PROSPECTUS SUPPLEMENT (to Prospectus dated January 15, 2015)

\$12,328,645



Common Stock

We are offering up to \$12,328,645 of our common stock pursuant to our existing At Market Issuance Sales Agreement with MLV & Co. LLC ("MLV") dated June 13, 2014, or Sales Agreement. We originally registered up to \$25,000,000 of our common stock pursuant to the Sales Agreement and we are required to file this prospectus supplement because the original registration statement specified in the Sales Agreement expired on April 12, 2015. The shares of common stock offered by this prospectus supplement represent the remaining shares available for sale under the Sales Agreement.

Our common stock is listed on The NASDAQ Capital Market, or NASDAQ, and trades under the symbol "PPHM".

Sales of shares of our common stock, if any, under this prospectus supplement and the accompanying prospectus will be made by any method that is deemed an offering "at the market" as defined in Rule 415 promulgated under the Securities Act of 1933, as amended, including by means of ordinary brokers' transactions at market prices, in block transactions or as otherwise agreed by MLV and us. With our prior written consent, sales may also be made in negotiated transactions and/or any other method permitted by law. MLV will make all sales using commercially reasonable efforts consistent with its normal sales and trading practices on mutually agreed upon terms between MLV and us. There is no arrangement for funds to be received in any escrow, trust or similar arrangement.

MLV will be entitled to compensation at a commission rate equal to 2.5% of the gross proceeds per share sold. In connection with the sale of common stock on our behalf, MLV may be deemed to be an "underwriter" within the meaning of the Securities Act, and the compensation of MLV may be deemed to be underwriting commissions or discounts. We have also agreed to provide indemnification and contribution to MLV against certain liabilities, including liabilities under the Securities Act.

Investing in our securities involves a high degree of risk. Before buying shares of our common stock, you should carefully consider the risk factors described in "Risk Factors" beginning on page S-4 of this prospectus supplement and in any documents incorporated by reference into this prospectus supplement.

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



The date of this prospectus supplement is April 13, 2015.

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ABOUT THIS PROSPECTUS SUPPLEMENT

This prospectus supplement is a supplement to the accompanying prospectus that is also a part of this document. This prospectus supplement and the accompanying prospectus, dated January 15, 2015, are part of a registration statement on Form S-3 (File No. 333-201245) that we filed with the Securities and Exchange Commission, or the SEC, utilizing a "shelf" registration process. Under the shelf registration process, we may offer and sell from time to time in one or more offerings the securities described in the accompanying prospectus.

This document is in two parts. The first part is this prospectus supplement, which describes the securities we are offering and the terms of the offering and also adds to and updates information contained in the accompanying prospectus and the documents incorporated by reference into the accompanying prospectus. The second part is the accompanying prospectus, which provides more general information, some of which may not apply to the securities offered by this prospectus supplement. Generally, when we refer to this "prospectus," we are referring to both documents combined. To the extent there is a conflict between the information contained in this prospectus supplement, on the one hand, and the information contained in the accompanying prospectus or any document incorporated by reference therein, on the other hand, you should rely on the information in this prospectus supplement. We urge you to carefully read this prospectus supplement and the accompanying prospectus and any related free writing prospectus, together with the information incorporated herein and therein by reference as described under the heading "Incorporation of Certain Documents by Reference," before buying any of the securities being offered.

You should rely only on the information that we have provided or incorporated by reference in this prospectus supplement and the accompanying prospectus and any related free writing prospectus that we may authorize to be provided to you. We have not, and MLV has not, authorized anyone to provide you with different information. No other dealer, salesperson or other person is authorized to give any information or to represent anything not contained in this prospectus supplement and the accompanying prospectus or any related free writing prospectus that we may authorize to be provided to you. You must not rely on any unauthorized information or representation. This prospectus supplement is an offer to sell only the securities offered hereby, and only under circumstances and in jurisdictions where it is lawful to do so. You should assume that the information in this prospectus supplement and the accompanying prospectus or any related free on the front of the document and that any information we have incorporated by reference is accurate only as of the date of the document incorporated by reference, regardless of the time of delivery of this prospectus supplement and the accompanying prospectus, or any sale of a security.

This prospectus supplement contains summaries of certain provisions contained in some of the documents described herein, but reference is made to the actual documents for complete information. All of the summaries are qualified in their entirety by the actual documents. Copies of some of the documents referred to herein have been filed, will be filed or will be incorporated by reference as exhibits to the registration statement of which this prospectus supplement is a part, and you may obtain copies of those documents as described below under the heading "Where To Learn More About Us."

As used in this prospectus supplement, the terms "we", "us", "our", "Company" and "Peregrine" refer to Peregrine Pharmaceuticals, Inc., and its wholly-owned subsidiary, Avid Bioservices, Inc.

We own or have rights to trademarks or trade names that we use in conjunction with the operation of our business. Each trademark, trade name or service mark of any other company appearing in this prospectus supplement or the accompanying prospectus belongs to its holder. Use or display by us of other parties' trademarks, trade names or service marks is not intended to and does not imply a relationship with, or endorsement or sponsorship by us of, the trademark, trade name or service mark owner.

The industry and market data contained or incorporated by reference in this prospectus supplement are based either on our management's own estimates or on independent industry publications, reports by market research firms or other published independent sources. Although we believe these sources are reliable, we have not independently verified the information and cannot guarantee its accuracy and completeness, as industry and market data are subject to change and cannot always be verified with complete certainty due to limits on the availability and reliability of raw data, the voluntary nature of the data gathering process and other limitations and uncertainties inherent in any statistical survey of market shares. Accordingly, you should be aware that the industry and market data contained or incorporated by reference in this prospectus supplement, and estimates and beliefs based on such data, may not be reliable. Unless otherwise indicated, all information contained or incorporated by reference in this prospectus supplement concerning our industry in general or any segment thereof, including information regarding our general expectations and market opportunity, is based on management's estimates using internal data, data from industry related publications, consumer research and marketing studies and other externally obtained data.

PROSPECTUS SUPPLEMENT SUMMARY

This summary description about us and our business highlights selected information contained elsewhere in, or incorporated by reference into, this prospectus supplement and the accompanying prospectus. It does not contain all the information you should consider before investing in our common stock. Before making an investment decision, you should read carefully this prospectus supplement and the accompanying prospectus, including, without limitation, the "Risk Factors" beginning on page S-4 of this prospectus supplement, and any other offering materials, together with the additional information described under the captions "Where To Learn More About Us" and "Incorporation of Certain Documents By Reference," beginning on page S-8 of this prospectus supplement.

Our Company

We are a biopharmaceutical company with a pipeline of novel drug candidates in clinical trials focused on the treatment and diagnosis of cancer. Our lead immunotherapy candidate, bavituximab, is in Phase III development (the "Phase III SUNRISE trial") for the treatment of second-line non-small cell lung cancer ("NSCLC") along with several investigator-sponsored trials evaluating other treatment combinations and additional oncology indications. In addition, we are evaluating our molecular imaging agent, 124I-PGN650 ("PGN650"), in an exploratory clinical trial for the imaging of multiple solid tumor types.

Bavituximab is our lead immunotherapy investigational candidate in Phase III development for the treatment of second-line NSCLC. The design of the Phase III SUNRISE (Stimulating ImmUne RespoNse thRough BavItuximab in a PhaSE III Lung Cancer Study) trial was supported by promising data from our prior Phase IIb second-line NSCLC trial in the same indication, which final data was presented at the 2013 American Society of Clinical Oncology Annual Meeting. In December 2013, we initiated the Phase III SUNRISE trial and patient enrollment is ongoing. In addition, in January 2014, we announced that bavituximab received Fast Track designation by the U.S. Food and Drug Administration ("FDA") for combination with docetaxel in patients with previously-treated non-squamous NSCLC.

