Neos Therapeutics, Inc.
Form 424B5
February 03, 2017

Use these links to rapidly review the document
TABLE OF CONTENTS

Table of Contents

Filed pursuant to Rule 424(b)(5)
Registration No. 333-212809

PROSPECTUS SUPPLEMENT
(to Prospectus dated August 12, 2016)

5,000,000 Shares

Common Stock

We are offering up to 5,000,000 shares of our common stock, par value $0.001 per share, at a price of $5.00 per share. Our common stock is quoted on the NASDAQ Global Market under the symbol "NEOS." On February 1, 2017, the last reported sale price of our common stock on the NASDAQ Global Market was $5.80 per share.

We are an "emerging growth company" under applicable Securities and Exchange Commission rules and will be subject to reduced public company reporting requirements for this prospectus and future filings.

Our business and an investment in our common stock involve significant risks. These risks are described under the caption "Risk Factors" beginning on page S-9 of this prospectus.

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

	Per Share	*Total*
Public offering price	**$ 5.00**	**$ 25,000,000**
Underwriting discount(1)	**$ 0.30**	**$ 1,500,000**
Proceeds, before expenses, to us	**$ 4.70**	**$ 23,500,000**

(1) See "Underwriting" for additional disclosure regarding underwriting discount and expense reimbursement.

The underwriters may also purchase up to an additional 750,000 shares from us at the public offering price, less the underwriting discount, within 30 days from the date of this prospectus.

The underwriters expect to deliver the shares against payment in New York, New York on February 8, 2017.

Joint Book-running Managers

Cowen and Company **BMO Capital Markets**

Lead Manager

JMP Securities

February 3, 2017

Table of Contents

TABLE OF CONTENTS

Table of Contents

ABOUT THIS PROSPECTUS SUPPLEMENT

This document is in two parts. The first part is this prospectus supplement, which describes the specific terms of this offering of common stock. The second part is the accompanying prospectus, which provides more general information, some of which may not apply to this offering. The information included or incorporated by reference in this prospectus supplement also adds to, updates and changes information contained or incorporated by reference in the accompanying prospectus. If information included or incorporated by reference in this prospectus supplement is inconsistent with the accompanying prospectus or the information incorporated by reference therein, then this prospectus supplement or the information incorporated by reference in this prospectus supplement will apply and will supersede the information in the accompanying prospectus and the documents incorporated by reference therein.

This prospectus supplement is part of a registration statement that we filed with the Securities and Exchange Commission, or SEC, using a "shelf" registration process. Under the shelf registration process, we may from time to time offer and sell any combination of the securities described in the accompanying prospectus up to a total dollar amount of $125.0 million, of which this offering is a part.

You should rely only on the information contained or incorporated by reference in this prospectus supplement, the accompanying prospectus and any free writing prospectus prepared by us or on our behalf. We have not, and the underwriters have not, authorized any other person to provide you with information different from that contained in this prospectus supplement and the accompanying prospectus or incorporated by reference in this prospectus supplement and the accompanying prospectus. If anyone provides you with different or inconsistent information, you should not rely on it. We are not, and the underwriters are not, making an offer to sell or soliciting an offer to buy these securities under any circumstance in any jurisdiction where the offer or solicitation is not permitted. You should assume that the information contained in this prospectus supplement, the accompanying prospectus and any free writing prospectus prepared by us or on our behalf is accurate only as of the date of the respective document in which the information appears, and that any information in documents that 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 or any sale of a security. Our business, financial condition, results of operations and prospects may have changed since those dates.

It is important for you to read and consider all of the information contained in this prospectus supplement and the accompanying prospectus in making your investment decision. We include cross-references in this prospectus supplement and the accompanying prospectus to captions in these materials where you can find additional related discussions. The table of contents in this prospectus supplement provides the pages on which these captions are located. You should read both this prospectus supplement and the accompanying prospectus, together with the additional information described in the sections entitled "Where You Can Find More Information" and "Incorporation by Reference" of this prospectus supplement, before investing in our common stock.

