

Cyclacel Pharmaceuticals, Inc.
Form S-1/A
July 17, 2017

TABLE OF CONTENTS

As filed with the Securities and Exchange Commission on July 17, 2017
Registration No. 333-218305

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

Amendment No. 3 to
FORM S-1
REGISTRATION STATEMENT
UNDER THE SECURITIES ACT OF 1933

CYCLACEL PHARMACEUTICALS, INC.
(Exact name of registrant as specified in its charter)

Delaware 91-1707622
(State or other jurisdiction of IRS Employer
incorporation or organization) Identification Number)

200 Connell Drive, Suite 1500
Berkeley Heights, NJ 07922
(908) 517-7330

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

Spiro Rombotis
Chief Executive Officer
Cyclacel Pharmaceuticals, Inc.
200 Connell Drive, Suite 1500
Berkeley Heights, NJ 07922
(908) 517-7330

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

With copies to:

Joel I. Papernik, Esq. Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. 666 Third Avenue New York, New York 10017 (212) 935-3000	Michael Nertney Ellenoff Grossman & Schole LLP 1345 Avenue of the Americas New York, New York 10105 (212) 370-1300
---	--

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

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, check the following box:

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

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

Edgar Filing: Cyclacel Pharmaceuticals, Inc. - Form S-1/A

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(d) under the Securities Act, check the following box:

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

Large accelerated filer

Accelerated filer

Non-accelerated filer

Smaller reporting company

(Do not check if a smaller reporting company)

Indicate by check mark whether the registrant is an emerging growth company as defined in Rule 405 of the Securities Act of 1933 (§230.405 of this chapter) or Rule 12b-2 of the Securities Exchange Act of 1934 (§240.12b-2 of this chapter).

If an emerging growth company, indicate by check mark if the registrant has elected not to use the extended transition period for complying with any new or revised financial accounting standards provided pursuant to Section 13(a) of the Exchange Act.

TABLE OF CONTENTS

CALCULATION OF REGISTRATION FEE

Title of each class of securities to be registered(1)	Proposed maximum aggregate offering price(1)(2)	Amount of registration fee
Class A Units consisting of:	\$ 4,400,000	\$ 509.96
(i) Shares of common stock, par value \$0.001 per share		
(ii) Warrants to purchase common stock		
Class B Units consisting of:	\$ 8,250,000	\$ 956.18
(i) Shares of Series A Preferred Stock, par value \$0.001 per share		
(ii) Shares of common stock issuable on conversion of Series A Preferred Stock(3)		
(iii) Warrants to purchase common stock		
Common stock issuable upon exercise of warrants	\$ 12,650,000	\$ 1,466.13
Total	\$ 25,300,000	\$ 2,932.27(4)

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

(2)
Includes the price of additional shares of common stock and warrants to purchase shares of common stock that the underwriters have the option to purchase to cover over-allotments, if any.

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

(4)
Previously paid.

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

TABLE OF CONTENTS

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

Subject to Completion, dated July 17, 2017

PROSPECTUS

667,476 Class A Units consisting of common stock and warrants and
8,250 Class B Units consisting of shares of Series A Preferred Stock and warrants
(and 4,672,330 shares of common stock underlying shares of
Series A Preferred Stock and warrants)

We are offering 667,476 Class A Units, with each Class A Unit consisting of one share of common stock, par value \$0.001 per share (the “common stock”), and a warrant to purchase one share of our common stock (together with the shares of common stock underlying such warrants, the “Class A Units”) at a public offering price of \$ per Class A Unit. Each warrant included in the Class A Units entitles its holder to purchase one share of common stock at an exercise price per share of \$.

We are also offering to those purchasers whose purchase of our Class A Units in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock following the consummation of this offering, or to those purchasers that elect to purchase Class B Units in their sole discretion, the opportunity to purchase, if they so choose, in lieu of the number of Class A Units that would result in ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%), or as such purchasers have elected to purchase, 8,250 Class B Units. Each Class B Unit will consist of one share of our Series A Preferred Stock, par value \$0.001 per share (the “Series A Preferred Stock”), convertible into 242.72 shares of common stock at the initial conversion price (the “Conversion Price”) and warrants to purchase a number of shares of our common stock equal to \$1,000 divided by the Conversion Price (together with the shares of common stock underlying such shares of Series A Preferred Stock and such warrants, the “Class B Units” and, together with the Class A Units, the “Units”) at a public offering price of \$1,000 per Class B Unit. Each warrant included in the Class B Units entitles its holder to purchase a number of shares of our common stock equal to \$1,000 divided by the Conversion Price at an exercise price per share of \$.

