would not be just and equitable if contributions pursuant to this subsection (d) were to be determined by pro rata allocation or by any other method of allocation that does not take account of the equitable considerations referred to in the first sentence of this subsection (d). The amount paid by an indemnified party as a result of the losses, claims, damages or liabilities referred to in the first sentence of this subsection (d) shall be deemed to include any legal or other expenses reasonably incurred by such indemnified party in connection with investigating or defending against any action or claim that is the subject of this subsection (d). Notwithstanding the provisions of this subsection (d), the Underwriter shall not be required to contribute any amount in excess of the underwriting discounts and commissions set forth in the table on the cover page of the Final Prospectus actually received by the Underwriter pursuant to this Agreement. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

(e) The obligations of the Company under this Section 7 shall be in addition to any liability that the Company may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to each person, if any, who controls the Underwriter within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act; and the obligations of the Underwriter under this Section 7 shall be in addition to any liability that the Underwriter may otherwise have and the benefits of such obligations shall extend, upon the same terms and conditions, to the Company, and its officers, directors and each person who controls the Company within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act.

(f) For purposes of this Agreement, the Underwriter confirms, and the Company acknowledges, that there is no information concerning the Underwriter furnished in writing to the Company by the Underwriter specifically for preparation of or inclusion in the Registration Statement, the Time of Sale Disclosure Package, the Prospectus or any Issuer Free Writing Prospectus, other than the statements set forth in the last paragraph on the cover page of the Prospectus and the statements set forth in the "Underwriting" section of the Prospectus and Time of Sale Disclosure Package, only insofar as such statements relate to the amount of selling concession and re-allowance and the lack of stabilization activities to be undertaken by the Underwriter.

8. Representations and Agreements to Survive Delivery. All representations, warranties, and agreements of the Company herein or in certificates delivered pursuant hereto, including, but not limited to, the agreements of the Underwriter and the Company contained in Section 5(a)(viii) and Section 7 hereof, shall remain operative and in full force and effect regardless of any investigation made by or on behalf of the Underwriter or any controlling person thereof, or the Company or any of its officers, directors, or controlling persons, and shall survive delivery of, and payment for, the Securities to and by the Underwriter hereunder.

9. Termination of this Agreement.

(a) The Underwriter shall have the right to terminate this Agreement by giving notice to the Company as hereinafter specified at any time at or prior to the Closing Date if in the discretion of the Underwriter, (i) there has occurred any material adverse change in the securities markets or any event, act or occurrence that has materially disrupted, or in the opinion of the Underwriter, will in the future materially disrupt, the securities markets or there shall be such a material adverse change in general financial, political or economic conditions or the effect of international conditions on the financial markets in the United States is such as to make it, in the judgment of the Underwriter, inadvisable or impracticable to market the Securities or enforce contracts for the sale of the Securities, (ii) trading in the Company's Common Stock shall have been suspended by the Commission, the OTCBB or trading in securities generally on the NASDAQ Global Market, the New York Stock Exchange or NYSE MKT shall have been suspended, (iii) minimum or maximum prices for trading shall have been fixed, or maximum ranges for prices for securities shall have been required, on the NASDAQ Global Market, the New York Stock Exchange, or NYSE MKT, by such exchange or by order of the Commission or any other governmental authority having jurisdiction, (iv) a banking moratorium shall have been declared by federal or New York or California state authorities, (v) there shall have occurred any attack on, outbreak or escalation of hostilities or act of terrorism involving the United States, any declaration by the United States of a national emergency or war, any substantial change or development involving a prospective substantial change in United States or international political, financial or economic conditions or any other calamity or crisis, (vi) the Company suffers any loss by strike, fire, flood, earthquake, accident or other calamity, whether or not covered by insurance, or (vii) in the judgment of the Underwriter, there has been, since the time of execution of this Agreement or since the respective dates as of which information is given in the Prospectus, any material adverse change in the assets, properties, condition, financial or otherwise, or in the results of operations, business affairs or business prospects of the Company and its subsidiaries considered as a whole, whether or not arising in the ordinary course of business. Any such termination shall be without liability of any party to any other party except that the provisions of Section 5(a)(viii) and Section 7 hereof shall at all times be effective and shall survive such termination.

(b) If the Underwriter elects to terminate this Agreement as provided in this Section, the Company shall be notified promptly by the Underwriter by telephone, confirmed by letter.

10. ***Notices***. Except as otherwise provided herein, all communications hereunder shall be in writing and, (i) if to the Underwriter, shall be mailed, delivered or telecopied to Roth Capital Partners, LLC, 888 San Clemente Drive, Newport Beach, CA 92660, telecopy number: (949) 720-7227, Attention: Managing Director, and (ii) if to the Company, shall be mailed, delivered or telecopied to it at Titan Pharmaceuticals, Inc., 400 Oyster Point Boulevard, South San Francisco, CA 94080, telecopy number: (650) 244-4956, Attention: President; or in each case to such other address as the person to be notified may have requested in writing. Any party to this Agreement may change such address for notices by sending to the parties to this Agreement written notice of a new address for such purpose.

11. ***Persons Entitled to Benefit of Agreement***. This Agreement shall inure to the benefit of and be binding upon the parties hereto and their respective successors and assigns and the controlling persons, officers and directors referred to in Section 7. Nothing in this Agreement is intended or shall be construed to give to any other person, firm or corporation any legal or equitable remedy or claim under or in respect of this Agreement or any provision herein contained. The term "successors and assigns" as herein used shall not include any purchaser, as such purchaser, of any of the Securities from the Underwriter.

12. ***Absence of Fiduciary Relationship***. The Company acknowledges and agrees that: (a) the Underwriter has been retained solely to act as underwriter in connection with the sale of the Securities and that no fiduciary, advisory or agency relationship between the Company and the Underwriter has been created in respect of any of the transactions contemplated by this Agreement, irrespective of whether the Underwriter has advised or is advising the Company on other matters; (b) the price and other terms of the Securities set forth in this Agreement were established by the Company following discussions and arms-length negotiations with the Underwriter and the Company is capable of evaluating and understanding and understands and accepts the terms, risks and conditions of the transactions contemplated by this Agreement; (c) it has been advised that the Underwriter and its affiliates are engaged in a broad range of transactions that may involve interests that differ from those of the Company and that the Underwriter has no obligation to disclose such interest and transactions to the Company by virtue of any fiduciary, advisory or agency relationship; (d) it has been advised that the Underwriter is acting, in respect of the transactions contemplated by this Agreement, solely for the benefit of the Underwriter, and not on behalf of the Company.

13. ***Amendments and Waivers***. No supplement, modification or waiver of this Agreement shall be binding unless executed in writing by the party to be bound thereby. The failure of a party to exercise any right or remedy shall not be deemed or constitute a waiver of such right or remedy in the future. No waiver of any of the provisions of this Agreement shall be deemed or shall constitute a waiver of any other provision hereof (regardless of whether similar), nor shall any such waiver be deemed or constitute a continuing waiver unless otherwise expressly provided.

14. ***Partial Unenforceability***. The invalidity or unenforceability of any section, paragraph, clause or provision of this Agreement shall not affect the validity or enforceability of any other section, paragraph, clause or provision.

15. ***Governing Law***. This Agreement shall be governed by and construed in accordance with the laws of the State of New York.

16. ***Submission to Jurisdiction***. The Company irrevocably (a) submits to the jurisdiction of any court of the State of New York for the purpose of any suit, action, or other proceeding arising out of this Agreement, or any of the agreements or transactions contemplated by this Agreement, the Registration Statement and the Prospectus (each a "Proceeding"), (b) agrees that all claims in respect of any Proceeding may be heard and determined in any such court, (c) waives, to the fullest extent permitted by law, any immunity from jurisdiction of any such court or from any legal process therein, (d) agrees not to commence any Proceeding other than in such courts, and (e) waives, to the fullest extent permitted by law, any claim that such Proceeding is brought in an inconvenient forum. THE COMPANY (ON BEHALF OF ITSELF AND, TO THE FULLEST EXTENT PERMITTED BY LAW, ON BEHALF OF ITS RESPECTIVE EQUITY HOLDERS AND CREDITORS) HEREBY WAIVES ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY CLAIM BASED UPON, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT AND THE TRANSACTIONS CONTEMPLATED BY THIS AGREEMENT, THE REGISTRATION STATEMENT, THE TIME OF SALE DISCLOSURE PACKAGE AND THE PROSPECTUS.

17. ***Counterparts.*** This Agreement may be executed in one or more counterparts and, if executed in more than one counterpart, the executed counterparts shall each be deemed to be an original and all such counterparts shall together constitute one and the same instrument.

[Signature Page Follows]

Please sign and return to the Company the enclosed duplicates of this letter whereupon this letter will become a binding agreement between the Company and the Underwriter in accordance with its terms.

Very truly yours,

TITAN PHARMACEUTICALS, INC.

By: _____
Name:
Title:

Confirmed as of the date first above-
Mentioned by the Underwriter.

ROTH CAPITAL PARTNERS, LLC

By: _____
Name: Aaron Gurewitz
Title: Head of Equity Capital Markets

[Signature page to Underwriting Agreement]

SCHEDULE I

Name	Number of Units to be Purchased
Roth Capital Partners, LLC	•
Total	•

SCHEDULE II

Final Term Sheet

Issuer:	Titan Pharmaceuticals, Inc. (the "Company")
Symbol:	TTNP
Security:	• units (the "Units"), each Unit consisting of (i) one share of common stock, par value $0.001 per share (the "Common Stock"), of the Company, and (ii) 0.75 of a Class A warrant (the "Class A Warrants"), each to purchase one share of Common Stock
Exercisability of Warrants	The Class A Warrants will be exercisable at any time on or after the later of (i) one year and one day from the date of issuance and (ii) the date that the Company effects either an increase in its authorized Common Stock or a reverse split of its Common Stock as specified in the Class A Warrants and will expire five years from the date they first become exercisable.
Public offering price:	$• per Unit
Underwriting discounts and commissions:	$• per Unit
Expected net proceeds:	$• million (after deducting the Underwriter's discounts and commissions and estimated offering expenses payable by the Company)
Underwriter's warrants:	Warrants to purchase • shares of Common Stock
Trade date:	October •, 2014
Settlement date:	October •, 2014
Underwriter:	Roth Capital Partners, LLC

SCHEDULE III

Free Writing Prospectus

SCHEDULE IV

Form of Lock-Up Agreement

September [_], 2014

Roth Capital Partners, LLC
888 San Clemente Drive
Newport Beach, CA 92660;

Ladies and Gentlemen:

This Lock-Up Agreement is being delivered to you in connection with the proposed Underwriting Agreement (the "Underwriting Agreement") to be entered into by Titan Pharmaceuticals, Inc., a Delaware corporation (the "Company") and Roth Capital Partners, LLC (the "Underwriter") with respect to the proposed public offering of securities of the Company (the "Offering") including shares of common stock, par value $0.001 per share, of the Company (the "Common Stock"). Capitalized terms used and not otherwise defined herein shall have the meanings given them in the Underwriting Agreement.