We are offering to sell, and seeking offers to buy, shares of common stock only in jurisdictions where offers and sales are permitted. The distribution of this prospectus supplement and the accompanying prospectus and the offering of the common stock in certain jurisdictions may be restricted by law. Persons outside the United States who come into possession of this prospectus supplement and the accompanying prospectus must inform themselves about, and observe any

Table of Contents

restrictions relating to, the offering of the common stock and the distribution of this prospectus supplement and the accompanying prospectus outside the United States. This prospectus supplement and the accompanying prospectus do not constitute, and may not be used in connection with, an offer to sell, or a solicitation of an offer to buy, any securities offered by this prospectus supplement and the accompanying prospectus by any person in any jurisdiction in which it is unlawful for such person to make such an offer or solicitation.

Table of Contents

CAUTIONARY STATEMENT REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement and the accompanying prospectus, including the documents that we incorporate by reference, contain forward-looking statements within the meaning of Section 27A of the Securities Act and Section 21E of the Exchange Act. Any statements about our expectations, beliefs, plans, objectives, assumptions or future events or performance are not historical facts and may be forward-looking. These statements are often, but are not always, made through the use of words or phrases such as "may," "will," "could," "should," "expects," "intends," "plans," "anticipates," "believes," "estimates," "predicts," "projects," "potential," "continue," and similar expressions, or the negative of these terms, or similar expressions. Accordingly, these statements involve estimates, assumptions and uncertainties which could cause actual results to differ materially from those expressed in them. Any forward-looking statements are qualified in their entirety by reference to the factors discussed throughout this report, and in particular those factors referenced in the section "Risk Factors."

This prospectus supplement and the accompanying prospectus contain forward-looking statements that are based on our management's belief and assumptions and on information currently available to our management. These statements relate to future events or our future financial performance, and involve known and unknown risks, uncertainties and other factors that may cause our actual results, levels of activity, performance or achievements to be materially different from any future results, levels of activity, performance or achievements expressed or implied by these forward-looking statements. Forward-looking statements include, but are not limited to, statements about:

- our ability to develop and/or commercialize Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future product or product candidate;
- the timing, cost or other aspects of the commercial launch and future sales of Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future product or product candidate;
- our ability to increase our manufacturing and distribution capabilities for Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future product or product candidate;
- the attention deficit hyperactivity disorder patient market size and market adoption of Adzenys XR-ODT and, if approved, Cotempla XR-ODT or NT-0201, by physicians and patients;
- the therapeutic benefits, effectiveness and safety of Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future product or product candidate;
- our expectations regarding the commercial supply of our Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future products, or our generic Tussionex;
- our ability to receive, and the timing of any receipt of the U.S. Food and Drug Administration, or FDA, approvals, or other regulatory action in the United States and elsewhere, for Cotempla XR-ODT, NT-0201, and any other future product candidate;
- our expectations regarding federal, state and foreign regulatory requirements;
- deficiencies the FDA has identified in its Complete Response Letter and may identify with respect to Cotempla XR-ODT and whether we will be able to address the issues that may relate to those deficiencies;
- deficiencies the FDA may identify with respect to NT-0201 and whether we will be able to address the issues that may relate to those deficiencies;

Table of Contents

- the PDUFA dates for Cotempla XR-ODT and NT-0201, and the projected commercial launch dates, if approved by the FDA, of Cotempla XR-ODT and NT-0201;
- our estimates regarding anticipated expenses, capital requirements and our needs for additional financing;
- our product research and development activities, including the timing and progress of our clinical trials, and projected expenditures;
- issuance of patents to us by the U.S. Patent and Trademark Office and other governmental patent agencies;
- our ability to achieve profitability;
- our staffing needs; and
- the additional risks, uncertainties and other factors described under the caption "Risk Factors" in this prospectus and any prospectus supplement that we may file.