The Class A Units and Class B Units have no stand-alone rights and will not be certificated or issued as stand-alone securities. The shares of common stock, Series A Preferred Stock and warrants comprising such units are immediately separable and will be issued separately in this offering. The underwriters have the option to purchase additional shares of common stock and/or warrants to purchase shares of common stock solely to cover over-allotments, if any, at the price to the public less the underwriting discounts and commissions. The over-allotment option may be used to purchase shares of common stock, or warrants, or any combination thereof, as determined by the underwriters, but such purchases cannot exceed an aggregate of 15% of the number of shares of common stock (including the number of shares of common stock issuable upon conversion of shares of Series A Preferred Stock) and warrants sold in the offering. The over-allotment option is exercisable for 45 days from the date of this prospectus.

Our common stock is listed on the NASDAQ Capital Market under the symbol “CYCC.” On July 13, 2017, the last reported sale price for our common stock was \$3.65 per share. The price of our common stock on the NASDAQ Capital Market during recent periods will only be one of many factors in determining the public offering price. Other factors to be considered include our history, our prospects, the industry in which we operate, the previous experience of our executive officers and the general condition of the securities markets at the time of this offering. All share and warrant numbers of the securities being offered included in this prospectus are based on an assumed public offering price per Class A Unit of \$4.12 and an assumed initial Conversion Price of the Series A Preferred Stock of \$4.12, the last reported sale price for our common stock on June 23, 2017. We do not intend to apply for listing of the warrants

Edgar Filing: Cyclacel Pharmaceuticals, Inc. - Form S-1/A

offered hereby or the shares of Series A Preferred Stock on any securities exchange or trading system.

	Per Class A Unit	Per Class B Unit	Total
Public offering price(1)	\$	\$	\$
Underwriting discounts and commissions(2)(3)	\$	\$	\$
Proceeds, before expenses, to us	\$	\$	\$

(1)

The public offering price and underwriting discount corresponds to (x) in respect of the Class A Units (i) a public offering price per share of common stock of \$ and (ii) a public offering price per warrant of \$ and (y) in respect of the Class B Units (i) a public offering price per share of Series A Preferred Stock of \$ and (ii) a public offering price per warrant of \$.

(2)

We have also agreed to reimburse the underwriters for certain expenses. See “Underwriting.”

(3)

We have granted a 45-day option to Ladenburg Thalmann & Co. Inc. (the “representative”) to purchase additional shares of common stock and/or warrants to purchase shares of common stock (up to 15% of the number of shares of common stock (including the number of shares of common stock issuable upon conversion of shares of Series A Preferred Stock) and warrants sold in the offering) solely to cover over-allotments, if any.

The Securities and Exchange Commission and state securities regulators have not approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

Investing in our securities involves significant risks. We strongly recommend that you read carefully the risks we describe in this prospectus. See “Risk Factors” beginning on page 7 before deciding whether to invest in our common stock.

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

Ladenburg Thalmann

The date of this Prospectus is , 2017.

TABLE OF CONTENTS

TABLE OF CONTENTS

<u>PROSPECTUS SUMMARY</u>	1
<u>THE OFFERING</u>	5
<u>RISK FACTORS</u>	7
<u>CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS</u>	37
<u>USE OF PROCEEDS</u>	38
<u>MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS</u>	38
<u>DIVIDEND POLICY</u>	39
<u>DILUTION</u>	40
<u>SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT</u>	41
<u>UNDERWRITING</u>	43
<u>DESCRIPTION OF CAPITAL STOCK</u>	46
<u>LEGAL MATTERS</u>	59
<u>EXPERTS</u>	59
<u>WHERE YOU CAN FIND MORE INFORMATION</u>	59
<u>INCORPORATION BY REFERENCE</u>	59

TABLE OF CONTENTS

About This Prospectus

You should rely only on the information provided in this Prospectus or in any free writing Prospectus prepared by or on behalf of us or to which we have referred you. We have not authorized anyone to provide you with different information. The information contained in this Prospectus is accurate only as of the date of this Prospectus, regardless of the time of delivery of this Prospectus or of any sale of our common stock. Our business, financial condition, results of operations and prospects may have changed since that date.