The Phase III SUNRISE trial is a randomized, double-blind, placebo-controlled trial evaluating bavituximab plus docetaxel versus docetaxel plus placebo in approximately 600 patients at clinical sites worldwide. The trial is enrolling patients with stage IIIb/IV non-squamous NSCLC who have progressed after standard front-line platinum-based treatment. Patients are randomized into one of two treatment arms. One treatment arm receives docetaxel (75 mg/m²), up to six 21-day cycles, in combination with placebo weekly until progression or toxicity. The other treatment arm receives docetaxel (75 mg/m²), up to six 21-day cycles, in combination with placebo weekly until progression or toxicity. The primary endpoint of the trial is overall survival.

In addition, we are currently exploring the full clinical potential of bavituximab in combination with chemotherapies or other immuno-oncology agents through a series of investigator-sponsored trials in multiple tumor indications.

With respect to our imaging program, we are currently conducting an open-label, single-center clinical trial under an exploratory Investigational New Drug Application filed with the FDA for our imaging agent PGN650 for the imaging of multiple solid tumor types.

For a more detailed discussion of our novel drug candidates bavituximab and PGN650 in clinical trials, please refer to our Annual Report on Form 10-K for the year ended April 30, 2014, filed with the SEC on July 14, 2014, our Quarterly Reports on Form 10-Q for the three months ended July 31, 2014, October 31, 2014, and January 31, 2015, and any subsequent filings that we make with the SEC.

In addition, we also operate a wholly-owned (current Good Manufacturing Practices ("cGMP")) contract manufacturing subsidiary, Avid Bioservices, Inc. ("Avid"). Avid is a Contract Manufacturing Organization that provides fully integrated services from cell line development to commercial cGMP biomanufacturing for us and its third-party customers. In addition to generating revenue from third-party customers, Avid is strategically integrated with us to manufacture all clinical products to support our company-sponsored and investigator-sponsored clinical trials while also preparing for potential commercial launch of bavituximab.

On December 10, 2014, we announced expansion plans that will more than double Avid's current manufacturing capacity to support the potential commercial manufacturing of bavituximab while also providing sufficient additional capacity to meet the anticipated growth of Avid's business. The capacity expansion will take place within an existing 40,000 square foot warehouse located adjacent to our current headquarters in Tustin, California. We anticipate the new manufacturing capacity will be ready for cGMP production during mid-2015.

THE OFFERING

Common stock offered by us	Shares of our common stock having an aggregate offering price of up to \$12,328,645.
Common stock outstanding before this offering	192,444,716 shares ⁽¹⁾
Manner of offering	"At the market offering" that may be made from time to time on the NASDAQ or other market for our common stock in the United States through our sales agent, MLV. See the section entitled "Plan of Distribution" of this prospectus supplement.
Use of proceeds	We intend to use the net proceeds from this offering, if any, for general corporate purposes, including, without limitation, to fund our SUNRISE trial. Please see the section entitled "Use of Proceeds" in this prospectus supplement.
NASDAQ Capital Market symbol	РРНМ
Risk Factors	Investing in our securities involves risks. You should carefully consider the risks described under "Risk Factors" in this prospectus supplement, in our most recent Annual Report on Form 10-K and our subsequent Quarterly Reports on Form 10-Q as well as the other information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus before making a decision to invest in our common stock.

- (1) This excludes the following shares of common stock reserved for issuance as of April 10, 2015:
 - 24,880,481 common shares reserved for issuance under outstanding option grants and available for issuance under our stock incentive plans;
 - · 2,714,717 common shares reserved for and available for issuance under our Employee Stock Purchase Plan;
 - · 273,280 common shares issuable upon exercise of outstanding warrants; and
 - 45,668,156 common shares issuable upon conversion of our outstanding 10.50% Series E Convertible Preferred Stock ⁽²⁾.
- (2) The 10.50% Series E Convertible Preferred Stock ("Series E Preferred Stock") is convertible into shares of common stock at a conversion price of \$3.00 per share. However, in the event of a change of control (as further described in the certificate of designation of rights and preferences for the Series E Preferred Stock, or Certificate of Designations, filed as Exhibit 3.11 to the Company's Form 8-A filed with the SEC on February 12, 2014), the holders of Series E Preferred Stock will be limited to a maximum number of shares of our common stock or other applicable consideration equal to 29 (the "Share Cap") multiplied by the number of shares of Series E Preferred Stock converted. This Share Cap assumes our shares of common stock are acquired for a consideration of \$0.855 per share or less, which is approximately one-half of the per share closing sale price of our common stock on the day before the initial public offering of the Series E Preferred Stock.

RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the specific risks described in our Annual Report on Form 10-K for the year ended April 30, 2014 under the heading "Risk Factors" and in our Quarterly Reports on Form 10-Q for the three months ended July 31, 2014, October 31, 2014 and January 31, 2015 under the heading "Risk Factors" before investing in our securities. You should also consider similar information in any Annual Report on Form 10-K or other documents filed by us with the SEC after the date of this prospectus supplement before deciding to invest in our securities. If any of the foregoing risks actually materializes, our business, financial condition, results of operations and prospects could be materially adversely affected. As a result, the value of our securities could decline and you could lose part or all of your investment. The foregoing risks are not the only ones we face. Additional risks and uncertainties not presently known to us or that we currently deem immaterial may also materially affect our business, financial condition, results of operations and prospects. See "Where To Learn More About Us" and "Incorporation of Certain Documents By Reference," beginning on page S-8 of this prospectus supplement.

RISKS RELATED TO THIS OFFERING

We will have broad discretion over the use of the net proceeds from this offering, you may not agree with how we use the proceeds and we may not invest the proceeds successfully.

We intend to use the net proceeds, if any, from this offering for general corporate purposes, including the funding of our SUNRISE trial. Accordingly, we will have broad discretion as to the use of the net proceeds from this offering and could use them for purposes other than those contemplated at the time of this offering. Accordingly, you will be relying on the judgment of our management with regard to the use of these net proceeds, and you will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. It is possible that the proceeds will be invested in a way that does not yield a favorable, or any, return for us.

YOU WILL EXPERIENCE IMMEDIATE DILUTION IN THE BOOK VALUE PER SHARE OF THE COMMON STOCK YOU PURCHASE.

The offering price per share in this offering may exceed the pro forma net tangible book value per share of our common stock outstanding prior to this offering. Assuming that an aggregate of 8,806,175 shares of our common stock are sold at a price of \$1.40 per share, the last reported sale price of our common stock on the NASDAQ on April 10, 2015 for aggregate gross proceeds of approximately \$12.3 million, and after deducting commissions and estimated aggregate offering expenses payable by us, you will experience immediate dilution of \$1.08 per share, representing the difference between our pro forma net tangible book value per share as of January 31, 2015 and our pro forma as adjusted net tangible book value per share as of January 31, 2015 after giving effect to this offering at the assumed size and offering price. The exercise of outstanding stock options will result in further dilution of your investment. See the section below entitled "Dilution" on page S-5 for a more detailed discussion of the dilution you will incur in connection with this offering.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus, including the information we incorporate by reference, contain forward-looking statements within the meaning of Sections 27A of the Securities Act of 1933, as amended (the "Securities Act"), and 21E of the Securities Exchange Act of 1934, as amended (the "Exchange Act"). Forward-looking statements include, without limitation, any statement that may project, indicate or imply future results, events, performance or achievements, and may contain words such as "may," "will," "expect," "intend," "anticipate," "believe," "estimate," "plan," "could," "continue" or other comparable words or expressions. These statements involve known and unknown risks, including, among others, risks resulting from economic and market conditions, the regulatory environment in which we operate, pricing pressures, accurately forecasting operating and capital expenditures and clinical trial costs, competitive activities, uncertainties of litigation and other business conditions, and are subject to uncertainties and assumptions contained elsewhere in this prospectus supplement and the accompanying prospectus. We base our forward-looking statements on information currently available to us, and, in accordance with the requirements of federal securities laws, we will disclose to you material developments affecting such statements. Our actual operating results and financial performance may prove to be very different from what we have predicted as of the date of this prospectus supplement due to certain risks and uncertainties. We undertake no duty to update any of the forward-looking statements after the date of this prospectus supplement to conform such statements to actual results or to changes in our expectations.