Table of Contents

PROSPECTUS SUPPLEMENT SUMMARY

This summary provides an overview of selected information contained elsewhere in this prospectus supplement and the accompanying prospectus and does not contain all of the information you should consider before making your investment decision. Before investing in our common stock, you should carefully read this entire prospectus supplement and the accompanying prospectus and the information incorporated herein and therein by reference, including our financial statements and the related notes included or incorporated by reference into this prospectus supplement and the accompanying prospectus. You should also consider, among other things, the matters described under "Risk Factors" beginning on page S-9 and "Management's Discussion and Analysis of Financial Condition and Results of Operations" in each case included or incorporated by reference in this prospectus supplement and the accompanying prospectus and the information incorporated herein and therein by reference. As used in this prospectus supplement and the accompanying prospectus, the terms "Neos," "we," "our," "us," or "the Company" refer to Neos Therpeutics, Inc. and its subsidiaries on a consolidated basis, unless the context otherwise indicates.

Company Overview

We are a pharmaceutical company focused on developing, manufacturing and commercializing products utilizing our proprietary modified-release drug delivery technology platform, which we have already used to develop our approved product Adzenys XR-ODT and our two product candidates for the treatment of attention deficit hyperactivity disorder, or ADHD. Our approved product and two product candidates are extended-release, or XR, medications in patient-friendly, orally disintegrating tablets, or ODT, or oral suspension dosage forms. Our proprietary modified-release drug delivery platform has enabled us to create novel, extended-release ODT and oral suspension dosage forms. We received approval from the U.S. Food and Drug Administration, or FDA, for Adzenys XR-ODT, our amphetamine XR-ODT, on January 27, 2016 and began the commercialization of this product on May 16, 2016. We believe Adzenys XR-ODT and, if approved, Cotempla XR-ODT, is and will be the first amphetamine XR-ODT and the first methylphenidate XR-ODT, respectively, for the treatment of ADHD on the market. Cotempla XR-ODT is the provisionally accepted trade name of our methylphenidate XR-ODT. On November 10, 2015, we announced that we received a Complete Response Letter from the FDA in its review of our New Drug Application, or NDA, for Cotempla XR-ODT, which required us to conduct a bridging study to demonstrate bioequivalence between the clinical trial material and the to-be-marketed drug product, including an assessment of food effect, and to provide process validation and three months of stability data. On July 28, 2016, we announced that we had completed the bridging study demonstrating that the Cotempla XR-ODT to-be-marketed product was bioequivalent to the clinical trial material, and on December 20, 2016, we announced the resubmission of our NDA for Cotempla XR-ODT. In addition, on November 17, 2016, we announced our submission of an NDA for NT-0201, our amphetamine XR oral suspension.

Recent Developments

ADHD market and Adzenys XR-ODT update

In 2016, 70.4 million prescriptions for medications with ADHD labeling were written in the United States, representing a 5.6% annual increase in prescriptions from 2015, and generated $10.4 billion in sales. Approximately 92% of these prescriptions were for stimulant medications, such as methylphenidate and amphetamine, which have been the standard of care for several decades. Methylphenidate and amphetamine prescriptions generated $3.4 billion and $5.7 billion in sales, respectively, in 2016 in the United States. A few non-stimulant medications are also available, but evidence of their efficacy for treating ADHD symptoms is less compelling. The market for ADHD

Table of Contents

medications outside of the United States is less developed, but we believe will continue to grow as recognition and awareness of the disorder increase.

With respect to Adzenys XR-ODT, monthly prescriptions filled have continued to increase since its commercial launch on May 16, 2016. Based on data from QuintilesIMS, a total of 35,059 prescriptions for Adzenys XR-ODT were filled for the period from its commercial launch through January 20, 2017.

Financial Update

Our cash, cash equivalents and short-term investments was approximately $39.8 million at December 31, 2016, as compared to $90.8 million at December 31, 2015. In addition, we estimate that, for the three months ended December 31, 2016, total net product revenues were between $3.3 million and $3.6 million, an increase of 94% to 112% compared to $1.7 million for the three months ended December 31, 2015 and an increase of 106% to 125% compared to $1.6 million for the three months ended September 30, 2016. This change was primarily driven by net sales of our Adzenys XR-ODT product during the three months ended December 31, 2016 of between $2.0 million and $2.2 million as compared to $0.7 million for the three months ended September 30, 2016 as well as an increase in net sales of our generic Tussionex product during the three months ended December 31, 2016 of between $1.3 million and $1.4 million as compared to $0.9 million for the three months ended September 30, 2016.