In order to induce you to enter into the Underwriting Agreement, the undersigned agrees that, for a period (the "Lock-Up Period") beginning on the date hereof and ending on, and including, the date that is 90 days after the date of the final prospectus supplement relating to the Offering, the undersigned will not, without the prior written consent of the Underwriter, (i) sell, offer to sell, contract or agree to sell, hypothecate, pledge, grant any option to purchase or otherwise dispose of or agree to dispose of, directly or indirectly, or file (or participate in the filing of) a registration statement with the Securities and Exchange Commission (the "Commission") in respect of, or establish or increase a put equivalent position or liquidate or decrease a call equivalent position within the meaning of Section 16 of the Securities Exchange Act of 1934, as amended, and the rules and regulations of the Commission promulgated thereunder (the "Exchange Act") with respect to, any Common Stock or any other securities of the Company that are substantially similar to Common Stock, or any securities convertible into or exchangeable or exercisable for, or any warrants or other rights to purchase, the foregoing, (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 Common Stock or any other securities of the Company that are substantially similar to Common Stock, or any securities convertible into or exchangeable or exercisable for, or any warrants or other rights to purchase, the foregoing, whether any such transaction is to be settled by delivery of Common Stock or such other securities, in cash or otherwise or (iii) publicly announce an intention to effect any transaction specified in clause (i) or (ii).

The foregoing paragraph shall not apply to (a) the registration of the offer and sale of Common Stock as contemplated by the Underwriting Agreement and the sale of the Common Stock to the Underwriter in the Offering, (b) bona fide gifts, provided the recipient thereof agrees in writing with the Underwriter to be bound by the terms of this Lock-Up Agreement, (c) dispositions to any trust for the direct or indirect benefit of the undersigned and/or the immediate family of the undersigned, provided that such trust agrees in writing with the Underwriter to be bound by the terms of this Lock-Up Agreement, (d) transfers of Common Stock or securities convertible into Common Stock on death by will or intestacy, (e) sales or transfers of Common Stock solely in connection with the "cashless" exercise of Company stock options outstanding on the date hereof for the purpose of exercising such stock options (provided that any remaining Common Stock received upon such exercise will be subject to the restrictions provided for in this Lock-Up Agreement) or (f) sales or transfers of Common Stock or securities convertible into Common Stock pursuant to a sales plan entered into prior to the date hereof pursuant to Rule 10b5-1 under the Exchange Act, a copy of which has been provided to the Underwriter. In addition, the restrictions sets forth herein shall not prevent the undersigned from entering into a sales plan pursuant to Rule 10b5-1 under the Exchange Act after the date hereof, provided that (i) a copy of such plan is provided to the Underwriter promptly upon entering into the same and (ii) no sales or transfers may be made under such plan until the Lock-Up Period ends or this Lock-Up Agreement is terminated in accordance with its terms. For purposes of this paragraph, "immediate family" shall mean the undersigned and the spouse, any lineal descendent, father, mother, brother or sister of the undersigned.

In addition, the undersigned hereby waives any rights the undersigned may have to require registration of Common Stock in connection with the filing of a registration statement relating to the Offering. The undersigned further agrees that, for the Lock-Up Period, the undersigned will not, without the prior written consent of the Underwriter, make any demand for, or exercise any right with respect to, the registration of Common Stock or any securities convertible into or exercisable or exchangeable for Common Stock, or warrants or other rights to purchase Common Stock or any such securities.

Notwithstanding the above, if (a) during the period that begins on the date that is fifteen (15) calendar days plus three (3) business days before the last day of the Lock-Up Period and ends on the last day of the Lock-Up Period, the Company issues an earnings release or material news or a material event relating to the Company occurs; or (b) prior to the expiration of the Lock-Up Period, the Company announces that it will release earnings results during the sixteen (16) day period beginning on the last day of the Lock-Up Period, then the restrictions imposed by this Lock-Up Agreement shall continue to apply until the expiration of the date that is fifteen (15) calendar days plus three (3) business days after the date on which the issuance of the earnings release or the material news or material event occurs.

The undersigned hereby confirms that the undersigned has not, directly or indirectly, taken, and hereby covenants that the undersigned will not, directly or indirectly, take, any action designed, or which has constituted or will constitute or might reasonably be expected to cause or result in the stabilization or manipulation of the price of any security of the Company to facilitate the sale or resale of shares of Common Stock.

If (i) the Company notifies you in writing that it does not intend to proceed with the Offering, (ii) the registration statement filed with the Commission with respect to the Offering is withdrawn, (iii) if the closing of the Offering does not occur prior to ninety (90) days from the date of this Lock-Up Agreement or (iv) for any reason the Underwriting Agreement shall be terminated prior to the effective time of the Registration Statement (as defined in the Underwriting Agreement), this Lock-Up Agreement shall be terminated and the undersigned shall be released from its obligations hereunder.

[signature page follows]

Very truly yours,

(Name - Please Print)

(Signature)

(Name of Signatory, in the case of entities - Please Print)

(Title of Signatory, in the case of entities - Please Print)

Address:

SCHEDULE V

List of persons executing lock-up agreements

Marc Rubin, M.D.
Sunil Bhonsle
Victor J. Bauer, Ph.D.
Eurelio M. Cavalier
M. David MacFarlane, Ph.D.
Ley S. Smith
Braeburn Pharmaceuticals BVBA SPRL

Exhibit 4.7

PURSUANT TO THE TERMS OF SECTION 1 OF THIS WARRANT, ALL OR A PORTION OF THIS WARRANT MAY HAVE BEEN EXERCISED, AND THEREFORE THE ACTUAL NUMBER OF WARRANT SHARES REPRESENTED BY THIS WARRANT MAY BE LESS THAN THE AMOUNT SET FORTH ON THE FACE HEREOF.

TITAN PHARMACEUTICALS, INC.

Class A Warrant To Purchase Common Stock

Warrant No.:_____
Number of Shares of Common Stock:_____
Date of Issuance: •, 2014 ("**Issuance Date**")

Titan Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [INVESTOR NAME], the registered holder hereof or its permitted assigns (the "**Holder**"), is entitled, subject to the terms set forth below, to purchase from the Company, at the Exercise Price (as defined below) then in effect, upon surrender of this Warrant to purchase Common Stock (as defined below) (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the "**Warrant**"), at any time or times on or after the later of (i) •, 2015[1] and (ii) the Capital Event Date (as defined below) (the "**Exercisability Date**"), but not after 11:59 p.m., New York time, on the Expiration Date (as defined below), [_____ (_____)] fully paid nonassessable shares of Common Stock (the "**Warrant Shares**"). Except as otherwise defined herein, capitalized terms in this Warrant shall have the meanings set forth in Section 16. This Warrant is the Warrant to purchase Common Stock (this "**Warrant**") issued pursuant to (i) the Underwriting Agreement, dated as of •, 2014, between the Company and Roth Capital Partners, LLC (the "**Underwriting Agreement**") and (ii) the Company's Registration Statement on Form S-1 (File No.: 333-198476). This Warrant is one of a series of warrants containing substantially identical terms and conditions issued pursuant to the Underwriting Agreement (collectively, the "**Class A Warrants**").

[1] One year and one day after the Issuance Date.

1. EXERCISE OF WARRANT.

(a) Mechanics of Exercise. Subject to the terms and conditions hereof, this Warrant may be exercised by the Holder on any day on or after the Exercisability Date, in whole or in part (but not as to fractional shares), by delivery of a written notice, in the form attached hereto as Exhibit A (the "**Exercise Notice**") of the Holder's election to exercise this Warrant. No ink-original Notice of Exercise shall be required, nor shall any medallion guarantee (or other type of guarantee or notarization) of any Notice of Exercise form be required. Within two (2) Trading Days of the delivery of such Exercise Notice, if both (A) the Holder is not electing a Cashless Exercise (as defined below) pursuant to Section 1(d) of this Warrant and (B) a registration statement registering the issuance of the Warrant Shares under the Securities Act of 1933, as amended (the "**Securities Act**"), is effective and available for the issuance of the Warrant Shares, or an exemption from registration under the Securities Act is available for the issuance of the Warrant Shares, payment to the Company of an amount equal to the applicable Exercise Price multiplied by the number of Warrant Shares as to which this Warrant is being exercised (the "**Aggregate Exercise Price**") in cash or wire transfer of immediately available funds (a "**Cash Exercise**"). The Holder shall not be required to surrender this Warrant in order to effect an exercise hereunder; provided, however, that in the event that this Warrant is exercised in full or for the remaining unexercised portion hereof, the Holder shall deliver this Warrant to the Company for cancellation within a reasonable time after such exercise. On or before the first Trading Day following the date on which the Company has received the Exercise Notice (the date upon which the Company has received the Exercise Notice, the "**Exercise Date**"), the Company shall transmit by facsimile or e-mail transmission an acknowledgment of confirmation of receipt of the Exercise Notice to the Holder and the Company's transfer agent for the Common Stock (the "**Transfer Agent**"). The Company shall deliver any objection to the Exercise Notice on or before the second Trading Day following the later of the date on which the Company has received the Exercise Notice. On or before the second Trading Day following the date on which the Company has received the Exercise Notice, provided the Aggregate Exercise Price has been received by the Company prior to such Trading Day (the "**Share Delivery Date**"), the Company shall, (X) provided that the Transfer Agent is participating in The Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program (the "**FAST Program**") and so long as the certificates therefor are not required to bear a legend regarding restriction on transferability, upon the request of the Holder, credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with DTC through its Deposit Withdrawal Agent Commission system, or (Y), if the Transfer Agent is not participating in the FAST Program or if the certificates are required to bear a legend regarding restriction on transferability, issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. Upon delivery of the Exercise Notice and payment of the Aggregate Exercise Price, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder's DTC account or the date of delivery of the certificates evidencing such Warrant Shares, as the case may be. If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then the Company shall as soon as practicable and in no event later than three Trading Days after any such submission and at its own expense, issue a new Warrant (in accordance with Section 7(d)) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant has been and/or is exercised. The Company shall pay any and all taxes and other expenses of the Company (including overnight delivery charges) that may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant; provided, however, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares or Warrants in a name other than that of the Holder or an affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

(b) Exercise Price. For purposes of this Warrant, **"Exercise Price"** means $[•], subject to adjustment as provided herein.

(c) Company's Failure to Timely Deliver Securities. If the Company shall fail for any reason or for no reason to issue to the Holder within five (5) Business Days of the Exercise Date a certificate for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company's share register or to credit the Holder's balance account with DTC for such number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise of this Warrant, and if on or after such Trading Day the Holder purchases, or another Person purchasers on the Holder's behalf or for the Holder's account (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of shares of Common Stock issuable upon such exercise that the Holder anticipated receiving from the Company (a **"Buy-In"**), then the Company shall, within three (3) Business Days after the Holder's written request and in the Holder's discretion, either (i) pay cash to the Holder in an amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the **"Buy-In Price"**), at which point the Company's obligation to deliver such certificate (and to issue such Warrant Shares) shall terminate, or (ii) promptly honor its obligation to deliver to the Holder a certificate or certificates representing such Warrant Shares and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock, times (B) the VWAP (as reported by Bloomberg) on the date of the event giving rise to the Company's obligation to deliver such certificate.