USE OF PROCEEDS

The amount of proceeds from this offering will depend upon the number of shares of our common stock sold and the market prices at which they are sold. We may not be able to sell any shares under or fully utilize the sales agreement with MLV as a source of financing. We intend to use the net proceeds from this offering for general corporate purposes, including, without limitation, to fund our SUNRISE trial and which may also include research and development expenses, other clinical trial expenses, expansion of our contract manufacturing capabilities and increasing our working capital. Pending the use of the net proceeds in investment grade, interest bearing securities.

The principal purposes of this offering are to increase our operating and financial flexibility. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds we will have upon completion of this offering. Accordingly, our management will have broad discretion in the application of net proceeds, if any.

DILUTION

If you purchase our common stock in this offering, your interest will be diluted to the extent of the difference between the price per share you pay in this offering and the net tangible book value per share of our common stock after this offering. Our net tangible book value of our common stock as of January 31, 2015 was approximately \$49.8 million, or approximately \$0.27 per share of common stock based upon 184.2 million shares outstanding. Net tangible book value per share is equal to our total tangible assets, less our total liabilities, divided by the total number of shares of our common stock outstanding as of January 31, 2015.

After giving effect to the sale of our common stock in the aggregate amount of \$12,328,645 at an assumed offering price of \$1.40 per share, the last reported sale price of our common stock on the NASDAQ on April 10, 2015, and after deducting estimated offering commissions payable by us, our net tangible book value as of January 31, 2015 would have been \$61.8 million, or \$0.32 per share of common stock. This represents an immediate increase in net tangible book value of \$0.05 per share to our existing stockholders and an immediate dilution in net tangible book value of \$1.08 per share to new investors in this offering. The following table illustrates this per share dilution:

Assumed public offering price per share		\$ 1.40
Net tangible deficit per share as of January 31, 2015	\$ 0.27	
Increase in net tangible book per share attributable to this offering	\$ 0.05	
As adjusted net tangible book per share as of January 31, 2015, after giving effect to this offering		\$ 0.32
Dilution per share to new investors in this offering		\$ 1.08

The table above assumes for illustrative purposes that an aggregate of 8,806,175 shares of our common stock are sold at a price of \$1.40 per share, the last reported sale price of our common stock on the NASDAQ on April 10, 2015, for aggregate gross proceeds of \$12,328,645. The shares sold in this offering, if any, will be sold from time to time at various prices.

The number of shares of our common stock to be outstanding immediately after this offering is based on 184,244,698 shares of our common stock outstanding as of January 31, 2015. For information regarding the number of shares of our common stock outstanding as of date of this prospectus supplement, including our common stock shares reserved for future issuance, please refer to the following section entitled "Description of Common Stock".

DESCRIPTION OF COMMON STOCK

As of the date of the prospectus supplement, we are authorized to issue up to 325,000,000 shares of common stock, \$.001 par value per share. As of April 10, 2015, shares of our common stock were issued and outstanding. In addition, our common stock outstanding as of April 10, 2015 excludes the following:

- 24,880,481 common shares reserved for issuance under outstanding option grants and available for issuance under our stock incentive plans;
- 2,714,717 common shares reserved for and available for issuance under our Employee Stock Purchase Plan;
- · 273,280 common shares issuable upon exercise of outstanding warrants; and
- 45,668,156 common shares issuable upon conversion of our outstanding 10.50% Series E Convertible Preferred Stock ⁽¹⁾.
 - (1) The 10.50% Series E Convertible Preferred Stock ("Series E Preferred Stock") is convertible into shares of common stock at a conversion price of \$3.00 per share. However, in the event of a change of control (as further described in the certificate of designation of rights and preferences for the Series E Preferred Stock, or Certificate of Designations, filed as Exhibit 3.11 to the Company's Form 8-A filed with the SEC on February 12, 2014), the holders of Series E Preferred Stock will be limited to a maximum number of shares of our common stock or other applicable consideration equal to 29 (the "Share Cap") multiplied by the number of shares of Series E Preferred Stock converted. This Share Cap assumes our shares of common stock are acquired for a consideration of \$0.855 per share or less, which is approximately one-half of the per share closing sale price of our common stock on the day before the initial public offering of the Series E Preferred Stock.

Dividends

Our Board of Directors may, out of funds legally available, at any regular or special meeting, declare dividends to the holders of shares of our common stock as and when they deem expedient, subject to the rights of holders of the preferred stock, if any.

Voting

Each share of common stock entitles the holders to one vote per share on all matters requiring a vote of the stockholders, including the election of directors. No holders of shares of common stock shall have the right to vote such shares cumulatively in any election for the Board of Directors.

Rights Upon Liquidation

In the event of our voluntary or involuntary liquidation, dissolution, or winding up, the holders of our common stock will be entitled to share equally in our assets available for distribution after payment in full of all debts and after the holders of preferred stock, if any, have received their liquidation preferences in full.

Miscellaneous

No holders of shares of our common stock shall have any preemptive rights to subscribe for, purchase or receive any shares of any class, whether now or hereafter authorized, or any options or warrants to purchase any such shares, or any securities convertible into or exchanged for any such shares, which may at any time be issued, sold or offered for sale by us.



PLAN OF DISTRIBUTION

We previously entered into an At Market Issuance Sales Agreement, or Sales Agreement, with MLV on June 13, 2014, pursuant to which we may issue and sell shares of our common stock having aggregate sales proceeds of up to \$25,000,000 from time to time through MLV, as our exclusive sales agent for the offer and sale of the common stock. On April 13, 2015, we amended the Sales Agreement to substitute registration statements from which our shares may be offered and sold under the Sales Agreement, to replace the original registration statement which expired on April 12, 2015, with the registration statement to which this prospectus supplement forms a part. As of the date of this prospectus supplement, we could issue shares of our common stock for aggregate gross proceeds of up to \$12,328,645 under the Sales Agreement, as amended. The sales, if any, of common stock made under the Sales Agreement will be made in privately negotiated transactions or in any method permitted by law deemed to be an offering "at the market" as defined in Rule 415 promulgated under the Securities Act, at negotiated prices, at prices prevailing at the time of sale or at prices related to such prevailing market prices, including sales made directly on the NASDAQ, or sales made through a market maker other than on an exchange. MLV will make all sales using commercially reasonable efforts consistent with its normal sales and trading practices on mutually agreed upon terms between MLV and us.

MLV will sell the shares of common stock subject to the Sales Agreement from time to time as agreed upon by us and MLV. Each time we wish to issue and sell shares of common stock, we will notify MLV of the proposed terms of the placement. Subject to the terms and conditions of the Sales Agreement, including agreement by MLV of the terms of the placement, MLV will use its commercially reasonable efforts, consistent with its normal trading and sales practices, to try to sell all of the designated shares of common stock. We may instruct MLV not to sell shares of common stock if the sales cannot be effected at or above the price designated by us in any such instruction. MLV will not be obligated to attempt to sell shares if the market price is below the designated price. We or MLV may suspend the offering of shares of common stock upon proper notice and subject to other conditions.

The compensation to MLV for sales of our common stock related to this prospectus supplement will be 2.5% of the gross proceeds from the sale of such common stock. The remaining sales proceeds, after deducting offering expenses and any transaction fees imposed by any governmental or self-regulatory organization in connection with the sales, will equal our net proceeds for the sale of the shares.

Settlement for sales of common stock will occur on the third business day following the date on which any sales are made in return for payment of the net proceeds to us. There is no arrangement for funds to be received in an escrow, trust or similar arrangement.

In connection with the sale of common stock on our behalf, MLV may be an "underwriter" within the meaning of the Securities Act, and compensation to MLV may constitute underwriting commissions. We have agreed to provide indemnification and contribution to MLV against certain civil liabilities, including liabilities under the Securities Act. MLV may engage in transactions with, or perform services for, us in the ordinary course of business.