This financial data as of and for the three months ended December 31, 2016 is preliminary and may change, and is based on information available to management as of the date of this prospectus supplement and is subject to completion by management of our financial statements as of and for the quarter and year ended December 31, 2016. We have provided ranges for preliminary revenues described above primarily because our financial closing procedures for the quarter ended December 31, 2016 are not yet complete. There can be no assurance that our final revenues for this period or cash position as of December 31, 2016 will not differ from these estimates, including as a result of year-end closing and audit procedures or review adjustments and any such changes could be material. In addition, we are not able to provide a range of operating or net loss at this time. Accordingly, you should not draw any conclusions as to our profitability based on the foregoing estimates. The preliminary results of operations for the quarter ended December 31, 2016 are not necessarily indicative of the results to be achieved for any future period.

Our independent registered public accountants have not audited, reviewed or performed any procedures with respect to such preliminary financial data and accordingly do not express an opinion or any other form of assurance with respect thereto. These results could change as a result of further review. Complete quarterly results will be announced during our fourth quarter and 2016 year end financial results conference call and included in our Annual Report on Form 10-K for the year ended December 31, 2016.

Company Information

Our predecessor company was incorporated in Texas on November 30, 1994 as PharmaFab, Inc. and subsequently changed its name to Neostx, Inc. On June 15, 2009, we completed a reorganization pursuant to which substantially all of the capital stock of Neostx, Inc. was acquired by a newly formed Delaware corporation, named Neos Therapeutics, Inc. The remaining capital stock of Neostx, Inc. was acquired by us on June 29, 2015, and Neostx, Inc. was merged with and into Neos Therapeutics, Inc.

Table of Contents

Our principal executive offices are located at 2940 N. Hwy 360, Grand Prairie, TX 75050 and our telephone number is (972) 408-1300. Our website address is www.neostx.com. The information contained on our website is not a part of, and should not be construed as being incorporated by reference into, this prospectus supplement or the accompanying prospectus.

Implications of Being an Emerging Growth Company

We qualify as an "emerging growth company" as defined in the Jumpstart Our Business Startups Act of 2012, or the JOBS Act. As an emerging growth company, we may take advantage of specified reduced disclosure and other requirements that are otherwise applicable generally to public companies. These provisions include, among others:

- only two years of audited financial statements, in addition to any required unaudited interim financial statements with correspondingly reduced "Management's Discussion and Analysis of Financial Condition and Results of Operations" disclosure;
- reduced disclosure about our executive compensation arrangements;
- no non-binding advisory votes on executive compensation or golden parachute arrangements; and
- exemption from the auditor attestation requirement in the assessment of our internal controls over financial reporting.

We may take advantage of these exemptions for up to five years or such earlier time that we are no longer an emerging growth company. We would cease to be an emerging growth company as of the last day of the fiscal year in which we have more than $1 billion in annual revenue, we have more than $700 million in market value of our stock held by non-affiliates as of the prior June 30th, or the date on which we issue more than $1 billion of non-convertible debt over a three-year period. We may choose to take advantage of some, but not all, of the available exemptions. We have taken advantage of certain reduced reporting burdens in this prospectus supplement and the accompanying prospectus and in documents incorporated herein and therein by reference. Accordingly, the information contained herein may be different than the information you receive from other public companies in which you hold stock.