(d) Cashless Exercise. Notwithstanding anything contained herein to the contrary, if (i) the Company exercises the right not to register the Warrant Shares in accordance with the provisions of Section 8(b) hereof or (ii) a registration statement covering the Warrant Shares that are the subject of the Exercise Notice (the **"Unavailable Warrant Shares"**), or an exemption from registration, is not available for the resale of such Unavailable Warrant Shares, then, in the case of clause (i) the Holder may only and in the case of clause (ii) the Holder may in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to receive upon such exercise the **"Net Number"** of shares of Common Stock determined according to the following formula (a **"Cashless Exercise"**):

$$\text{Net Number} = \frac{(A - B)(X)}{(A)}$$

For purposes of the foregoing formula:

A= the VWAP for the five (5) consecutive Trading Days ending on the date immediately preceding the date of the Exercise Notice.

B= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

X= the total number of shares with respect to which this Warrant is then being exercised.

(e) Rule 144. For purposes of Rule 144(d) promulgated under the Securities Act, as in effect on the date hereof, assuming the Holder is not an affiliate of the Company, it is intended that the Warrant Shares issued in a Cashless Exercise shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the Issuance Date.

(f) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed.

(g) Beneficial Ownership. The Company shall not effect the exercise of this Warrant, and the Holder shall not have the right to exercise this Warrant, to the extent that after giving effect to such exercise, such Person (together with such Person's affiliates) would beneficially own in excess of 4.99% (the "**Maximum Percentage**") of the shares of Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by such Person and its affiliates shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which the determination of such sentence is being made, but shall exclude shares of Common Stock which would be issuable upon (i) exercise of the remaining, unexercised portion of this Warrant beneficially owned by such Person and its affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by such Person and its affiliates (including, without limitation, any convertible notes or convertible preferred stock or warrants) subject to a limitation on conversion or exercise analogous to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this paragraph, beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"). For purposes of this Warrant, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in the most recent of (1) the Company's most recent Form 10-K, Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission (the "**Commission**"), as the case may be, (2) a more recent public announcement by the Company or (3) any other notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. For any reason at any time, upon the written or oral request of the Holder, the Company shall within two (2) Business Days confirm to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and its affiliates since the date as of which such number of outstanding shares of Common Stock was reported. By written notice to the Company, the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% specified in such notice; provided that (i) any such increase will not be effective until the sixty-first (61st) day after such notice is delivered to the Company, and (ii) any such increase or decrease will apply only to the Holder. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 1(g) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended beneficial ownership limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation.

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and the number of Warrant Shares shall be adjusted from time to time as follows:

(a) Voluntary Adjustment By Company. The Company may at any time during the term of this Warrant reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the Board of Directors of the Company.

(b) Adjustment upon Subdivision or Combination of Common Stock. If the Company at any time on or after the Issuance Date subdivides (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise) one or more classes of its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares will be proportionately increased. If the Company at any time on or after the Issuance Date combines (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise) one or more classes of its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares will be proportionately decreased. Any adjustment under this Section 2(b) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(c) Other Events. If any event occurs of the type contemplated by the provisions of this Section 2 but not expressly provided for by such provisions (including, without limitation, by means of the granting of stock appreciation rights or phantom stock rights), then the Company's Board of Directors will make an appropriate adjustment in the Exercise Price and the number of Warrant Shares so as to protect the rights of the Holder; provided that no such adjustment pursuant to this Section 2(c) will increase the Exercise Price or decrease the number of Warrant Shares as otherwise determined pursuant to this Section 2.

3. RIGHTS UPON DISTRIBUTION OF ASSETS.

(a) If the Company, at any time while this Warrant is outstanding, shall distribute to all holders of Common Stock (and not to the Holders) evidences of its indebtedness or assets (including cash and cash dividends) (a "**Distribution**"), then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Maximum Percentage) immediately before the date on which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution.

4. PURCHASE RIGHTS; FUNDAMENTAL TRANSACTIONS.

(a) Purchase Rights. In addition to any adjustments pursuant to Section 2 above, if at any time the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the "**Purchase Rights**"), then in each such case, the Company shall reserve Options, Convertible Securities or Purchase Rights for distribution to the Holder upon exercise of this Warrant so that, in addition to the shares of the Common Stock to which such Holder is entitled, such Holder will receive upon such exercise the amount and kind of such Options, Convertible Securities or Purchase Rights which such Holder would have received if the Holder had, immediately prior to the record date for the distribution of the Options, Convertible Securities or Purchase Rights, exercised this Warrant.

(b) Fundamental Transactions. The Company shall not enter into or be party to a Fundamental Transaction unless the Successor Entity assumes in writing (unless the Company is the Successor Entity) all of the obligations of the Company under this Warrant in accordance with the provisions of this Section (4)(b) pursuant to written agreements in form and substance reasonably satisfactory to the Required Holders and approved by the Required Holders prior to such Fundamental Transaction, including agreements to deliver to each holder of the Warrants in exchange for such Warrants a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant, including, without limitation, an adjusted exercise price equal to the value for the shares of Common Stock reflected by the terms of such Fundamental Transaction, and exercisable for a corresponding number of shares of capital stock equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and reasonably satisfactory to the Required Holders. Upon the occurrence of any Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein. Upon consummation of the Fundamental Transaction, the Successor Entity shall deliver to the Holder confirmation that there shall be issued upon exercise of this Warrant at any time after the consummation of the Fundamental Transaction, in lieu of the shares of Common Stock (or other securities, cash, assets or other property) issuable upon the exercise of the Warrant prior to such Fundamental Transaction, such shares of the publicly traded common stock or common shares (or its equivalent) of the Successor Entity (including its Parent Entity) which the Holder would have been entitled to receive upon the happening of such Fundamental Transaction had this Warrant been converted immediately prior to such Fundamental Transaction, as adjusted in accordance with the provisions of this Warrant. In addition to and not in substitution for any other rights hereunder, prior to the consummation of any Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive securities or other assets with respect to or in exchange for shares of Common Stock (a "**Corporate Event**"), the Company shall make appropriate provision to insure that the Holder will thereafter have the right to receive upon an exercise of this Warrant at any time after the consummation of the Corporate Event but prior to the Expiration Date, in lieu of shares of Common Stock (or other securities, cash, assets or other property) purchasable upon the exercise of this Warrant prior to such Corporate Event, such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights) which the Holder would have been entitled to receive upon the happening of such Corporate Event had this Warrant been exercised immediately prior to such Corporate Event. Provision made pursuant to the preceding sentence shall be in a form and substance reasonably satisfactory to the Required Holders. The provisions of this Section 4(b) shall apply similarly and equally to successive Fundamental Transactions and Corporate Events and shall be applied without regard to any limitations on the exercise of this Warrant.

(c) Applicability to Successive Transactions. The provisions of this Section shall apply similarly and equally to successive Fundamental Transactions and Corporate Events and shall be applied without regard to any limitations on the exercise of this Warrant.

5. NONCIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its Certificate of Incorporation, Bylaws or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, and will at all times in good faith comply with all the provisions of this Warrant and take all actions consistent with effectuating the purposes of this Warrant. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, and (iii) shall, so long as this Warrant is outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of this Warrant, 100% of the number of shares of Common Stock issuable upon exercise of this Warrant then outstanding (without regard to any limitations on exercise).

6. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

7. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Company and deliver the completed and executed Assignment Form, in the form attached hereto as Exhibit B, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 7(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less then the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 7(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary form and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 7(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new Warrant or Warrants (in accordance with Section 7(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, that no Warrants for fractional shares of Common Stock shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 7(a) or Section 7(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

8. CAPITAL EVENT.

(a) Stockholders Meeting. Promptly following the Issuance Date, the Company shall take all corporate action necessary to call a meeting of its stockholders (which may be its annual meeting) (the "**Stockholders Meeting**"), which shall occur not later than March 31, 2015, for the purpose of seeking approval of the Company's stockholders to either (i) increase the number of shares of Common Stock the Company is authorized to issue or (ii) effect a reverse split of the Common Stock, in either event sufficient to permit the exercise in full of the Class A Warrants and the Underwriter Warrants (as defined in the Underwriting Agreement) in accordance with their terms (a "**Capital Event**"). In connection therewith, the Company will as soon as reasonably practicable after the Issuance Date file with the Commission proxy materials (including a proxy statement and form of proxy) for use at the Stockholders Meeting and, after receiving and promptly responding to any comments of the Commission thereon, shall as soon as reasonably practicable mail such proxy materials to the stockholders of the Company. The Company will comply with Section 14(a) of the Exchange Act and the rules promulgated thereunder in relation to any proxy statement (as amended or supplemented, the "**Proxy Statement**") and any form of proxy to be sent to the stockholders of the Company in connection with the Stockholders Meeting, and the Proxy Statement shall not, on the date that the Proxy Statement (or any amendment thereof or supplement thereto) is first mailed to stockholders or at the time of the Stockholders Meeting, contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein not false or misleading, or omit to state any material fact necessary to correct any statement in any earlier communication with respect to the solicitation of proxies or the Stockholders Meeting which has become false or misleading. If the Company should discover at any time prior to the Stockholders Meeting, any event relating to the Company or any of its affiliates, officers or directors that is required to be set forth in a supplement or amendment to the Proxy Statement, in addition to the Company's obligations under the Exchange Act, the Company will promptly inform Roth Capital Partners, LLC (the "**Underwriter**") thereof. The Company's Board of Directors shall recommend to the Company's stockholders that the stockholders vote in favor of the Capital Event at the Stockholders Meeting and take all commercially reasonable action (including, without limitation, the hiring of a proxy solicitation firm of nationally recognized standing) to solicit the approval of the stockholders for the Capital Event. No later than two (2) business days following stockholder approval of the Capital Event, the Company shall file with the Secretary of State of Delaware a certificate of amendment to the Company's Certificate of Incorporation to effect the Capital Event, which certificate of amendment shall provide that it shall become immediately effective upon filing. The Company shall issue a press release announcing the effectiveness of the Capital Event no later than one (1) business day after such filing. The date on which the Capital Event becomes effective is referred to herein as the "**Capital Event Date**."

In the event that the Capital Event is not approved by the stockholders of the Company in accordance with applicable law and the requirements of the Company's Certificate of Incorporation and Bylaws on or before •, 2015 (the "**Capital Event Deadline Date**"), the Holders of the Class A Warrants issued by the Company on the Issuance Date shall be entitled to receive an aggregate cash payment, as liquidated damages and not as a penalty, in an aggregate amount of $2,500,000 (the "**Liquidated Damages Amount**"). Not later than the close of business on the Capital Event Deadline Date, the Company shall irrevocably deposit the Liquidated Damages Amount with an escrow agent reasonably acceptable to the Underwriter (the "**Escrow Agent**"), the Liquidated Damages Amount to be held in trust for the benefit of the Holders entitled to payment thereof as provided in this paragraph. The Escrow Agent shall fix or cause to be fixed a record date (the "**Record Date**") for determining the Holders of the Class A Warrants entitled to payment of the Liquidated Damages Amount and a payment date (the "**Payment Date**") on which the Liquidated Damages Amount is to be paid to such Holders. No Payment Date may be less than fifteen (15) days or more than thirty (30) days after the Record Date. At least fifteen (15) days before the Record Date, the Escrow Agent shall mail or cause to be mailed, first-class postage prepaid, to each record Holder of the Class A Warrants, with a copy to the Company, a notice at the Holder's address as it appears in the Escrow Agent's books and records, setting forth the Record Date, the Payment Date and an estimate of the Per Warrant Amount (as defined in the following sentence). On the Payment Date, the Escrow Agent shall pay to each record Holder of the Class A Warrants at the close of business on the Record Date (each, a "**Record Holder**") an amount equal to (A) the quotient obtained by dividing (i) the Liquidated Damages Amount by (ii) the number of Warrant Shares issuable upon the exercise of the Class A Warrants outstanding on the Record Date (the "**Per Warrant Amount**"), times (B) the number of Warrant Shares issuable upon the exercise of the Class A Warrants held by the Record Holder as of the close of business on the Record Date. Any such payment shall be by check payable to the order of the Record Holder unless otherwise requested by such Record Holder.