The offering of our common stock in accordance with the Sales Agreement will terminate upon the earlier of (1) the sale of all of our shares of common stock subject to the Sales Agreement, or (2) the termination of the Sales Agreement as permitted therein.

MLV and its affiliates have provided and may in the future provide various investment banking and advisory services to us from time to time for which they have received, and are expected to receive, customary fees and expenses. MLV previously acted as (i) our underwriter in the initial public offering of 775,000 shares of our Series E Preferred Stock, with respect to which we entered into an Underwriting Agreement, dated February 11, 2014, with MLV, Maxim Group LLC, National Securities Corporation, Empire Asset Management Company and I-Bankers Securities, Inc., and (ii) our sales agent in the establishment of an "at the market" program for the offering of our Series E Preferred Stock with respect to which we entered into an At Market Issuance Sales Agreement, dated June 13, 2014, pursuant to which multiple offering of our common stock with respect to which we entered into an At Market Issuance Sales Agreement, dated December 27, 2012 , with MLV and pursuant to which multiple offerings of our common stock were made from time to time to time.

LEGAL MATTERS

The validity of the securities offered by this prospectus has been passed upon for us by K&L Gates LLP, Irvine, California, counsel to Peregrine Pharmaceuticals, Inc. LeClairRyan, A Professional Corporation, New York, New York, is acting as counsel for MLV in connection with this offering.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements and schedule included in our Annual Report on Form 10-K for the year ended April 30, 2014 and the effectiveness of our internal control over financial reporting as of April 30, 2014, as set forth in their reports, which are incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements and schedule are incorporated by reference in reliance on Ernst & Young LLP's reports, given on their authority as experts in accounting and auditing.

WHERE TO LEARN MORE ABOUT US

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities being offered under this prospectus supplement. This prospectus supplement and accompanying prospectus, which forms part of the registration statement, does not contain all of the information in the registration statement. We have omitted certain parts of the registration statement, as permitted by the rules and regulations of the SEC. For further information regarding us and our securities, please see the registration statement and our other filings with the SEC, including our annual, quarterly, and current reports and any proxy statements, which you may read and copy at the Public Reference Room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information about the Public Reference Room by calling the SEC at 1-800-SEC-0330. Our public filings with the SEC are also available to the public on the SEC's Internet website at *http://www.sec.gov*.

We furnish holders of our common stock with annual reports containing audited financial statements prepared in accordance with accounting principles generally accepted in the United States following the end of each fiscal year. We file reports and other information with the SEC pursuant to the reporting requirements of the Exchange Act. In addition, the reports, proxy statements and other information that we file with the SEC are available to you free of charge through the Investor Relations page of our website, *www.peregrineinc.com*, as soon as reasonably practicable after they have been electronically filed with, or furnished to, the SEC. We have included our website address as a textual reference and do not intend it as an active link to our website. The contents of our website are not part of this prospectus supplement, and you should not consider the contents of our website in making an investment decision with respect to our securities.

Descriptions in this prospectus supplement and accompanying prospectus of documents are intended to be summaries of the material, relevant portions of those documents, but may not be complete descriptions of those documents. For complete copies of those documents, please refer to the exhibits to the registration statement and other documents filed by us with the SEC.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus supplement the documents we file with them, which means that we can disclose important information to you by referring you to these documents. The information that we incorporate by reference into this prospectus supplement is considered to be part of this prospectus supplement, and information that we file later with the SEC automatically updates and supersedes any information in this prospectus supplement. We have filed the following documents with the SEC. These documents are incorporated by reference as of their respective dates of filing:

- 1. our Annual Report on Form 10-K for the fiscal year ended April 30, 2014, as filed with the SEC on July 14, 2014;
- 2. our Definitive Proxy Statement with respect to the 2014 Annual Meeting of Stockholders held on October 16, 2014, as filed with the SEC on August 28, 2014;

- 3. our Quarterly Reports on Form 10-Q for the quarterly periods ended July 31, 2014, October 31, 2014, and January 31, 2015, as filed with the SEC on September 9, 2014, December 10, 2014 and March 12, 2015, respectively.
- 4. our Current Reports on Form 8-K as filed with the SEC on May 5, 2014, May 8, 2014, June 10, 2014, June 16, 2014, September 8, 2014, October 17, 2014, October 30, 2014, November 14, 2014, December 9, 2014, January 16, 2015 and March 10, 2015;
- 5. the description of our common stock contained in our Registration Statement on Form 8-A and Form 8-B (Registration of Successor Issuers) filed under the Exchange Act, including any amendment or report filed for the purpose of updating such description;
- 6. the description of our preferred stock purchase rights contained in our Form 8-A filed under the Exchange Act on March 17, 2006, including any amendment or report filed for the purpose of updating such descriptions;
- 7. the description of our Series E Preferred Stock contained in our Form 8-A filed under the Exchange Act on February 12, 2014, including any amendment or report filed for the purpose of updating such description; and
- 8. all other reports filed by us under Section 13(a) of 15(d) of the Exchange Act since the end of our fiscal year ended April 30, 2014.

In addition, all documents subsequently filed by us pursuant to Section 13(a), 13(c), 14 and 15(d) of the Exchange Act, after the date of this prospectus supplement and prior to the termination of this offering shall be deemed to be incorporated by reference into this prospectus supplement and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus supplement to the extent that a statement contained herein or in any other subsequently filed document that is incorporated by reference herein modifies or supersedes such earlier statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus supplement or the accompanying prospectus.

Nothing in this prospectus supplement shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02 or Item 7.01 of Form 8-K.

We will provide, without charge, upon written or oral request of any person to whom a copy of this prospectus supplement and the accompanying prospectus is delivered, a copy of any or all of the foregoing documents and information that has been or may be incorporated in this prospectus supplement and the accompanying prospectus by reference, other than exhibits to such documents. Requests for such documents and information should be directed to:

Peregrine Pharmaceuticals, Inc. Attn: Paul J. Lytle, Chief Financial Officer 14282 Franklin Avenue Tustin, California 92780-7017 (714) 508-6000

\$150,000,000



Common Stock Preferred Stock

We may offer and sell either individually or in combination with other securities any of the securities described in this prospectus from time to time in one or more offerings at prices and on terms to be determined at or prior to the applicable offering. The aggregate initial offering price of all securities sold under this prospectus will not exceed \$150,000,000.

This prospectus describes some of the general terms that may apply to these securities. We will provide the specific prices and terms of these securities in one or more supplements to this prospectus at the time of the offering. You should read this prospectus and any prospectus supplement carefully before you invest in our securities.

We may offer and sell these securities through underwriters, dealers or agents or directly to purchasers, on a continuous or delayed basis. The prospectus supplement for each offering will describe in detail the plan of distribution for that offering and will set forth the names of any underwriters, dealers or agents involved in the offering and any applicable fees, commissions or discount arrangements.

We encourage you to carefully review and consider this prospectus and any prospectus supplement before investing in our securities. We also encourage you to read the documents to which we have referred you in the "Where To Learn More About Us" section of this prospectus for information on us and for our financial statements.

This prospectus may not be used to sell securities unless accompanied by a prospectus supplement.

Our common stock is listed on The NASDAQ Capital Market, or NASDAQ, and trades under the symbol "PPHM".

Investing in our securities involves a high degree of risk. Before investing in our securities, you should refer to the risk factors included in our periodic reports, in prospectus supplements relating to specific offerings of our securities and in other information that we file with the Securities and Exchange Commission. See "Risk Factors" beginning on page 2 of this prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

The date of this prospectus is January 15, 2015.

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ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission (the "SEC") utilizing a "shelf" registration process. Under the shelf registration process, we may offer and sell either individually or in combination with other securities any of the securities described in this prospectus from time to time in one or more offerings at prices and on terms to be determined at or prior to the applicable offering. The aggregate initial offering price of all securities sold under this prospectus will not exceed \$150,000,000.