Table of Contents

The Offering

Common stock offered by us	5,000,000 shares
Common stock to be outstanding immediately after this offering	21,070,705 shares (or 21,820,705 shares if the underwriters exercise their option to purchase additional shares in full)
Underwriters' option to purchase additional shares	750,000 shares
Use of proceeds	We intend to use the proceeds from this offering to fund the ongoing commercialization of Adzenys XR-ODT; to fund the potential launches of Cotempla XR-ODT and NT-0201, if approved; to fund the development of additional product candidates; and for general corporate purposes, including working capital. For a more complete description of our intended use of the proceeds from this offering, see "Use of Proceeds" on page S-13.
Risk factors	This investment involves a high degree of risk. You should carefully read "Risk Factors" on page S-9 of this prospectus supplement or otherwise incorporated by reference in this prospectus supplement and the accompanying prospectus for a discussion of factors that you should consider before deciding to invest in our common stock.
NASDAQ Global Market symbol	"NEOS"

Corporate Information

The number of shares of our common stock to be outstanding immediately after this offering is based on 16,070,705 shares outstanding as of September 30, 2016, and gives effect to the sale of 5,000,000 shares of common stock, and does not include:

- 2,121,274 shares of common stock issuable upon the exercise of stock options outstanding as of September 30, 2016 at a weighted-average exercise price of $12.16 per share;
- 70,833 shares of common stock issuable upon the exercise of warrants outstanding as of September 30, 2016 at a weighted-average exercise price of $12.00 per share;
- 186,960 shares of common stock that are available for future issuance under our Neos Therapeutics, Inc. 2015 Stock Option and Incentive Plan, or 2015 Plan, as of September 30, 2016, or an automatic increase of additional 803,049 shares of common stock reserved for future issuance under the 2015 Plan as of January 1, 2017.

Table of Contents

RISK FACTORS

Investing in our common stock involves a high degree of risk. Before deciding whether to invest in our common stock, you should consider carefully the risks and uncertainties described below. You should also consider the risks, uncertainties and assumptions discussed under the heading "Risk Factors" included in our most recent annual report on Form 10-K and our subsequent quarterly reports on Form 10-Q, each of which is on file with the SEC and are incorporated herein by reference, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future. There may be other unknown or unpredictable economic, business, competitive, regulatory or other factors that could have material adverse effects on our future results. If any of these risks actually occurs, our business, business prospects, financial condition or results of operations could be seriously harmed. This could cause the trading price of our common stock to decline, resulting in a loss of all or part of your investment. Please also read carefully the section above entitled "Cautionary Statement Regarding Forward-Looking Statements."

Risks Related to Our Intellectual Property

Our drug development strategy relies heavily upon the 505(b)(2) regulatory approval pathway, which requires us to certify that we do not infringe upon third-party patents covering approved drugs. Such certifications typically result in third-party claims of intellectual property infringement, the defense of which would be costly and time consuming, and an unfavorable outcome in any litigation may prevent or delay our development and commercialization efforts which would harm our business.

Our commercial success depends in large part on our avoiding infringement of the patents and proprietary rights of third parties for existing approved drug products. Because we utilize the 505(b)(2) regulatory approval pathway for the approval of our products and product candidates, we rely in whole or in part on studies conducted by third parties related to those approved drug products. As a result, upon filing with the FDA for approval of our product candidates, we will be required to certify to the FDA that either: (1) there is no patent information listed in the FDA's Orange Book with respect to our NDA; (2) the patents listed in the Orange Book have expired; (3) the listed patents have not expired, but will expire on a particular date and approval is sought after patent expiration; or (4) the listed patents are invalid or will not be infringed by the manufacture, use or sale of our proposed drug product. If we certify to the FDA that a patent is invalid or not infringed, or a Paragraph IV certification, a notice of the Paragraph IV certification must also be sent to the patent owner once our 505(b)(2) NDA is accepted for filing by the FDA. The third party may then initiate a lawsuit against us asserting infringement of the patents identified in the notice. The filing of a patent infringement lawsuit within 45 days of receipt of the notice automatically prevents the FDA from approving our NDA until the earliest of 30 months or the date on which the patent expires, the lawsuit is settled, or the court reaches a decision in the infringement lawsuit in our favor. If the third party does not file a patent infringement lawsuit within the required 45-day period, our NDA will not be subject to the 30-month stay. However, even if the third party does not sue within the 45-day time limit, thereby invoking the 30-month stay, it may still challenge our right to market our product upon FDA approval; therefore, some risk of an infringement suit remains even after the expiry of the 45-day limit. By way of example, when we initially submitted our Adzenys XR-ODT NDA in December 2012 and in response to our Paragraph IV certification, Shire LLC, or Shire, initiated a lawsuit against us claiming patent infringement against certain of Shire's patents. We settled with Shire in July 2014. As part of our settlement, among other things, we stipulated that the commercial manufacture, use, selling, offering for sale or importing of Adzenys XR-ODT would infringe on certain Shire patents and that such patent claims are valid and enforceable with respect to our Adzenys XR-ODT NDA, but that such stipulations do not preclude us from filing new