The provisions of this Section 8(a) may not be modified, amended or deleted without the Underwriter's prior written consent.

(b) Additional Registration Statement. No later than five (5) business days after the Capital Event Date, the Company shall file with the Commission a registration statement (which shall be on Form S-3 unless the Company is not then eligible to use Form S-3 to register the Warrant Shares) for the registration under the Securities Act of the Warrant Shares (the "**Additional Registration Statement**"), and it shall take such reasonable action as is necessary to qualify for sale, in those states in which the Warrant was initially offered by the Company, the Warrant Shares, provided, however, that no such qualification shall be required in any jurisdiction where, as a result thereof, the Company would be subject to service of general process or to taxation as a foreign corporation doing business in such jurisdiction. The Company shall use its commercially reasonable efforts to cause the Additional Registration Statement to become effective as promptly as practicable and in no event later than the time that the Warrant first becomes exercisable in accordance with its terms and shall use its commercially reasonable efforts to maintain the effectiveness and availability of such registration statement until the earlier of (i) the expiration of the Warrant in accordance with its terms or (ii) the time the Warrant is no longer outstanding. The Company shall take all commercially reasonable action to include the Warrant Shares for listing on an Eligible Market (as defined in Section 16(e) below) on or prior to the date that the Warrant first becomes exercisable in accordance with its terms.

Notwithstanding the provisions of this Section 8(b), the Company shall not be required to file or maintain the effectiveness of an Additional Registration Statement in the event that the Company delivers to the Underwriter and the Escrow Agent an opinion (in form and substance reasonably satisfactory to the Underwriter) of outside counsel to the Company reasonably satisfactory to the Underwriter to the effect that the issuance of the Warrant Shares to the Holder is exempt from the registration requirements of the Securities Act and may be freely resold by the Holder if it is not an affiliate at the time of exercise without further registration under the Securities Act either pursuant to either (i) a cashless exercise or (ii) an exemption from registration under the Securities Act (the "**Opinion of Counsel**"). In the event that the Company determines that it does not wish to file and maintain the effectiveness of an Additional Registration Statement in compliance with the terms of this paragraph and delivers the Opinion of Counsel, no later than two (2) business days after the delivery of such Opinion of Counsel, the Company shall issue a press release announcing that it has determined not to file and maintain the effectiveness of an Additional Registration Statement, and explaining in reasonable detail the basis on which the Warrant Shares may be issued to and freely resold by the Holder upon the exercise of the Warrant. Any exercise of this Warrant after the issuance of such press release shall only be effected by cashless exercise as provided in Section 1(d) above.

The provisions of this Section 8(b) may not be modified, amended or deleted without the Underwriter's prior written consent.

9. NOTICES. The Company shall provide Holder with prompt written notice of all actions taken pursuant to this Warrant. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in writing, will be mailed (a) if within the domestic United States by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, or by facsimile or (b) if delivered from outside the United States, by International Federal Express or facsimile, and (c) will be deemed given (i) if delivered by first-class registered or certified mail domestic, three business days after so mailed, (ii) if delivered by nationally recognized overnight carrier, one business day after so mailed, (iii) if delivered by International Federal Express, two business days after so mailed and (iv) if delivered by facsimile, upon electronic confirmation of receipt, and will be delivered and addressed as follows:

(i) if to the Company, to:

Titan Pharmaceuticals, Inc.
400 Oyster Point Boulevard
South San Francisco, CA 94080
Attn: Sunil Bhonsle, President
Facsimile: (___) ___-____

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

Loeb & Loeb LLP
345 Park Avenue
New York, NY 10154
Attn: Fran Stoller, Esq.
Facsimile: (212) 214-0706

(ii) if to the Holder, at the address of the Holder appearing on the books of the Company.

10. AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Required Holders. Any such amendment shall apply to all Warrants and be binding upon all registered holders of such Warrants.

11. GOVERNING LAW; CONSENT TO JURISDICTION; WAIVER OF JURY TRIAL. This Warrant shall be governed by, and construed in accordance with, the internal laws of the State of New York, without reference to the choice of law provisions thereof. The Company and, by accepting this Warrant, the Holder, each irrevocably submits to the exclusive jurisdiction of the courts of the State of New York located in New York County and the United States District Court for the Southern District of New York for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Warrant and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Warrant. The Company and, by accepting this Warrant, the Holder, each irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. The Company and, by accepting this Warrant, the Holder, each irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. **EACH OF THE COMPANY AND, BY ITS ACCEPTANCE HEREOF, THE HOLDER HEREBY WAIVES ANY RIGHT TO REQUEST A TRIAL BY JURY IN ANY LITIGATION WITH RESPECT TO THIS WARRANT AND REPRESENTS THAT COUNSEL HAS BEEN CONSULTED SPECIFICALLY AS TO THIS WAIVER.**

12. CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and the Holder and shall not be construed against any person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

13. DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall submit the disputed determinations or arithmetic calculations via facsimile within two (2) Business Days of receipt of the Exercise Notice giving rise to such dispute, as the case may be, to the Holder. If the Holder and the Company are unable to agree upon such determination or calculation of the Exercise Price or the Warrant Shares within three Business Days of such disputed determination or arithmetic calculation being submitted to the Holder, then the Company shall, within two (2) Business Days submit via facsimile (a) the disputed determination of the Exercise Price to an independent, reputable investment bank selected by the Company and approved by the Holder, which approval shall not be unreasonably withheld, or (b) the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten Business Days from the time it receives the disputed determinations or calculations. The prevailing party (which, for purposes of this Warrant, is the party whose determinations or calculations is closest to those of the investment bank or the accountant, as the case may be) in any dispute resolved pursuant to this Section 13 shall be entitled to the full amount of all reasonable expenses, including all costs and fees paid or incurred in good faith, in relation to the resolution of such dispute. Such investment bank's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error.

14. REMEDIES, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual damages for any failure by the Company to comply with the terms of this Warrant.

15. TRANSFER. Subject to applicable laws, this Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company

16. CERTAIN DEFINITIONS. For purposes of this Warrant, the following terms shall have the following meanings:

(a) **"Bloomberg"** means Bloomberg Financial Markets.

(b) **"Business Day"** means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

(c) **"Common Stock"** means (i) the Company's shares of Common Stock, par value $0.001 per share, and (ii) any share capital into which such Common Stock shall have been changed or any share capital resulting from a reclassification of such Common Stock.

(d) **"Convertible Securities"** means any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.

(e) **"Eligible Market"** means the Principal Market, The New York Stock Exchange, Inc., The NYSE MKT, The NASDAQ Capital Market, The NASDAQ Global Market or The NASDAQ Global Select Market.

(f) **"Expiration Date"** means the [*] anniversary of the Issuance Date or, if such date falls on a day other than a Trading Day or on which trading does not take place on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded (a "**Holiday**"), the next date that is not a Holiday.

(g) **"Fundamental Transaction"** means that the Company shall, directly or indirectly, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) another Person (but excluding a migratory merger effected solely for the purpose of changing the jurisdiction of incorporation of the Company), or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company to another Person, or (iii) allow another Person to make a purchase, tender or exchange offer that is accepted by the holders of more than the 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the Person or Persons making or party to, or associated or affiliated with the Persons making or party to, such purchase, tender or exchange offer), or (iv) consummate a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock purchase agreement or other business combination), (v) reorganize, recapitalize or reclassify its Common Stock, or (vi) any "person" or "group" (as these terms are used for purposes of Sections 13(d) and 14(d) of the Exchange Act) is or shall become the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock.

(h) **"Options"** means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

(i) **"Parent Entity"** of a Person means an entity that, directly or indirectly, controls the applicable Person and whose common stock or equivalent equity security is quoted or listed on an Eligible Market, or, if there is more than one such Person or Parent Entity, the Person or Parent Entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

(j) **"Person"** means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

(k) **"Principal Market"** means the Over-The-Counter Bulletin Board.

(l) **"Required Holders"** means, as of any date, the holders of at least a majority of the Warrants outstanding as of such date.

(m) **"Successor Entity"** means the Person (or, if so elected by the Holder, the Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or the Person (or, if so elected by the Holder, the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(n) **"Trading Day"** means any day on which the Common Stock are traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock are then traded; *provided* that "Trading Day" shall not include any day on which the Common Stock are scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock are suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time).

(o) **"Weighted Average Price"** means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market during the period beginning at 9:30:01 a.m., New York time (or such other time as the Principal Market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as the Principal Market publicly announces is the official close of trading), as reported by Bloomberg through its "Volume at Price" function or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30:01 a.m., New York time (or such other time as the Principal Market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as the Principal Market publicly announces is the official close of trading), as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in the "pink sheets" by OTC Markets LLC. If the Weighted Average Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Weighted Average Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 13 with the term "Weighted Average Price" being substituted for the term "Exercise Price." All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to Purchase Common Stock to be duly executed as of the Issuance Date set out above.

TITAN PHARMACEUTICALS, INC.

By: _____
Name:
Title:

EXHIBIT A

EXERCISE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS WARRANT TO PURCHASE COMMON STOCK

TITAN PHARMACEUTICALS, INC.

The undersigned holder hereby exercises the right to purchase _____ of the shares of Common Stock (**"Warrant Shares"**) of Titan Pharmaceuticals Inc., a Delaware corporation (the **"Company"**), evidenced by the attached Warrant to Purchase Common Stock (the **"Warrant"**). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

_____ a **"**Cash Exercise**"** with respect to _____ Warrant Shares; and/or

_____ a **"**Cashless Exercise**"** with respect to _____ Warrant Shares.

2. Payment of Exercise Price. In the event that the holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the holder shall pay the Aggregate Exercise Price in the sum of $_____ to the Company in accordance with the terms of the Warrant.

3. Delivery of Warrant Shares. The Company shall deliver to the holder _____ Warrant Shares in accordance with the terms of the Warrant and, after delivery of such Warrant Shares, _____ Warrant Shares remain subject to the Warrant.

Date: _____ __, _____

_____
Name of Registered Holder

By: _____
Name:
Title:

EXHIBIT B

ASSIGNMENT FORM

TITAN PHARMACEUTICALS, INC.

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Dated: _____ __, _____

Holder's Signature:_____

Holder's Address:_____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatever. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

Exhibit 4.8

[FORM OF UNDERWRITER WARRANT]

PURSUANT TO THE TERMS OF SECTION 1 OF THIS WARRANT, ALL OR A PORTION OF THIS WARRANT MAY HAVE BEEN EXERCISED, AND THEREFORE THE ACTUAL NUMBER OF WARRANT SHARES REPRESENTED BY THIS WARRANT MAY BE LESS THAN THE AMOUNT SET FORTH ON THE FACE HEREOF.