This prospectus only provides you with a general description of the securities we may offer. Each time we sell securities described in the prospectus, we will provide a supplement to this prospectus that will contain specific information about the terms of that offering, including the specific amounts, prices and terms of the securities offered.

The prospectus supplement may also add, update or change information contained in this prospectus. You should read carefully both this prospectus and any accompanying prospectus supplement or other offering materials, together with the additional information described under "Where To Learn More About Us" and "Incorporation of Certain Documents By Reference," beginning on page 10 of this prospectus.

You should rely only on the information contained in or incorporated by reference into this prospectus. We have 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 making an offer to sell these securities in any jurisdiction where the offer or sale is not permitted.

This prospectus and any accompanying prospectus supplement or other offering materials do not contain all of the information included in the registration statement as permitted by the rules and regulations of the SEC. For further information, we refer you to the registration statement on Form S-3, including its exhibits. We are subject to the informational requirements of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), and, therefore, file reports and other information with the SEC. Statements contained in this prospectus and any accompanying prospectus supplement or other offering materials about the provisions or contents of any agreement or other document are only summaries. If the SEC rules require that any agreement or document be filed as an exhibit to the registration statement, then you should refer to that agreement or document for its complete contents.

You should not assume that the information in this prospectus, any accompanying prospectus supplement or any other offering materials is accurate as of any date other than the date on the front of each document, regardless of the time of delivery of this prospectus, any accompanying prospectus supplement or any sale of securities. Our business, financial condition, results of operations and prospects may have changed since then.

As used in this prospectus, the terms "we," "us," "our," "Company" and "Peregrine" refer to Peregrine Pharmaceuticals, Inc., and its wholly-owned subsidiary, Avid Bioservices, Inc.

PROSPECTUS SUMMARY

This summary description about us and our business highlights selected information contained elsewhere in this prospectus or incorporated by reference into this prospectus. It does not contain all the information you should consider before investing in our securities. You should read carefully this prospectus, any accompanying prospectus supplement and any other offering materials, together with the additional information described under "Where To Learn More About Us" and "Incorporation of Certain Documents By Reference," beginning on page 10 of this prospectus.

Our Company

We are a biopharmaceutical company with a pipeline of novel drug candidates in clinical trials focused on the treatment and diagnosis of cancer. Our lead immunotherapy candidate, bavituximab, is in Phase III development (the "Phase III SUNRISE trial") for the treatment of second-line non-small cell lung cancer ("NSCLC") along with several investigator-sponsored trials evaluating other treatment combinations and additional oncology indications. In addition, we are evaluating our lead molecular imaging agent, 124I-PGN650 ("PGN650"), in an exploratory clinical trial for the imaging of multiple solid tumor types.



Bavituximab is our lead immunotherapy investigational candidate in Phase III development for the treatment of second-line NSCLC. The design of the Phase III SUNRISE (Stimulating ImmUne RespoNse thRough BavItuximab in a PhaSE III Lung Cancer Study) trial was supported by promising data from our prior Phase IIb second-line NSCLC trial in the same indication, which final data was presented at the 2013 American Society of Clinical Oncology Annual Meeting. In December 2013, we initiated the Phase III SUNRISE trial and patient enrollment is ongoing. In addition, in January 2014, we announced that bavituximab received Fast Track designation by the U.S. Food and Drug Administration ("FDA") for combination with docetaxel in patients with previously-treated non-squamous NSCLC.

The Phase III SUNRISE trial is a randomized, double-blind, placebo-controlled trial evaluating bavituximab plus docetaxel versus docetaxel plus placebo in approximately 600 patients at clinical sites worldwide. The trial is enrolling patients with stage IIIb/IV non-squamous NSCLC who have progressed after standard front-line platinum-based treatment. Patients are randomized into one of two treatment arms. One treatment arm receives docetaxel (75 mg/m²), up to six 21-day cycles, in combination with placebo weekly until progression or toxicity. The other treatment arm receives docetaxel (75 mg/m²), up to six 21-day cycles, in combination with placebo weekly until progression or toxicity. The primary endpoint of the trial is overall survival.

In addition, we are currently exploring the full clinical potential of bavituximab in combination with chemotherapies or other immuno-oncology agents through a series of investigator-sponsored trials in multiple tumor indications.

With respect to our imaging program, we are currently conducting an open-label, single-center clinical trial under an exploratory Investigational New Drug Application filed with the FDA for our lead imaging agent PGN650 for the imaging of multiple solid tumor types.

For a more detailed discussion of our novel drug candidates bavituximab and PGN650 in clinical trials, please refer to our Annual Report on Form 10-K for the year ended April 30, 2014, filed with the SEC on July 14, 2014 (the "2014 Annual Report"), our Quarterly Reports on Form 10-Q for the three months ended July 31, 2014 and October 31, 2014, and any subsequent filings that we make with the SEC, as well as each prospectus supplement made a part hereof.

In addition, we also operate a wholly-owned (current Good Manufacturing Practices ("cGMP")) contract manufacturing subsidiary, Avid Bioservices, Inc. ("Avid"). Avid is a Contract Manufacturing Organization that provides fully integrated services from cell line development to commercial cGMP biomanufacturing for us and its third-party clients. In addition to generating revenue from providing a broad range of biomanufacturing services to third-party clients, Avid is strategically integrated with us to manufacture all clinical products to support our company-sponsored and investigator-sponsored clinical trials while also preparing for potential commercial launch of bavituximab.

Company Information

We are a Delaware corporation. Our principal executive offices are located at 14282 Franklin Avenue, Tustin, California 92780 and our telephone number is 714-508-6000. Our internet website addresses are www.peregrineinc.com, www.avidbio.com, www.sunrisetrial.com and www.peregrinetrials.com. This reference to our websites is an inactive textual reference only and is not a hyperlink. The contents of our websites are not part of this prospectus, and you should not consider the contents of our websites in making an investment decision with respect to our securities.

RISK FACTORS

An investment in our securities involves a high degree of risk. You should carefully consider the specific risks described in our 2014 Annual Report under the heading "Risk Factors" and in our Quarterly Reports on Form 10-Q for the three months ended July 31, 2014 and October 31, 2014 under the heading "Risk Factors" before investing in our securities. You should also consider similar information in any Annual Report on Form 10-K or other documents filed by us with the SEC after the date of this prospectus before deciding to invest in our securities. If applicable, we will include in any prospectus supplement a description of those significant risks that could make the offering described therein speculative or risky. If any of the foregoing risks actually materializes, our business, financial condition, results of operations and prospects could be materially adversely affected. As a result, the value of our securities not presently known to us or that we currently deem immaterial may also materially affect our business, financial condition, results of operations and prospects. See "Where To Learn More About Us" and "Incorporation of Certain Documents By Reference," beginning on page 10 of this prospectus.

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and the documents we incorporate by reference herein contain forward-looking statements within the meaning of Sections 27A of the Securities Act of 1933, as amended (the "Securities Act"), and 21E of the Exchange Act. Forward-looking statements include, without limitation, any statement that may project, indicate or imply future results, events, performance or achievements, and may contain words such as "may," "will," "expect," "intend," "anticipate," "believe," "estimate," "plan," "could," "should," "continue" or other comparable words or expressions. These statements involve known and unknown risks, including, among others, risks resulting from economic and market conditions, the regulatory environment in which we operate, pricing pressures, accurately forecasting operating and capital expenditures and clinical trial costs, competitive activities, uncertainties of litigation and other business conditions, and are subject to uncertainties and assumptions contained elsewhere in this prospectus. We base our forward-looking statements on information currently available to us, and, in accordance with the requirements of federal securities laws, we will disclose to you material developments affecting such statements. Our actual operating results and financial performance may prove to be very different from what we have predicted as of the date of this prospectus due to certain risks and uncertainties. Except as required by law, we undertake no duty to update any of the forward-looking statements in this prospectus and any supplements to this prospectus, even if new information becomes available in the future. The risks and uncertainties that we face are described in greater detail under the heading "Risk Factors" in our 2014 Annual Report, our Quarterly Reports on Form 10-Q for the three months ended July 31, 2014 and October 31, 2014, and in subsequent filings that we make with the SEC, and may also be described in each prospectus supplement made a part hereof.