Table of Contents

regulatory applications containing a Paragraph IV certification citing such patents. We also entered into a non-exclusive license agreement with Shire for certain of Shire's patents with respect to our Adzenys XR-ODT NDA. Under the terms of the license agreement, upon obtaining FDA approval of our Adzenys XR-ODT NDA, we were required to pay a lump-sum, non-refundable license fee no later than thirty days after receiving such approval and are to pay a single-digit royalty on net sales of Adzenys XR-ODT during the life of Shire's patents. In addition, on January 26, 2017, we sent a letter to Shire, notifying Shire that we have made a Paragraph IV certification to the FDA certifying that the patents owned by Shire that purportedly cover our NT-0201 product candidate are invalid, unenforceable and/or will not be infringed by the commercial manufacture, use or sale of NT-0201. Shire may respond to our letter within 45 days by initiating a lawsuit against us asserting infringement of those patents, which would automatically prevent the FDA from approving our NDA for 30 months, or earlier upon the expiration of the patents, the settlement of the lawsuit or the court deciding the infringement lawsuit in our favor. Even if Shire does not initiate a lawsuit within 45 days of the receipt of our letter, Shire may challenge our right to market NT-0201 in the future, if it is approved by the FDA. Finally, we may enter into a settlement agreement with Shire as we did in July 2014 with respect to our Adzenys XR-ODT product, which may involve the payment of license fees and/or royalty amounts on the sales of NT-0201, if approved. There can be no assurance that any such settlement with Shire may be obtained on commercially reasonable terms or at all.

Risks Related to This Offering

We have broad discretion in the use of the net proceeds from this offering and our existing cash and may not use them effectively.

Our management will have broad discretion in the application of the net proceeds from this offering, including for any of the purposes described in the section entitled "Use of Proceeds," as well as our existing cash and cash equivalents, and you will be relying on the judgment of our management regarding such application. You will not have the opportunity, as part of your investment decision, to assess whether the proceeds are being used appropriately. Our management might not apply the net proceeds or our existing cash in ways that ultimately increase the value of your investment. If we do not invest or apply the net proceeds from this offering or our existing cash and cash equivalents in ways that enhance stockholder value, we may fail to achieve expected financial results, which could cause our stock price to decline. Pending their use, we may invest the net proceeds from this offering in short-term, investment-grade, interest-bearing securities. These investments may not yield a favorable return to our stockholders.

You will experience immediate dilution in the book value per share of the securities you purchase in this offering.

Because the price per share of our common stock being offered 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. Based on the public offering price of $5.00 per share, and a net tangible book value of ($0.1) million, or ($0.00) per share of common stock, as of September 30, 2016, if you purchase shares of common stock in this offering, you will suffer immediate and substantial dilution of $3.90 per share in the net tangible book value of the common stock you purchase. Any exercise of outstanding stock options, warrants or other equity awards will result in further dilution. In addition, we may sell shares or other securities in any other offering, including pursuant to the Common Stock Sales Agreement that we entered into in August 2016 with Cowen and Company, LLC, at a price per share that is less than the price per share paid by investors in this offering, and investors purchasing shares or other securities in the future could have rights superior to existing stockholders. The price per share at which we sell additional shares of our common stock, or securities convertible or exchangeable into common stock, in future

Table of Contents

transactions may be higher or lower than the price per share paid by investors in this offering. See "Dilution" for a more detailed discussion of the dilution you will incur if you purchase our securities in this offering.