TITAN PHARMACEUTICALS, INC.

Warrant To Purchase Common Stock

Warrant No.: _____
Number of Shares of Common Stock: _____
Date of Issuance: ●, 2014 ("**Issuance Date**")

Titan Pharmaceuticals, Inc., a Delaware corporation (the "**Company**"), hereby certifies that, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, [INVESTOR NAME], the registered holder hereof or its permitted assigns (the "**Holder**"), is entitled, subject to the terms set forth below, to purchase from the Company, at the Exercise Price (as defined below) then in effect, upon surrender of this Warrant to purchase Common Stock (as defined below) (including any Warrants to Purchase Common Stock issued in exchange, transfer or replacement hereof, the "**Underwriter Warrant**"), at any time or times on or after the later of (i) ●, 2015[1] and (ii) the Capital Event Date (as defined below) (the "**Exercisability Date**"), but not after 11:59 p.m., New York time, on the Expiration Date (as defined below), [_____ (_____)][2] fully paid nonassessable shares of Common Stock (the "**Warrant Shares**"). Except as otherwise defined herein, capitalized terms in this Warrant shall have the meanings set forth in Section 16. This Warrant is one of the Underwriter Warrants to purchase Common Stock (this "**Warrant"**) issued pursuant to (i) Section 4(d) of the Underwriting Agreement, dated as of ●, 2014, between the Company and Roth Capital Partners, LLC (the "**Underwriting Agreement**") and (ii) the Company's Registration Statement on Form S-1 (File No.: 333-198476). This Warrant is one of a series of warrants containing substantially identical terms and conditions issued pursuant to Section 4(c) of the Underwriting Agreement (collectively, the "**Underwriter Warrants**").

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[1] One year and one day after the Issuance Date.

[2] 3% of units sold.

1. EXERCISE OF WARRANT.

(a) Mechanics of Exercise. Subject to the terms and conditions hereof, this Warrant may be exercised by the Holder on any day on or after the Exercisability Date, in whole or in part (but not as to fractional shares), by (i) delivery of a written notice, in the form attached hereto as Exhibit A (the "**Exercise Notice**"), of the Holder's election to exercise this Warrant and (ii) if the Holder is not electing a Cashless Exercise (as defined below) pursuant to Section 1(d) of this Warrant, payment to the Company of an amount equal to the applicable Exercise Price multiplied by the number of Warrant Shares as to which this Warrant is being exercised (the "**Aggregate Exercise Price**") in cash or wire transfer of immediately available funds (a "**Cash Exercise**") (the items under (i) and (ii) above, the "**Exercise Delivery Documents**"). The Holder shall not be required to surrender this Warrant in order to effect an exercise hereunder; provided, however, that in the event that this Warrant is exercised in full or for the remaining unexercised portion hereof, the Holder shall deliver this Warrant to the Company for cancellation within a reasonable time after such exercise. On or before the first Trading Day following the date on which the Company has received the Exercise Delivery Documents (the date upon which the Company has received all of the Exercise Delivery Documents, the "**Exercise Date**"), the Company shall transmit by facsimile or e-mail transmission an acknowledgment of confirmation of receipt of the Exercise Delivery Documents to the Holder and the Company's transfer agent for the Common Stock (the "**Transfer Agent**"). The Company shall deliver any objection to the Exercise Delivery Documents on or before the second Trading Day following the date on which the Company has received all of the Exercise Delivery Documents. On or before the second Trading Day following the date on which the Company has received all of the Exercise Delivery Documents (the "**Share Delivery Date**"), the Company shall, (X) provided that the Transfer Agent is participating in The Depository Trust Company ("**DTC**") Fast Automated Securities Transfer Program (the "**FAST Program**") and so long as the certificates therefor are not required to bear a legend regarding restriction on transferability, upon the request of the Holder, credit such aggregate number of shares of Common Stock to which the Holder is entitled pursuant to such exercise to the Holder's or its designee's balance account with DTC through its Deposit Withdrawal Agent Commission system, or (Y), if the Transfer Agent is not participating in the FAST Program or if the certificates are required to bear a legend regarding restriction on transferability, issue and dispatch by overnight courier to the address as specified in the Exercise Notice, a certificate, registered in the Company's share register in the name of the Holder or its designee, for the number of shares of Common Stock to which the Holder is entitled pursuant to such exercise. Upon delivery of the Exercise Delivery Documents, the Holder shall be deemed for all corporate purposes to have become the holder of record of the Warrant Shares with respect to which this Warrant has been exercised, irrespective of the date such Warrant Shares are credited to the Holder's DTC account or the date of delivery of the certificates evidencing such Warrant Shares, as the case may be. If this Warrant is submitted in connection with any exercise pursuant to this Section 1(a) and the number of Warrant Shares represented by this Warrant submitted for exercise is greater than the number of Warrant Shares being acquired upon an exercise, then the Company shall as soon as practicable and in no event later than three Trading Days after any such submission and at its own expense, issue a new Warrant (in accordance with Section 7(d)) representing the right to purchase the number of Warrant Shares purchasable immediately prior to such exercise under this Warrant, less the number of Warrant Shares with respect to which this Warrant has been and/or is exercised. The Company shall pay any and all taxes and other expenses of the Company (including overnight delivery charges) that may be payable with respect to the issuance and delivery of Warrant Shares upon exercise of this Warrant; provided, however, that the Company shall not be required to pay any tax which may be payable in respect of any transfer involved in the registration of any certificates for Warrant Shares or Warrants in a name other than that of the Holder or an affiliate thereof. The Holder shall be responsible for all other tax liability that may arise as a result of holding or transferring this Warrant or receiving Warrant Shares upon exercise hereof.

(b) Exercise Price. For purposes of this Warrant, "**Exercise Price**" means $[●], subject to adjustment as provided herein.

(c) Company's Failure to Timely Deliver Securities. If the Company shall fail for any reason or for no reason to issue to the Holder within five (5) Business Days of the Exercise Date a certificate for the number of shares of Common Stock to which the Holder is entitled and register such shares of Common Stock on the Company's share register or to credit the Holder's balance account with DTC for such number of shares of Common Stock to which the Holder is entitled upon the Holder's exercise of this Warrant, and if on or after such Trading Day the Holder purchases, or another Person purchasers on the Holder's behalf or for the Holder's account (in an open market transaction or otherwise) shares of Common Stock to deliver in satisfaction of a sale by the Holder of shares of Common Stock issuable upon such exercise that the Holder anticipated receiving from the Company (a "**Buy-In**"), then the Company shall, within three (3) Business Days after the Holder's written request and in the Holder's discretion, either (i) pay cash to the Holder in an amount equal to the Holder's total purchase price (including brokerage commissions, if any) for the shares of Common Stock so purchased (the "**Buy-In Price**"), at which point the Company's obligation to deliver such certificate (and to issue such Warrant Shares) shall terminate, or (ii) promptly honor its obligation to deliver to the Holder a certificate or certificates representing such Warrant Shares and pay cash to the Holder in an amount equal to the excess (if any) of the Buy-In Price over the product of (A) such number of shares of Common Stock, times (B) the VWAP (as reported by Bloomberg) on the date of the event giving rise to the Company's obligation to deliver such certificate.

(d) Cashless Exercise. The Holder may, in its sole discretion, exercise this Warrant in whole or in part and, in lieu of making the cash payment otherwise contemplated to be made to the Company upon such exercise in payment of the Aggregate Exercise Price, elect instead to receive upon such exercise the "**Net Number**" of shares of Common Stock determined according to the following formula (a "**Cashless Exercise**"):

$$\text{Net Number} = \frac{(A - B)(X)}{(A)}$$

For purposes of the foregoing formula:

A= the VWAP for the five (5) consecutive Trading Days ending on the date immediately preceding the date of the Exercise Notice.

B= the Exercise Price then in effect for the applicable Warrant Shares at the time of such exercise.

X= the total number of shares with respect to which this Warrant is then being exercised.

(e) Rule 144. For purposes of Rule 144(d) promulgated under the Securities Act of 1933, as amended, as in effect on the date hereof, assuming the Holder is not an affiliate of the Company, it is intended that the Warrant Shares issued in a Cashless Exercise shall be deemed to have been acquired by the Holder, and the holding period for the Warrant Shares shall be deemed to have commenced, on the Issuance Date.

(f) Disputes. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall promptly issue to the Holder the number of Warrant Shares that are not disputed.

(g) Beneficial Ownership. The Company shall not effect the exercise of this Warrant, and the Holder shall not have the right to exercise this Warrant, to the extent that after giving effect to such exercise, such Person (together with such Person's affiliates) would beneficially own in excess of 4.99% (the "**Maximum Percentage**") of the shares of Common Stock outstanding immediately after giving effect to such exercise. For purposes of the foregoing sentence, the aggregate number of shares of Common Stock beneficially owned by such Person and its affiliates shall include the number of shares of Common Stock issuable upon exercise of this Warrant with respect to which the determination of such sentence is being made, but shall exclude shares of Common Stock which would be issuable upon (i) exercise of the remaining, unexercised portion of this Warrant beneficially owned by such Person and its affiliates and (ii) exercise or conversion of the unexercised or unconverted portion of any other securities of the Company beneficially owned by such Person and its affiliates (including, without limitation, any convertible notes or convertible preferred stock or warrants) subject to a limitation on conversion or exercise analogous to the limitation contained herein. Except as set forth in the preceding sentence, for purposes of this paragraph, beneficial ownership shall be calculated in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended (the "**Exchange Act**"). For purposes of this Warrant, in determining the number of outstanding shares of Common Stock, the Holder may rely on the number of outstanding shares of Common Stock as reflected in the most recent of (1) the Company's most recent Form 10-K, Form 10-Q, Current Report on Form 8-K or other public filing with the Securities and Exchange Commission (the "**Commission**"), as the case may be, (2) a more recent public announcement by the Company or (3) any other notice by the Company or the Transfer Agent setting forth the number of shares of Common Stock outstanding. For any reason at any time, upon the written or oral request of the Holder, the Company shall within two (2) Business Days confirm to the Holder the number of shares of Common Stock then outstanding. In any case, the number of outstanding shares of Common Stock shall be determined after giving effect to the conversion or exercise of securities of the Company, including this Warrant, by the Holder and its affiliates since the date as of which such number of outstanding shares of Common Stock was reported. By written notice to the Company, the Holder may from time to time increase or decrease the Maximum Percentage to any other percentage not in excess of 9.99% specified in such notice; provided that (i) any such increase will not be effective until the sixty-first (61st) day after such notice is delivered to the Company, and (ii) any such increase or decrease will apply only to the Holder. The provisions of this paragraph shall be construed and implemented in a manner otherwise than in strict conformity with the terms of this Section 1(g) to correct this paragraph (or any portion hereof) which may be defective or inconsistent with the intended beneficial ownership limitation herein contained or to make changes or supplements necessary or desirable to properly give effect to such limitation.