RATIO OF COMBINED FIXED CHARGES AND PREFERRED STOCK DIVIDENDS TO EARNINGS

For each of the periods presented in the table below, our earnings were insufficient to cover combined fixed charges and preferred stock dividends. Accordingly, the table sets forth the deficiency of earnings to cover combined fixed charges and preferred stock dividends for each of the periods presented. Ratio information has not been presented as it is not applicable.

For purposes of computing the deficiencies of earnings available to cover combined fixed charges and preferred stock dividends, "earnings" consist of loss from continuing operations before income taxes plus fixed charges. "Fixed charges" consist of interest expense, amortization of discount on notes payable and debt issuance costs, loss on early extinguishment of debt, and the portion of operating lease rental expense that is estimated by us to be representative of interest. In addition, we did not pay any dividends on preferred stock and no preferred stock was outstanding during the fiscal year 2010 through fiscal year 2013 periods presented. See Exhibit 12.1 hereto for additional detail regarding the computation of the deficiency of earnings available to cover combined fixed charges and preferred stock dividends.

	Fiscal Year Ended April 30,								Six Months Ended October 31,		
		2010		2011		2012		2013	2014	2014	
					(in	thousands)					
Deficiency of earnings available to cover combined fixed charges and preferred stock dividends	\$	(14,494)	\$	(34,151)	\$	(42,119)	\$	(29,780)	\$ (35,763)	\$	(27,031)
stock dividends	\$	(14,494)	\$	(34,151)	\$	(42,119)	\$	(29,780)	\$ (35,763)	\$	(27,0

USE OF PROCEEDS

Unless otherwise indicated in the prospectus supplement applicable to an offering, we intend to use the net proceeds from the sale of our securities for general corporate purposes, which may include research and development expenses, clinical trial expenses, including the Phase III SUNRISE trial, expansion of our contract manufacturing capabilities and increasing our working capital. Pending the use of the net proceeds, we intend to invest the net proceeds in investment grade, interest bearing securities.

The principal purposes of this offering are to increase our operating and financial flexibility. As of the date of this prospectus, we cannot specify with certainty all of the particular uses for the net proceeds we will have upon completion of this offering. Accordingly, our management will have broad discretion in the application of net proceeds, if any.

DESCRIPTION OF SECURITIES TO BE OFFERED

The descriptions of the securities contained in this prospectus, together with the applicable prospectus supplements, summarize the material terms and provisions of the various types of securities that we may offer. We will describe in the applicable prospectus supplement relating to any securities the particular terms of the securities offered by that prospectus supplement. If we so indicate in the applicable prospectus supplement, the terms of the securities may differ from the terms we have summarized below. We will also include information in the prospectus supplement, where applicable, about material U.S. federal income tax considerations relating to the securities, and the securities exchange, if any, on which the securities will be listed.

We may sell from time to time, in one or more primary offerings, our common stock and preferred stock, or any combination of the foregoing.

In this prospectus, we refer to the common stock and preferred stock or any combination of the foregoing securities to be sold by us in a primary offering collectively as "securities." The total dollar amount of all securities that we may issue under this prospectus will not exceed \$150,000,000.

This prospectus may not be used to consummate a sale of securities unless it is accompanied by a prospectus supplement.

The following is a summary of the material provisions of the common stock and preferred stock as set forth in our certificate of incorporation, as amended to date (our "Charter"), and bylaws, as amended to date (our "Bylaws"). For additional detail about our capital stock, please refer to our Charter and Bylaws, as well as applicable Delaware law.

DESCRIPTION OF COMMON STOCK

As of the date of the prospectus, we are authorized to issue up to 325,000,000 shares of common stock, \$0.001 par value per share. As of December 19, 2014, 182,081,234 shares of our common stock were outstanding. In addition, our common stock outstanding as of December 19, 2014 excludes the following:

- 25,113,278 common shares reserved for issuance under outstanding option grants and available for issuance under our stock incentive plans;
- 2,714,717 common shares reserved for and available for issuance under our Employee Stock Purchase Plan;
- · 273,280 common shares issuable upon exercise of outstanding warrants; and
- [•] 34,220,116 common shares issuable upon conversion of our outstanding 10.50% Series E Convertible Preferred Stock ⁽¹⁾.
 - (2) The 10.50% Series E Convertible Preferred Stock, or Series E Preferred Stock, is convertible into shares of common stock at a conversion price of \$3.00 per share. However, in the event of a change of control (as further described in the certificate of designation of rights and preferences for the Series E Preferred Stock, or Certificate of Designations, filed as Exhibit 3.11 to the Company's Form 8-A filed with the SEC on February 12, 2014), the holders of Series E Preferred Stock will be limited to a maximum number of shares of our common stock or other applicable consideration equal to 29 (the "Share Cap") multiplied by the number of shares of Series E Preferred Stock converted. This Share Cap assumes our shares of common stock are acquired for a consideration of \$0.855 per share or less, which is approximately one-half of the per share closing sale price of our common stock on the day before the initial public offering of the Series E Preferred Stock.

Dividends

Our Board of Directors may, out of funds legally available, at any regular or special meeting, declare dividends to the holders of shares of our common stock as and when they deem expedient, subject to the rights of holders of the preferred stock, if any.

Voting

Each share of common stock entitles the holders to one vote per share on all matters requiring a vote of the stockholders, including the election of directors. No holders of shares of common stock shall have the right to vote such shares cumulatively in any election for the Board of Directors.

Rights Upon Liquidation

In the event of our voluntary or involuntary liquidation, dissolution, or winding up, the holders of our common stock will be entitled to share equally in our assets available for distribution after payment in full of all debts and after the holders of preferred stock, if any, have received their liquidation preferences in full.

Miscellaneous

No holders of shares of our common stock shall have any preemptive rights to subscribe for, purchase or receive any shares of any class, whether now or hereafter authorized, or any options or warrants to purchase any such shares, or any securities convertible into or exchanged for any such shares, which may at any time be issued, sold or offered for sale by us.

DESCRIPTION OF PREFERRED STOCK

Pursuant to our Charter, we are currently authorized to designate and issue up to 5,000,000 shares of preferred stock, \$0.001 par value per share, in one or more classes or series and, subject to the limitations prescribed by our Charter and Delaware law, with such rights, preferences, privileges and restrictions of each class or series of preferred stock, including dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences and the number of shares constituting any class or series as our Board of Directors may determine, without any vote or action by our stockholders. As of the date of this prospectus, we have authorized and designated 2,000,000 shares of 10.50% Series E Convertible Preferred Stock, or Series E Preferred Stock, of which 1,180,004 shares are issued and outstanding as of December 19, 2014.

Our Series E Preferred Stock is listed on the NASDAQ and trades under the symbol "PPHMP."

The transfer agent, registrar and dividend disbursing agent for our Series E Preferred Stock is Broadridge Corporate Issuer Solutions, Inc.