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

Our stock began trading on the NASDAQ Global Market on July 23, 2015. Between that date and February 1, 2017, it has traded between $5.30 and $28.99 per share. Our stock price could be subject to wide fluctuations in response to a variety of factors, which include:

- our ability to develop and/or commercialize Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future product or product candidate;
- the timing, cost or other aspects of the commercial launch and future sales of Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future product or product candidate;
- our ability to increase our manufacturing and distribution capabilities for Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future product or product candidate;
- the attention deficit hyperactivity disorder patient market size and market adoption of Adzenys XR-ODT and, if approved, Cotempla XR-ODT or NT-0201, by physicians and patients;
- the therapeutic benefits, effectiveness and safety of Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future product or product candidate;
- our expectations regarding the commercial supply of our Adzenys XR-ODT and, if approved, Cotempla XR-ODT, NT-0201, or any other future products, or our generic Tussionex;
- our ability to receive, and the timing of any receipt of the U.S. Food and Drug Administration, or FDA, approvals, or other regulatory action in the United States and elsewhere, for Cotempla XR-ODT, NT-0201, and any other future product candidate;
- our expectations regarding federal, state and foreign regulatory requirements;
- deficiencies the FDA has identified in its Complete Response Letter and may identify with respect to Cotempla XR-ODT and whether we will be able to address the issues that may relate to those deficiencies;
- deficiencies the FDA may identify with respect to NT-0201 and whether we will be able to address the issues that may relate to those deficiencies;
- the PDUFA dates for Cotempla XR-ODT and NT-0201, and the projected commercial launch dates, if approved by the FDA, of Cotempla XR-ODT and NT-0201;
- our estimates regarding anticipated expenses, capital requirements and our needs for additional financing;
- our product research and development activities, including the timing and progress of our clinical trials, and projected expenditures;
- issuance of patents to us by the U.S. Patent and Trademark Office and other governmental patent agencies;
- our ability to achieve profitability;
- our staffing needs;
- fluctuations in stock market prices and trading volumes of similar companies;

- general market conditions and overall fluctuations in U.S. equity markets;
- variations in our quarterly operating results;
- changes in our financial guidance or securities analysts' estimates of our financial performance;

Table of Contents

- changes in accounting principles;
- our ability to raise additional capital and the terms on which we can raise it;
- sales of large blocks of our common stock, including sales by our executive officers, directors and significant stockholders;
- additions or departures of key personnel;
- discussion of us or our stock price by the press and by online investor communities; and
- other risks and uncertainties described in these risk factors.

As a result, you may not be able to sell your shares of common stock at or above the price at which you purchase them. In addition, the stock market in general, and the NASDAQ Global Market and the stock of biotechnology and emerging pharmaceutical companies in particular, have experienced extreme price and volume fluctuations that have often been unrelated or disproportionate to the operating performance of these companies. Broad market and industry factors may negatively affect the market price of our common stock, regardless of our actual operating performance.

Table of Contents

USE OF PROCEEDS

We estimate that the net proceeds from the sale of the shares of common stock we are offering will be approximately $23.3 million, after deducting the underwriting discounts and commissions and estimated offering costs payable by us. If the underwriters exercise in full their option to purchase additional shares, we estimate that our net proceeds from this offering will be approximately $26.8 million.

The principal purpose of this offering is to obtain additional capital to support our operations. We expect to use the net proceeds of this offering, in addition to our existing cash resources and potential borrowings under our debt facilities, as follows:

- $8.3 million to fund the ongoing commercialization of Adzenys XR-ODT;
- $9.9 million to fund the potential launches of Cotempla XR-ODT and NT-0201, if approved;
- $1.5 million to fund the development of additional product candidates; and
- the remainder to fund working capital and other general corporate purposes.