2. ADJUSTMENT OF EXERCISE PRICE AND NUMBER OF WARRANT SHARES. The Exercise Price and the number of Warrant Shares shall be adjusted from time to time as follows:

(a) Voluntary Adjustment By Company. The Company may at any time during the term of this Warrant reduce the then current Exercise Price to any amount and for any period of time deemed appropriate by the Board of Directors of the Company.

(b) Adjustment upon Subdivision or Combination of Common Stock. If the Company at any time on or after the Issuance Date subdivides (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise) one or more classes of its outstanding shares of Common Stock into a greater number of shares, the Exercise Price in effect immediately prior to such subdivision will be proportionately reduced and the number of Warrant Shares will be proportionately increased. If the Company at any time on or after the Issuance Date combines (by any stock split, stock dividend, recapitalization, reorganization, scheme, arrangement or otherwise) one or more classes of its outstanding shares of Common Stock into a smaller number of shares, the Exercise Price in effect immediately prior to such combination will be proportionately increased and the number of Warrant Shares will be proportionately decreased. Any adjustment under this Section 2(b) shall become effective at the close of business on the date the subdivision or combination becomes effective.

(c) Other Events. If any event occurs of the type contemplated by the provisions of this Section 2 but not expressly provided for by such provisions (including, without limitation, by means of the granting of stock appreciation rights or phantom stock rights), then the Company's Board of Directors will make an appropriate adjustment in the Exercise Price and the number of Warrant Shares so as to protect the rights of the Holder; provided that no such adjustment pursuant to this Section 2(c) will increase the Exercise Price or decrease the number of Warrant Shares as otherwise determined pursuant to this Section 2.

3. RIGHTS UPON DISTRIBUTION OF ASSETS.

(a) If the Company, at any time while this Warrant is outstanding, shall distribute to all holders of Common Stock (and not to the Holders) evidences of its indebtedness or assets (including cash and cash dividends) (a "**Distribution**"), then, in each such case, the Holder shall be entitled to participate in such Distribution to the same extent that the Holder would have participated therein if the Holder had held the number of shares of Common Stock acquirable upon complete exercise of this Warrant (without regard to any limitations on exercise hereof, including without limitation, the Maximum Percentage) immediately before the date on which a record is taken for such Distribution, or, if no such record is taken, the date as of which the record holders of shares of Common Stock are to be determined for the participation in such Distribution.

4. PURCHASE RIGHTS; FUNDAMENTAL TRANSACTIONS.

(a) Purchase Rights. In addition to any adjustments pursuant to Section 2 above, if at any time the Company grants, issues or sells any Options, Convertible Securities or rights to purchase stock, warrants, securities or other property pro rata to the record holders of any class of Common Stock (the "**Purchase Rights**"), then in each such case, the Company shall reserve Options, Convertible Securities or Purchase Rights for distribution to the Holder upon exercise of this Warrant so that, in addition to the shares of the Common Stock to which such Holder is entitled, such Holder will receive upon such exercise the amount and kind of such Options, Convertible Securities or Purchase Rights which such Holder would have received if the Holder had, immediately prior to the record date for the distribution of the Options, Convertible Securities or Purchase Rights, exercised this Warrant.

(b) Fundamental Transactions. The Company shall not enter into or be party to a Fundamental Transaction unless the Successor Entity assumes in writing (unless the Company is the Successor Entity) all of the obligations of the Company under this Warrant in accordance with the provisions of this Section (4)(b) pursuant to written agreements in form and substance reasonably satisfactory to the Required Holders and approved by the Required Holders prior to such Fundamental Transaction, including agreements to deliver to each holder of the Underwriter Warrants in exchange for such Underwriter Warrants a security of the Successor Entity evidenced by a written instrument substantially similar in form and substance to this Warrant, including, without limitation, an adjusted exercise price equal to the value for the shares of Common Stock reflected by the terms of such Fundamental Transaction, and exercisable for a corresponding number of shares of capital stock equivalent to the shares of Common Stock acquirable and receivable upon exercise of this Warrant (without regard to any limitations on the exercise of this Warrant) prior to such Fundamental Transaction, and reasonably satisfactory to the Required Holders. Upon the occurrence of any Fundamental Transaction, the Successor Entity shall succeed to, and be substituted for (so that from and after the date of such Fundamental Transaction, the provisions of this Warrant referring to the "Company" shall refer instead to the Successor Entity), and may exercise every right and power of the Company and shall assume all of the obligations of the Company under this Warrant with the same effect as if such Successor Entity had been named as the Company herein. Upon consummation of the Fundamental Transaction, the Successor Entity shall deliver to the Holder confirmation that there shall be issued upon exercise of this Warrant at any time after the consummation of the Fundamental Transaction, in lieu of the shares of Common Stock (or other securities, cash, assets or other property) issuable upon the exercise of the Warrant prior to such Fundamental Transaction, such shares of the publicly traded common stock or common shares (or its equivalent) of the Successor Entity (including its Parent Entity) which the Holder would have been entitled to receive upon the happening of such Fundamental Transaction had this Warrant been converted immediately prior to such Fundamental Transaction, as adjusted in accordance with the provisions of this Warrant. In addition to and not in substitution for any other rights hereunder, prior to the consummation of any Fundamental Transaction pursuant to which holders of shares of Common Stock are entitled to receive securities or other assets with respect to or in exchange for shares of Common Stock (a "**Corporate Event**"), the Company shall make appropriate provision to insure that the Holder will thereafter have the right to receive upon an exercise of this Warrant at any time after the consummation of the Corporate Event but prior to the Expiration Date, in lieu of shares of Common Stock (or other securities, cash, assets or other property) purchasable upon the exercise of this Warrant prior to such Corporate Event, such shares of stock, securities, cash, assets or any other property whatsoever (including warrants or other purchase or subscription rights) which the Holder would have been entitled to receive upon the happening of such Corporate Event had this Warrant been exercised immediately prior to such Corporate Event. Provision made pursuant to the preceding sentence shall be in a form and substance reasonably satisfactory to the Required Holders. The provisions of this Section 4(b) shall apply similarly and equally to successive Fundamental Transactions and Corporate Events and shall be applied without regard to any limitations on the exercise of this Warrant.

(c) Applicability to Successive Transactions. The provisions of this Section shall apply similarly and equally to successive Fundamental Transactions and Corporate Events and shall be applied without regard to any limitations on the exercise of this Warrant.

5. NONCIRCUMVENTION. The Company hereby covenants and agrees that the Company will not, by amendment of its Certificate of Incorporation, Bylaws or through any reorganization, transfer of assets, consolidation, merger, scheme of arrangement, dissolution, issue or sale of securities, or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, and will at all times in good faith comply with all the provisions of this Warrant and take all actions consistent with effectuating the purposes of this Warrant. Without limiting the generality of the foregoing, the Company (i) shall not increase the par value of any shares of Common Stock receivable upon the exercise of this Warrant above the Exercise Price then in effect, (ii) shall take all such actions as may be necessary or appropriate in order that the Company may validly and legally issue fully paid and nonassessable shares of Common Stock upon the exercise of this Warrant, and (iii) shall, so long as this Warrant is outstanding, take all action necessary to reserve and keep available out of its authorized and unissued shares of Common Stock, solely for the purpose of effecting the exercise of this Warrant, 100% of the number of shares of Common Stock issuable upon exercise of this Warrant then outstanding (without regard to any limitations on exercise).

6. WARRANT HOLDER NOT DEEMED A STOCKHOLDER. Except as otherwise specifically provided herein, the Holder, solely in such Person's capacity as a holder of this Warrant, shall not be entitled to vote or receive dividends or be deemed the holder of share capital of the Company for any purpose, nor shall anything contained in this Warrant be construed to confer upon the Holder, solely in such Person's capacity as the Holder of this Warrant, any of the rights of a stockholder of the Company or any right to vote, give or withhold consent to any corporate action (whether any reorganization, issue of stock, reclassification of stock, consolidation, merger, conveyance or otherwise), receive notice of meetings, receive dividends or subscription rights, or otherwise, prior to the issuance to the Holder of the Warrant Shares which such Person is then entitled to receive upon the due exercise of this Warrant. In addition, nothing contained in this Warrant shall be construed as imposing any liabilities on the Holder to purchase any securities (upon exercise of this Warrant or otherwise) or as a stockholder of the Company, whether such liabilities are asserted by the Company or by creditors of the Company.

7. REISSUANCE OF WARRANTS.

(a) Transfer of Warrant. If this Warrant is to be transferred, the Holder shall surrender this Warrant to the Company and deliver the completed and executed Assignment Form, in the form attached hereto as Exhibit B, whereupon the Company will forthwith issue and deliver upon the order of the Holder a new Warrant (in accordance with Section 7(d)), registered as the Holder may request, representing the right to purchase the number of Warrant Shares being transferred by the Holder and, if less then the total number of Warrant Shares then underlying this Warrant is being transferred, a new Warrant (in accordance with Section 7(d)) to the Holder representing the right to purchase the number of Warrant Shares not being transferred.

(b) Lost, Stolen or Mutilated Warrant. Upon receipt by the Company of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant, and, in the case of loss, theft or destruction, of any indemnification undertaking by the Holder to the Company in customary form and, in the case of mutilation, upon surrender and cancellation of this Warrant, the Company shall execute and deliver to the Holder a new Warrant (in accordance with Section 7(d)) representing the right to purchase the Warrant Shares then underlying this Warrant.

(c) Exchangeable for Multiple Warrants. This Warrant is exchangeable, upon the surrender hereof by the Holder at the principal office of the Company, for a new Underwriter Warrant or Underwriter Warrants (in accordance with Section 7(d)) representing in the aggregate the right to purchase the number of Warrant Shares then underlying this Warrant, and each such new Warrant will represent the right to purchase such portion of such Warrant Shares as is designated by the Holder at the time of such surrender; provided, however, that no Underwriter Warrants for fractional shares of Common Stock shall be given.

(d) Issuance of New Warrants. Whenever the Company is required to issue a new Warrant pursuant to the terms of this Warrant, such new Warrant (i) shall be of like tenor with this Warrant, (ii) shall represent, as indicated on the face of such new Warrant, the right to purchase the Warrant Shares then underlying this Warrant (or in the case of a new Warrant being issued pursuant to Section 7(a) or Section 7(c), the Warrant Shares designated by the Holder which, when added to the number of shares of Common Stock underlying the other new Underwriter Warrants issued in connection with such issuance, does not exceed the number of Warrant Shares then underlying this Warrant), (iii) shall have an issuance date, as indicated on the face of such new Warrant which is the same as the Issuance Date, and (iv) shall have the same rights and conditions as this Warrant.