The rights and preferences of the Series E Preferred Stock include:

- The holders are entitled to receive a 10.50% per annum cumulative quarterly dividend, payable in cash, on or about the 1st day of each of January, April, July, and October;
- The dividend may increase to a penalty rate of 12.50% if: (a) we fail to pay dividends for any four consecutive or nonconsecutive quarterly dividend periods, or (b) we fail for 180 or more consecutive days to maintain a listing of the Series E Preferred Stock on a national securities exchange;

- Following a change of control of the Company (as defined in the Certificate of Designations) by a person or entity, we (or the acquiring entity) may, at our option, redeem the Series E Preferred Stock, in whole but not in part, within 120 days after the date on which the change of control has occurred for cash, at the redemption price;
- We may not redeem the Series E Preferred Stock prior to February 11, 2017 (except following a change of control) and, on and after February 11, 2017, we may redeem the Series E Preferred Stock for cash at our option, from time to time, in whole or in part, at the redemption price;
- The redemption price is \$25.00 per share, plus any accrued and unpaid dividends (whether or not earned or declared) to, but excluding, the redemption date;
- The liquidation preference is \$25.00 per share, plus any accrued and unpaid dividends (whether or not earned or declared);
- The Series E Preferred Stock has no stated maturity date or mandatory redemption and is senior to all of the Company's other securities;
- There is a general conversion right with respect to the Series E Preferred Stock with an initial conversion price of \$3.00, a special conversion right upon a change of control, and a market trigger conversion at our option in the event of Market Trigger (as defined in the Certificate of Designations); and
- The holders of the Series E Preferred Stock have no voting rights, except as defined in the Certificate of Designations.

The foregoing description does not purport to be complete and is qualified in its entirety by reference to the Certificate of Designations filed as Exhibit 3.11 to our Form 8-A filed with the SEC on February 12, 2014.

With respect to the remaining 3,000,000 shares of undesignated preferred stock under the terms of our Charter, our Board of Directors may, without action by stockholders, designated and authorize the issuance of additional series of authorized preferred stock ranking junior to or on parity with our Series E Preferred Stock and, in connection with the creation of such series, fix by the resolution or resolutions providing for the issuance of shares the voting powers and designations, preferences and relative, participating, optional or other special rights, and qualifications, limitations or restrictions of such series, including dividend rates, conversion rights, voting rights, terms of redemption and liquidation preferences and the number of shares constituting such series. The particular terms of any preferred stock offered by this prospectus and any prospectus supplement will be described in the applicable prospectus supplement, and include, to the extent possible:

- The maximum number of shares in the series and the designation of the series;
- The terms of which dividends, if any, will be paid;
- The terms of which the shares may be redeemed, if at all;
- The liquidation preference, if any;
- · The terms of any retirement or sinking fund for the purchase or redemption of the shares of the series;
- The terms and conditions, if any, on which the shares of the series will be convertible into, or exchangeable for, shares of any other class or classes of securities;
- · The voting rights, if any, of the shares of the series; and
- Any or all other preferences and relative, participating, operational or other special rights or qualifications, limitations or restrictions of the shares.

The description of the preferred stock above is not complete. You should refer to our Charter with respect to our Series E Preferred Stock and any other series of preferred stock we have or may issue for complete information concerning the terms of such series. A copy of the certificate of designations for each additional series of preferred stock will be filed with the SEC as an exhibit to the registration statement of which this prospectus is a part or as an exhibit to a filing incorporated by reference in such registration statement.

Our Board of Directors may authorize the issuance of series of preferred stock with voting or conversion rights that could adversely affect the voting power or other rights of common stockholders. The issuance of preferred stock could have the effect of delaying or preventing a change in control, and may cause the market price of our common stock to decline or impair the voting and other rights of the holders of our common stock.

PLAN OF DISTRIBUTION

We may sell the securities offered by this prospectus from time to time in one or more transactions, including, without limitation:

- · directly to one or more purchasers, including affiliates;
- through agents;
- to or through underwriters, brokers or dealers; or
- · through a combination of any of these methods.

In addition, the manner in which we may sell some or all of the securities covered by this prospectus include, without limitation, through:

- a block trade in which a broker-dealer will attempt to sell as agent, but may position or resell a portion of the block, as principal, in order to facilitate the transaction;
- · purchases by a broker-dealer, as principal, and resale by the broker-dealer for its account;
- ordinary brokerage transactions and transactions in which a broker solicits purchasers; or
- · privately negotiated transactions.

A prospectus supplement with respect to each offering of securities will state the terms of the offering of the securities, including:

- the name or names of any underwriters or agents and the amounts of securities underwritten or purchased by each of them, if any;
- the public offering price or purchase price of the securities and the net proceeds to be received by us from the sale;
- · any delayed delivery arrangements;
- · any underwriting discounts or agency fees and other items constituting underwriters' or agents' compensation;
- · any discounts or concessions allowed or reallowed or paid to dealers; and
- any securities exchange or markets on which the securities may be listed.

The offer and sale of the securities described in this prospectus by us the underwriters or the third parties described above may be effected from time to time in one or more transactions, including privately negotiated transactions, either:

- at a fixed price or prices, which may be changed;
- at market prices prevailing at the time of sale;
- at prices related to the prevailing market prices; or
- at negotiated prices.

General

Any public offering price and any discounts, commissions, concessions or other items constituting compensation allowed or reallowed or paid to underwriters, dealers, agents or remarketing firms may be changed from time to time. Underwriters, dealers, agents and remarketing firms that participate in the distribution of the offered securities may be "underwriters" as defined in the Securities Act. Any discounts or commissions they receive from us and any profits they receive on the resale of the offered securities may be treated as underwriting discounts and commissions under the Securities Act. We will identify any underwriters, agents or dealers and describe their commissions, fees or discounts in the applicable prospectus supplement or pricing supplement, as the case may be. In compliance with the guidelines of the Financial Industry Regulatory Authority ("FINRA"), the maximum discount or commission to be received by a FINRA member or independent broker-dealer may not exceed 8% of the aggregate amount of the securities offered pursuant to this prospectus and any applicable prospectus supplement.

At-the-Market Offerings

If we reach an agreement with an underwriter or agent on a placement, including the number and types of securities to be offered in the placement and any minimum price below which sales may not be made, such underwriter or agent would agree to use its commercially reasonable efforts, consistent with its normal trading and sales practices, to try to sell such securities on such terms. Underwriters could make sales in privately negotiated transactions and/or any other method permitted by law, including sales deemed to be an "at-the-market" offering as defined in Rule 415 promulgated under the Securities Act, sales made directly on the NASDAQ, the existing trading market for our common stock, or sales made to or through a market maker other than on an exchange. The name of any such underwriter or agent involved in the offer and sale of the securities, the amounts underwritten, and the nature of its obligations to take the securities will be described in the applicable prospectus supplement.

Underwriters and Agents

If underwriters are used in a sale, they will acquire the offered securities for their own account. The underwriters may resell the offered securities in one or more transactions, including negotiated transactions. These sales may be made at a fixed public offering price or prices, which may be changed, at market prices prevailing at the time of the sale, at prices related to such prevailing market price or at negotiated prices. We may offer the securities to the public through an underwriting syndicate or through a single underwriter. The underwriters in any particular offering will be mentioned in the applicable prospectus supplement or pricing supplement, as the case may be.

Unless otherwise specified in connection with any particular offering of securities, the obligations of the underwriters to purchase the offered securities will be subject to certain conditions contained in an underwriting agreement that we will enter into with the underwriters at the time of the sale to them. The underwriters will be obligated to purchase all of the securities of the series offered if any of the securities are purchased, unless otherwise specified in connection with any particular offering of securities. Any initial offering price and any discounts or concessions allowed, reallowed or paid to dealers may be changed from time to time.

We may designate agents to sell the offered securities. Unless otherwise specified in connection with any particular offering of securities, the agents will agree to use their best efforts to solicit purchases for the period of their appointment. We may also sell the offered securities to one or more remarketing firms, acting as principals for their own accounts or as agents for us. These firms will remarket the offered securities upon purchasing them in accordance with a redemption or repayment pursuant to the terms of the offered securities. A prospectus supplement or pricing supplement, as the case may be, will identify any remarketing firm and will describe the terms of its agreement, if any, with us and its compensation.

In connection with offerings made through underwriters or agents, we may enter into agreements with such underwriters or agents pursuant to which we receive our outstanding securities in consideration for the securities being offered to the public for cash. In connection with these arrangements, the underwriters or agents may also sell securities covered by this prospectus to hedge their positions in these outstanding securities, including in short sale transactions. If so, the underwriters or agents may use the securities received from us under these arrangements to close out any related open borrowings of securities.