The amounts and timing of our use of the net proceeds from this offering will depend on a number of factors, such as the timing and progress of our research and development efforts, the timing and progress of any collaborative or strategic partnering efforts, the competitive environment for our planned products and the degree and rate of market acceptance for our approved products. As of the date of this prospectus supplement, we cannot specify with certainty all of the particular uses for the net proceeds to us from this offering. Accordingly, our management will have broad discretion in the timing and application of these proceeds. Pending application of the net proceeds as described above, we intend to temporarily invest the proceeds in short-term, interest-bearing instruments.

Table of Contents

MARKET FOR COMMON STOCK

Our common stock is traded under the symbol "NEOS" and is quoted on The NASDAQ Global Market. The following table sets forth the high and low sales prices for shares of our common stock, as reported by The NASDAQ Global Market for the periods indicated.

Year Ended December 31, 2016	High	Low
First Quarter	$ 15.20	$ 7.57
Second Quarter	$ 11.40	$ 7.15
Third Quarter	$ 9.99	$ 6.33
Fourth Quarter	$ 9.23	$ 5.30

Year Ended December 31, 2015	High	Low
Third Quarter (from July 23, 2015)	$ 28.99	$ 16.12
Fourth Quarter	$ 21.70	$ 11.53

On February 1, 2017, the closing price for the common stock as reported on The NASDAQ Global Market was $5.80.

As of September 30, 2016, there were 90 stockholders of record, which excludes stockholders whose shares were held in nominee or street name by brokers.

Table of Contents

DIVIDEND POLICY

We have never paid or declared any cash dividends on our common stock, and we do not anticipate paying any cash dividends on our common stock in the foreseeable future. In addition, the terms of our outstanding indebtedness restrict our ability to pay dividends, and any future indebtedness that we may incur could preclude us from paying dividends. We intend to retain all available funds and any future earnings to fund the development and expansion of our business. Any future determination to pay dividends will be at the discretion of our board of directors and will depend upon a number of factors, including our results of operations, financial condition, future prospects, contractual restrictions, restrictions imposed by applicable law and other factors our board of directors deems relevant. Additionally, our ability to pay dividends on our common stock is limited by restrictions under the terms of our senior secured credit facility with Deerfield Private Designs Fund III, L.P.

Table of Contents

CAPITALIZATION

The following table sets forth our cash, cash equivalents and capitalization as of September 30, 2016:

- on an actual basis; and
- on an as adjusted basis, giving effect to the sale of 5,000,000 shares of common stock by us in this offering at the public offering price of $5.00 per share, and after deducting the underwriting discounts and commissions and estimated offering expenses payable by us.

You should read this table in conjunction with "Use of Proceeds" as well as our "Management's Discussion and Analysis of Financial Condition and Results of Operations" and our consolidated financial statements, including the related notes, incorporated by reference into this prospectus supplement and the accompanying prospectus from our annual report on Form 10-K for the fiscal year ended December 31, 2015 and our subsequent quarterly reports on Form 10-Q, and incorporated by reference herein and therein.

	As of September 30, 2016	
	Actual	As Adjusted
	(unaudited) (in thousands of dollars except share and per share data)	
Cash and Cash Equivalents	$ 43,489	$ 66,739
Short-Term Investments	16,547	16,547
Long-Term Debt, including current portion	61,712	61,712
Stockholders' Equity:		
Preferred Stock, $0.001 par value, 5,000,000 shares authorized, no shares issued or outstanding, actual; 5,000,000 shares authorized, no shares issued or outstanding, as adjusted		
Common Stock, $0.001 par value, 100,000,000 shares authorized; 16,079,902 and 16,070,705 issued and outstanding, respectively, actual; 100,000,000 authorized, 21,079,902 and 21,070,705 shares issued and outstanding, respectively, as adjusted	16	21
Treasury Stock, at cost, 9,197 shares	(171)	(171)
Additional Paid-in Capital	197,789	221,034
Accumulated Deficit	(181,745)	(181,745)
Accumulated Other Comprehensive Income	9	