8. CAPITAL EVENT.

(a) Stockholders Meeting. Promptly following the Issuance Date, the Company shall take all corporate action necessary to call a meeting of its stockholders (which may be its annual meeting) (the "**Stockholders Meeting**"), which shall occur not later than March 31, 2015, for the purpose of seeking approval of the Company's stockholders to either (i) increase the number of shares of Common Stock the Company is authorized to issue or (ii) effect a reverse split of the Common Stock, in either event sufficient to permit the exercise in full of the Warrants (as defined in the Underwriting Agreement) and the Underwriter Warrants in accordance with their terms (a "**Capital Event**"). In connection therewith, the Company will as soon as reasonably practicable after the Issuance Date file with the Commission proxy materials (including a proxy statement and form of proxy) for use at the Stockholders Meeting and, after receiving and promptly responding to any comments of the Commission thereon, shall as soon as reasonably practicable mail such proxy materials to the stockholders of the Company. The Company will comply with Section 14(a) of the Exchange Act and the rules promulgated thereunder in relation to any proxy statement (as amended or supplemented, the "**Proxy Statement**") and any form of proxy to be sent to the stockholders of the Company in connection with the Stockholders Meeting, and the Proxy Statement shall not, on the date that the Proxy Statement (or any amendment thereof or supplement thereto) is first mailed to stockholders or at the time of the Stockholders Meeting, contain any untrue statement of a material fact or omit to state any material fact necessary in order to make the statements made therein not false or misleading, or omit to state any material fact necessary to correct any statement in any earlier communication with respect to the solicitation of proxies or the Stockholders Meeting which has become false or misleading. If the Company should discover at any time prior to the Stockholders Meeting, any event relating to the Company or any of its affiliates, officers or directors that is required to be set forth in a supplement or amendment to the Proxy Statement, in addition to the Company's obligations under the Exchange Act, the Company will promptly inform Roth Capital Partners, LLC (the "**Underwriter**") thereof. The Company's Board of Directors shall recommend to the Company's stockholders that the stockholders vote in favor of the Capital Event at the Stockholders Meeting and take all commercially reasonable action (including, without limitation, the hiring of a proxy solicitation firm of nationally recognized standing) to solicit the approval of the stockholders for the Capital Event. No later than two (2) business days following stockholder approval of the Capital Event, the Company shall file with the Secretary of State of Delaware a certificate of amendment to the Company's Certificate of Incorporation to effect the Capital Event, which certificate of amendment shall provide that it shall become immediately effective upon filing. The Company shall issue a press release announcing the effectiveness of the Capital Event no later than one (1) business day after such filing. The date on which the Capital Event becomes effective is referred to herein as the "**Capital Event Date**."

The provisions of this Section 8(a) may not be modified, amended or deleted without the Underwriter's prior written consent.

(b) Additional Registration Statement. No later than five (5) business days after the Capital Event Date, the Company shall file with the Commission a registration statement (which shall be on Form S-3 unless the Company is not then eligible to use Form S-3 to register the Warrant Shares) for the registration under the Securities Act of the Warrant Shares (the "**Additional Registration Statement**"), and it shall take such reasonable action as is necessary to qualify for sale, in those states in which the Warrant was initially offered by the Company, the Warrant Shares, provided, however, that no such qualification shall be required in any jurisdiction where, as a result thereof, the Company would be subject to service of general process or to taxation as a foreign corporation doing business in such jurisdiction. The Company shall use its commercially reasonable efforts to cause the Additional Registration Statement to become effective as promptly as practicable and in no event later than the time that the Warrant first becomes exercisable in accordance with its terms and shall use its commercially reasonable efforts to maintain the effectiveness and availability of such registration statement until the earlier of (i) the expiration of the Warrant in accordance with its terms or (ii) the time the Warrant is no longer outstanding. The Company shall take all commercially reasonable action to include the Warrant Shares for listing on an Eligible Market (as defined in Section 16(e) below) on or prior to the date that the Warrant first becomes exercisable in accordance with its terms.

Notwithstanding the provisions of this Section 8(b), the Company shall not be required to file or maintain the effectiveness of an Additional Registration Statement in the event that the Company delivers to the Underwriter and the Escrow Agent an opinion (in form and substance reasonably satisfactory to the Underwriter) of outside counsel to the Company reasonably satisfactory to the Underwriter to the effect that the issuance of the Warrant Shares to the Holder is exempt from the registration requirements of the Securities Act and may be freely resold by the Holder if it is not an affiliate at the time of exercise without further registration under the Securities Act either pursuant to either (i) a cashless exercise or (ii) an exemption from registration under the Securities Act (the "**Opinion of Counsel**"). In the event that the Company determines that it does not wish to file and maintain the effectiveness of an Additional Registration Statement in compliance with the terms of this paragraph and delivers the Opinion of Counsel, no later than two (2) business days after the delivery of such Opinion of Counsel, the Company shall issue a press release announcing that it has determined not to file and maintain the effectiveness of an Additional Registration Statement, and explaining in reasonable detail the basis on which the Warrant Shares may be issued to and freely resold by the Holder upon the exercise of the Warrant. Any exercise of this Warrant after the issuance of such press release shall only be effected by cashless exercise as provided in Section 1(d) above.

The provisions of this Section 8(b) may not be modified, amended or deleted without the Underwriter's prior written consent.

9. NOTICES. The Company shall provide Holder with prompt written notice of all actions taken pursuant to this Warrant. Whenever notice is required to be given under this Warrant, unless otherwise provided herein, such notice shall be given in writing, will be mailed (a) if within the domestic United States by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, or by facsimile or (b) if delivered from outside the United States, by International Federal Express or facsimile, and (c) will be deemed given (i) if delivered by first-class registered or certified mail domestic, three business days after so mailed, (ii) if delivered by nationally recognized overnight carrier, one business day after so mailed, (iii) if delivered by International Federal Express, two business days after so mailed and (iv) if delivered by facsimile, upon electronic confirmation of receipt, and will be delivered and addressed as follows:

(i) if to the Company, to:

Titan Pharmaceuticals, Inc.
400 Oyster Point Boulevard
South San Francisco, CA 94080
Attn: Sunil Bhonsle, President
Facsimile: (___) ___-____

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

Loeb & Loeb LLP
345 Park Avenue
New York, NY 10154
Attn: Fran Stoller, Esq.
Facsimile: (212) 214-0706

(ii) if to the Holder, at the address of the Holder appearing on the books of the Company.

10. AMENDMENT AND WAIVER. Except as otherwise provided herein, the provisions of this Warrant may be amended and the Company may take any action herein prohibited, or omit to perform any act herein required to be performed by it, only if the Company has obtained the written consent of the Required Holders. Any such amendment shall apply to all Underwriter Warrants and be binding upon all registered holders of such Underwriter Warrants.

11. GOVERNING LAW; CONSENT TO JURISDICTION; WAIVER OF JURY TRIAL. This Warrant shall be governed by, and construed in accordance with, the internal laws of the State of New York, without reference to the choice of law provisions thereof. The Company and, by accepting this Warrant, the Holder, each irrevocably submits to the exclusive jurisdiction of the courts of the State of New York located in New York County and the United States District Court for the Southern District of New York for the purpose of any suit, action, proceeding or judgment relating to or arising out of this Warrant and the transactions contemplated hereby. Service of process in connection with any such suit, action or proceeding may be served on each party hereto anywhere in the world by the same methods as are specified for the giving of notices under this Warrant. The Company and, by accepting this Warrant, the Holder, each irrevocably consents to the jurisdiction of any such court in any such suit, action or proceeding and to the laying of venue in such court. The Company and, by accepting this Warrant, the Holder, each irrevocably waives any objection to the laying of venue of any such suit, action or proceeding brought in such courts and irrevocably waives any claim that any such suit, action or proceeding brought in any such court has been brought in an inconvenient forum. **EACH OF THE COMPANY AND, BY ITS ACCEPTANCE HEREOF, THE HOLDER HEREBY WAIVES ANY RIGHT TO REQUEST A TRIAL BY JURY IN ANY LITIGATION WITH RESPECT TO THIS WARRANT AND REPRESENTS THAT COUNSEL HAS BEEN CONSULTED SPECIFICALLY AS TO THIS WAIVER.**

12. CONSTRUCTION; HEADINGS. This Warrant shall be deemed to be jointly drafted by the Company and the Holder and shall not be construed against any person as the drafter hereof. The headings of this Warrant are for convenience of reference and shall not form part of, or affect the interpretation of, this Warrant.

13. DISPUTE RESOLUTION. In the case of a dispute as to the determination of the Exercise Price or the arithmetic calculation of the Warrant Shares, the Company shall submit the disputed determinations or arithmetic calculations via facsimile within two (2) Business Days of receipt of the Exercise Notice giving rise to such dispute, as the case may be, to the Holder. If the Holder and the Company are unable to agree upon such determination or calculation of the Exercise Price or the Warrant Shares within three Business Days of such disputed determination or arithmetic calculation being submitted to the Holder, then the Company shall, within two (2) Business Days submit via facsimile (a) the disputed determination of the Exercise Price to an independent, reputable investment bank selected by the Company and approved by the Holder, which approval shall not be unreasonably withheld, or (b) the disputed arithmetic calculation of the Warrant Shares to the Company's independent, outside accountant. The Company shall cause the investment bank or the accountant, as the case may be, to perform the determinations or calculations and notify the Company and the Holder of the results no later than ten Business Days from the time it receives the disputed determinations or calculations. The prevailing party (which, for purposes of this Warrant, is the party whose determinations or calculations is closest to those of the investment bank or the accountant, as the case may be) in any dispute resolved pursuant to this Section 13 shall be entitled to the full amount of all reasonable expenses, including all costs and fees paid or incurred in good faith, in relation to the resolution of such dispute. Such investment bank's or accountant's determination or calculation, as the case may be, shall be binding upon all parties absent demonstrable error.

14. REMEDIES, OTHER OBLIGATIONS, BREACHES AND INJUNCTIVE RELIEF. The remedies provided in this Warrant shall be cumulative and in addition to all other remedies available under this Warrant, at law or in equity (including a decree of specific performance and/or other injunctive relief), and nothing herein shall limit the right of the Holder to pursue actual damages for any failure by the Company to comply with the terms of this Warrant.

15. TRANSFER. Subject to applicable laws and the restrictions set forth in this paragraph, this Warrant may be offered for sale, sold, transferred or assigned without the consent of the Company. The Holder agrees that, pursuant to the Lock-Up Period (as defined below) contained in Rule 5110(g)(1) of the Financial Industry Regulatory Authority, Inc. ("**FINRA**"), it will not (a) sell, transfer, assign, pledge, hypothecate or otherwise transfer this Warrant (including any Warrant Shares issued or issuable hereunder) other than to a bona fide officer or partner of the Holder or any selected dealer in connection with the offering contemplated by the Underwriting Agreement, in each case in accordance with FINRA Conduct Rule 5110(g)(1), or (b) cause this Warrant or any Warrant Shares issued or issuable hereunder to be the subject of any hedging, short sale, derivative, put or call transaction that would result in the effective economic disposition of this Warrant or any Warrant Shares issued or issuable hereunder, except as provided for in FINRA Rule 5110(g)(2). As used herein, the term "**Lock-Up Period**" means the period beginning on the date that the registration statement registering this Warrant is declared effective by the Securities and Exchange Commission (the "**Effective Date**") and ending on the one hundred eighty day anniversary of the Effective Date. In addition, notwithstanding the other terms of this Warrant or any agreement between the Company and the Holder, the Holder agrees that, as required by FINRA Rule 5110(f)(2)(H): (i) this Warrant may not be exercised more than five years from the Effective Date; (ii) the Holder shall not have more than one demand registration right at the Company's expense; (iii) the Holder shall not have the right to demand registration of this Warrant or the Warrant Shares more than five years from the earlier of the Effective Date or the commencement of sales of the public offering contemplated by the Underwriting Agreement; (iv) the Holder shall not have the right to piggyback registration with respect to this Warrant or the Warrant Shares more than seven years from the earlier of the Effective Date or the commencement of sales of the public offering contemplated by the Underwriting Agreement; (v) this Warrant may not have anti-dilution terms that allow the Holder and related persons to receive more shares or to exercise at a lower price than originally agreed upon at the time of the public offering, when the public shareholders have not been proportionally affected by a stock split, stock dividend, or other similar event; and (vi) this Warrant may not have anti-dilution terms that allow the Holder and related persons to receive or accrue cash dividends prior to the exercise or conversion of the security.