Dealers

We may sell the offered securities to dealers as principals. We may negotiate and pay dealers' commissions, discounts or concessions for their services. The dealer may then resell such securities to the public either at varying prices to be determined by the dealer or at a fixed offering price agreed to with us at the time of resale. Dealers engaged by us may allow other dealers to participate in resales.

Direct Sales

We may choose to sell the offered securities directly. In this case, no underwriters or agents would be involved.

Institutional Purchasers

We may authorize agents, dealers or underwriters to solicit certain institutional investors to purchase offered securities on a delayed delivery basis pursuant to delayed delivery contracts providing for payment and delivery on a specified future date. The applicable prospectus supplement or pricing supplement, as the case may be, will provide the details of any such arrangement, including the offering price and commissions payable on the solicitations.

We will enter into such delayed contracts only with institutional purchasers that we approve. These institutions may include commercial and savings banks, insurance companies, pension funds, investment companies and educational and charitable institutions.

Indemnification; Other Relationships

We may have agreements with agents, underwriters, dealers and remarketing firms to indemnify them against certain civil liabilities, including liabilities under the Securities Act. Agents, underwriters, dealers and remarketing firms, and their affiliates, may engage in transactions with, or perform services for, us in the ordinary course of business. This includes commercial banking and investment banking transactions.

Market-Making, Stabilization and Other Transactions

There is currently no market for the offered preferred stock. If the offered preferred stock is traded after its initial issuance, it may trade at a discount from its initial offering price, depending upon prevailing interest rates, the market for similar securities and other factors. While it is possible that an underwriter could inform us that it intends to make a market in the offered preferred stock, such underwriter would not be obligated to do so, and any such market-making could be discontinued at any time without notice. Therefore, no assurance is given as to whether an active trading market will develop for the offered preferred stock. If we seek to list the preferred stock on any exchange or quotation system, any such listing with respect to any particular preferred stock will be described in the applicable prospectus supplement or pricing supplement, as the case may be.

In connection with any offering, the underwriters may also engage in penalty bids. Penalty bids permit the underwriters to reclaim a selling concession from a syndicate member when the securities originally sold by the syndicate member are purchased in a syndicate covering transaction to cover syndicate short positions. Stabilizing transactions, syndicate covering transactions and penalty bids may cause the price of the securities to be higher than it would be in the absence of the transactions. The underwriters may, if they commence these transactions, discontinue them at any time.

Fees and Commissions

In compliance with the guidelines of FINRA, the aggregate maximum discount, commission or agency fees or other items constituting underwriting compensation to be received by any FINRA member or independent broker-dealer will not exceed 8% of any offering pursuant to this prospectus and any applicable prospectus supplement or pricing supplement, as the case may be.

LEGAL MATTERS

The validity of the securities offered by this prospectus has been passed upon for us by K&L Gates LLP, Irvine, California, counsel to Peregrine Pharmaceuticals, Inc. Certain legal matters will be passed upon for any agents or underwriters by counsel for such agents or underwriters identified in the applicable prospectus supplement.

EXPERTS

Ernst & Young LLP, independent registered public accounting firm, has audited our consolidated financial statements and schedule included in our Annual Report on Form 10-K for the year ended April 30, 2014 and the effectiveness of our internal control over financial reporting as of April 30, 2014, as set forth in their reports, which are incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements and schedule are incorporated by reference in reliance on Ernst & Young LLP's reports, given on their authority as experts in accounting and auditing.

WHERE TO LEARN MORE ABOUT US

We have filed with the SEC a registration statement on Form S-3 under the Securities Act with respect to the securities being offered under this prospectus. This prospectus, which forms part of the registration statement, does not contain all of the information in the registration statement. We have omitted certain parts of the registration statement, as permitted by the rules and regulations of the SEC. For further information regarding us and our securities, please see the registration statement and our other filings with the SEC, including our annual, quarterly, and current reports and any proxy statements, which you may read and copy at the Public Reference Room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. You may obtain information about the Public Reference Room by calling the SEC at 1-800-SEC-0330. Our public filings with the SEC are also available to the public on the SEC's Internet website at *http://www.sec.gov*.

We furnish holders of our common stock with annual reports containing audited financial statements prepared in accordance with accounting principles generally accepted in the United States following the end of each fiscal year. We file reports and other information with the SEC pursuant to the reporting requirements of the Exchange Act. In addition, the reports, proxy statements and other information that we file with the SEC are available to you free of charge through the Investor Relations page of our website, *www.peregrineinc.com*, as soon as reasonably practicable after they have been electronically filed with, or furnished to, the SEC. We have included our website address as a textual reference and do not intend it as an active link to our website. The contents of our website are not part of this prospectus, and you should not consider the contents of our website in making an investment decision with respect to our securities.

Descriptions in this prospectus of documents are intended to be summaries of the material, relevant portions of those documents, but may not be complete descriptions of those documents. For complete copies of those documents, please refer to the exhibits to the registration statement and other documents filed by us with the SEC.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" into this prospectus the documents we file with them, which means that we can disclose important information to you by referring you to these documents. The information that we incorporate by reference into this prospectus is considered to be part of this prospectus, and information that we file later with the SEC automatically updates and supersedes any information in this prospectus. We have filed the following documents with the SEC. These documents are incorporated by reference as of their respective dates of filing:

- 1. our Annual Report on Form 10-K for the fiscal year ended April 30, 2014, as filed with the SEC on July 14, 2014;
- 2. our Definitive Proxy Statement with respect to the 2014 Annual Meeting of Stockholders held on October 16, 2014, as filed with the SEC on August 28, 2014;
- 3. our Quarterly Reports on Form 10-Q for the quarterly periods ended July 31, 2014 and October 31, 2014, as filed with the SEC on September 9, 2014 and December 10, 2014, respectively.
- 4. our Current Reports on Form 8-K as filed with the SEC on May 5, 2014, May 8, 2014, June 10, 2014, June 16, 2014, September 8, 2014, October 17, 2014, October 30, 2014, November 14, 2014, and December 9, 2014;
- 5. the description of our common stock contained in our Registration Statement on Form 8-A and Form 8-B (Registration of Successor Issuers) filed under the Exchange Act, including any amendment or report filed for the purpose of updating such description;
- 6. the description of our preferred stock purchase rights contained in our Form 8-A filed under the Exchange Act on March 17, 2006, including any amendment or report filed for the purpose of updating such descriptions;
- 7. the description of our Series E Preferred Stock contained in our Form 8-A filed under the Exchange Act on February 12, 2014, including any amendment or report filed for the purpose of updating such description; and
- 8. all other reports filed by us under Section 13(a) of 15(d) of the Exchange Act since the end of our fiscal year ended April 30, 2014.



In addition, all documents subsequently filed by us pursuant to Section 13(a), 13(c), 14 and 15(d) of the Exchange Act after the date of this registration statement and prior to the filing of a post-effective amendment that indicates that all securities offered have been sold or that deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference into this registration statement and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated by reference herein shall be deemed to be modified or superseded for purposes of this registration statement to the extent that a statement contained herein or in any other subsequently filed document that is incorporated by reference herein modifies or supersedes such earlier statement. Any such statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this registration statement.

Nothing in this registration statement shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02 or Item 7.01 of Form 8-K.

We will provide, without charge, upon written or oral request of any person to whom a copy of this prospectus is delivered, a copy of any or all of the foregoing documents and information that has been or may be incorporated in this prospectus by reference, other than exhibits to such documents. Requests for such documents and information should be directed to:

Peregrine Pharmaceuticals, Inc. Attn: Paul J. Lytle, Chief Financial Officer 14282 Franklin Avenue Tustin, California 92780-7017 (714) 508-6000

See also "Where to Learn More About Us."

\$12,328,645



Common Stock

PROSPECTUS SUPPLEMENT



The date of this prospectus supplement is April 13, 2015