16. CERTAIN DEFINITIONS. For purposes of this Warrant, the following terms shall have the following meanings:

(a) **"Bloomberg"** means Bloomberg Financial Markets.

(b) **"Business Day"** means any day other than Saturday, Sunday or other day on which commercial banks in The City of New York are authorized or required by law to remain closed.

(c) **"Common Stock"** means (i) the Company's shares of Common Stock, par value $0.001 per share, and (ii) any share capital into which such Common Stock shall have been changed or any share capital resulting from a reclassification of such Common Stock.

(d) **"Convertible Securities"** means any stock or securities (other than Options) directly or indirectly convertible into or exercisable or exchangeable for shares of Common Stock.

(e) "**Eligible Market"** means the Principal Market, The New York Stock Exchange, Inc., The NYSE MKT, The NASDAQ Capital Market, The NASDAQ Global Market or The NASDAQ Global Select Market.

(f) "**Expiration Date"** means the [*] anniversary of the Issuance Date or, if such date falls on a day other than a Trading Day or on which trading does not take place on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded (a "**Holiday**"), the next date that is not a Holiday.

(g) "**Fundamental Transaction"** means that the Company shall, directly or indirectly, in one or more related transactions, (i) consolidate or merge with or into (whether or not the Company is the surviving corporation) another Person (but excluding a migratory merger effected solely for the purpose of changing the jurisdiction of incorporation of the Company), or (ii) sell, assign, transfer, convey or otherwise dispose of all or substantially all of the properties or assets of the Company to another Person, or (iii) allow another Person to make a purchase, tender or exchange offer that is accepted by the holders of more than the 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the Person or Persons making or party to, or associated or affiliated with the Persons making or party to, such purchase, tender or exchange offer), or (iv) consummate a stock purchase agreement or other business combination (including, without limitation, a reorganization, recapitalization, spin-off or scheme of arrangement) with another Person whereby such other Person acquires more than 50% of the outstanding shares of Common Stock (not including any shares of Common Stock held by the other Person or other Persons making or party to, or associated or affiliated with the other Persons making or party to, such stock purchase agreement or other business combination), (v) reorganize, recapitalize or reclassify its Common Stock, or (vi) any "person" or "group" (as these terms are used for purposes of Sections 13(d) and 14(d) of the Exchange Act) is or shall become the "beneficial owner" (as defined in Rule 13d-3 under the Exchange Act), directly or indirectly, of 50% of the aggregate ordinary voting power represented by issued and outstanding Common Stock.

(h) **"Options"** means any rights, warrants or options to subscribe for or purchase shares of Common Stock or Convertible Securities.

(i) **"Parent Entity"** of a Person means an entity that, directly or indirectly, controls the applicable Person and whose common stock or equivalent equity security is quoted or listed on an Eligible Market, or, if there is more than one such Person or Parent Entity, the Person or Parent Entity with the largest public market capitalization as of the date of consummation of the Fundamental Transaction.

(j) **"Person"** means an individual, a limited liability company, a partnership, a joint venture, a corporation, a trust, an unincorporated organization, any other entity and a government or any department or agency thereof.

(k) "**Principal Market"** means the Over-The-Counter Bulletin Board.

(l) "**Required Holders"** means, as of any date, the holders of at least a majority of the Underwriter Warrants outstanding as of such date.

(m) **"Successor Entity"** means the Person (or, if so elected by the Holder, the Parent Entity) formed by, resulting from or surviving any Fundamental Transaction or the Person (or, if so elected by the Holder, the Parent Entity) with which such Fundamental Transaction shall have been entered into.

(n) "**Trading Day"** means any day on which the Common Stock are traded on the Principal Market, or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock are then traded; *provided* that "Trading Day" shall not include any day on which the Common Stock are scheduled to trade on such exchange or market for less than 4.5 hours or any day that the Common Stock are suspended from trading during the final hour of trading on such exchange or market (or if such exchange or market does not designate in advance the closing time of trading on such exchange or market, then during the hour ending at 4:00:00 p.m., New York time).

(o) **"Weighted Average Price"** means, for any security as of any date, the dollar volume-weighted average price for such security on the Principal Market during the period beginning at 9:30:01 a.m., New York time (or such other time as the Principal Market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as the Principal Market publicly announces is the official close of trading), as reported by Bloomberg through its "Volume at Price" function or, if the foregoing does not apply, the dollar volume-weighted average price of such security in the over-the-counter market on the electronic bulletin board for such security during the period beginning at 9:30:01 a.m., New York time (or such other time as the Principal Market publicly announces is the official open of trading), and ending at 4:00:00 p.m., New York time (or such other time as the Principal Market publicly announces is the official close of trading), as reported by Bloomberg, or, if no dollar volume-weighted average price is reported for such security by Bloomberg for such hours, the average of the highest closing bid price and the lowest closing ask price of any of the market makers for such security as reported in the "pink sheets" by OTC Markets LLC. If the Weighted Average Price cannot be calculated for a security on a particular date on any of the foregoing bases, the Weighted Average Price of such security on such date shall be the fair market value as mutually determined by the Company and the Holder. If the Company and the Holder are unable to agree upon the fair market value of such security, then such dispute shall be resolved pursuant to Section 13 with the term "Weighted Average Price" being substituted for the term "Exercise Price." All such determinations shall be appropriately adjusted for any stock dividend, stock split, stock combination or other similar transaction during the applicable calculation period.

[Signature Page Follows]

IN WITNESS WHEREOF, the Company has caused this Warrant to Purchase Common Stock to be duly executed as of the Issuance Date set out above.

TITAN PHARMACEUTICALS, INC.

By: _____
Name:
Title:

EXHIBIT A

EXERCISE NOTICE

TO BE EXECUTED BY THE REGISTERED HOLDER TO EXERCISE THIS WARRANT TO PURCHASE COMMON STOCK

TITAN PHARMACEUTICALS, INC.

The undersigned holder hereby exercises the right to purchase _____ of the shares of Common Stock (**"Warrant Shares"**) of Titan Pharmaceuticals Inc., a Delaware corporation (the **"Company"**), evidenced by the attached Warrant to Purchase Common Stock (the **"Warrant"**). Capitalized terms used herein and not otherwise defined shall have the respective meanings set forth in the Warrant.

1. Form of Exercise Price. The Holder intends that payment of the Exercise Price shall be made as:

_____ a **"**Cash Exercise**"** with respect to _____ Warrant Shares; and/or

_____ a **"**Cashless Exercise**"** with respect to _____ Warrant Shares.

2. Payment of Exercise Price. In the event that the holder has elected a Cash Exercise with respect to some or all of the Warrant Shares to be issued pursuant hereto, the holder shall pay the Aggregate Exercise Price in the sum of $_____ to the Company in accordance with the terms of the Warrant.

3. Delivery of Warrant Shares. The Company shall deliver to the holder _____ Warrant Shares in accordance with the terms of the Warrant and, after delivery of such Warrant Shares, _____ Warrant Shares remain subject to the Warrant.

Date: _____ __, _____

_____

Name of Registered Holder

By: _____

Name:
Title:

EXHIBIT B

ASSIGNMENT FORM

TITAN PHARMACEUTICALS, INC.

(To assign the foregoing Warrant, execute this form and supply required information. Do not use this form to purchase shares.)

FOR VALUE RECEIVED, the foregoing Warrant and all rights evidenced thereby are hereby assigned to

Name: _____
(Please Print)

Address: _____
(Please Print)

Dated: _____ __, _____
Holder's Signature: _____
Holder's Address: _____

NOTE: The signature to this Assignment Form must correspond with the name as it appears on the face of the Warrant, without alteration or enlargement or any change whatever. Officers of corporations and those acting in a fiduciary or other representative capacity should file proper evidence of authority to assign the foregoing Warrant.

Exhibit 5.1

LOEB&LOEB LLP

A LIMITED LIABILITY PARTNERSHIP INCLUDING PROFESSIONAL CORPORATIONS

345 PARK AVENUE
NEW YORK, NY 10154-0037

TELEPHONE: 212.407.4000
FACSIMILE: 212.407.4990

www.loeb.com

September 30, 2014

Titan Pharmaceuticals, Inc.
400 Oyster Point Blvd.
South San Francisco, CA

Ladies and Gentlemen:

Reference is made to the Registration Statement on Form S-1 File No. 333-198476 (the "Registration Statement") filed with the Securities and Exchange Commission by Titan Pharmaceuticals, Inc., a Delaware corporation (the "Company"), under the Securities Act of 1933, as amended (the "Act"), covering an underwritten public offering of (i) 20,000,000 units ("Units"), each Unit consisting of one share of the Company's common stock, par value $.0001 per share (the "Common Stock"), and 0.75 of a warrant to purchase one share of the Company's Common Stock (the "Warrants"), (ii) all shares of Common Stock and all Warrants issued as part of the Units and (iii) a warrant to purchase shares of Common Stock to be issued to the underwriter (the "Underwriter's Warrant").

We have examined such documents and considered such legal matters as we have deemed necessary and relevant as the basis for the opinion set forth below. With respect to such examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as reproduced or certified copies, and the authenticity of the originals of those latter documents. As to questions of fact material to this opinion, we have, to the extent deemed appropriate, relied upon certain representations of certain officers of the Company.

Based upon the foregoing, we are of the opinion that the Units, the Warrants and the Common Stock to be sold to the underwriter and the Underwriter's Warrant, when issued and sold in accordance with and in the manner described in the Registration Statement, will be duly authorized, validly issued, fully paid and non-assessable.

We are opining solely on all applicable statutory provisions of Delaware corporate law, including the rules and regulations underlying those provisions, all applicable provisions of the Delaware Constitution and all applicable judicial and regulatory determinations.

We hereby consent to the use of this opinion as an exhibit to the Registration Statement, to the use of our name as your counsel and to all references made to us in the Registration Statement and in the Prospectus forming a part thereof. In giving this consent, we do not hereby admit that we are in the category of persons whose consent is required under Section 7 of the Act, or the rules and regulations promulgated thereunder.

Very truly yours,

/s/ Loeb & Loeb LLP
Loeb & Loeb LLP

Exhibit 23.1

Consent of Independent Registered Public Accounting Firm

We hereby consent to the use in the prospectus constituting a part of this Amendment No. 1 to the Registration Statement on Form S-1 (No. 333-198476) of our report dated March 31, 2014 relating to the financial statements of Titan Pharmaceuticals, Inc. as of December 31, 2013 and 2012 and for each of the years in the three year period ended December 31, 2013.

We also consent to the reference to us under the caption "Experts" in the prospectus.

/s/ OUM & CO. LLP

San Francisco, California
September 26, 2014