No person is authorized in connection with this prospectus to give any information or to make any representations about us, the common stock hereby or any matter discussed in this prospectus, other than the information and representations contained in this prospectus. If any other information or representation is given or made, such information or representation may not be relied upon as having been authorized by us. This prospectus does not constitute an offer to sell, or a solicitation of an offer to buy our common stock in any circumstance under which the offer or solicitation is unlawful. Neither the delivery of this prospectus nor any distribution of our common stock in accordance with this prospectus shall, under any circumstances, imply that there has been no change in our affairs since the date of this prospectus.

Persons outside the United States who come into possession of this Prospectus must inform themselves about, and observe any restrictions relating to, the offering of the shares of common stock and the distribution of this Prospectus outside of the United States.

This prospectus 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, or will be filed as exhibits to the registration statement of which this prospectus is a part, and you may obtain copies of those documents as described below under the heading "Where You Can Find More Information."

ii

TABLE OF CONTENTS

PROSPECTUS SUMMARY

Because this is only a summary, it does not contain all of the information that may be important to you. You should carefully read the more detailed information contained in this prospectus and the information incorporated by reference carefully before you invest. Our business involves significant risks. You should carefully consider the information under the heading “Risk Factors” beginning on page 7.

As used in this prospectus, unless otherwise indicated, the terms “we,” “us,” “our company,” “the Company” and “Cyclacel” refer to Cyclacel Pharmaceuticals, Inc., a Delaware corporation.

Our Company

Overview

Cyclacel is a clinical-stage biopharmaceutical company using cell cycle control, transcriptional regulation and DNA damage response biology to develop innovative, targeted medicines for cancer and other proliferative diseases.

Cyclacel is a pioneer company in the field of cell cycle biology with a vision to improve patient healthcare by translating cancer biology into medicines.

Our Strategy

Our strategy is to build a diversified biopharmaceutical business focused in hematology and oncology based on a development pipeline of novel drug candidates. We have retained rights to commercialize our clinical development candidates and our business objective is to enter into selective partnership arrangements with these programs.

Substantially all efforts of the Company to date have been devoted to performing research and development, conducting clinical trials, developing and acquiring intellectual property, raising capital and recruiting and training personnel.

Our Development Efforts

Loss of control of the cell cycle, the process by which cells grow and divide, lies at the heart of cancer. In normal cells, a complex set of interacting proteins tightly regulates progression through the phases of the cell cycle by which a cell grows, replicates its DNA and divides. This process also includes mechanisms known as cell cycle checkpoints, to ensure all necessary events of each cell cycle phase are completed before beginning the next phase. If the events are not completed correctly, the cells may commit suicide by a process of organized and controlled cell death called apoptosis. Cyclin dependent kinases, or CDKs, are key regulators among the numerous proteins involved in cell cycle control processes. CDKs connect with proteins called cyclins to regulate cell cycle checkpoints and control transcription, DNA repair and metastatic spread. The discovery of CDKs and cyclins and their regulation of cell cycle checkpoint control were cited in the 2001 Nobel Prize in Physiology or Medicine.

We have evaluated several families of anticancer drugs that impact the cell cycle, including sapacitabine, seliciclib and CYC065. We believe that these drug candidates are differentiated from others in that they are orally-available and interact with unique target profiles and mechanisms and have the potential to treat multiple cancer indications.

Our development efforts focus on the following areas:

Transcriptional Regulation:

Cyclin Dependent Kinase (CDK) Inhibitors

CDKs are a family of enzymes first discovered as regulators of the cell cycle, but now understood to also provide pivotal functions in the regulation of transcription, DNA repair and metastatic spread. The precise selectivity of an individual CDK inhibitor molecule for certain specific CDKs is key to targeting particular tumor types and minimizing undesirable side effects through non-specific antiproliferative activity.

TABLE OF CONTENTS

In general, cell cycle regulation is less well controlled in cancer cells than in normal cells, which explains in part why cancer cells divide uncontrollably. Different CDKs are responsible for control of different aspects of proliferation, and when dysregulated, can be drivers of particular cancer sub-sets. Modulating CDK activity with targeted therapies is an attractive strategy to reinforce cell cycle control and decrease the rate of abnormal proliferation of cancer cells. The first FDA approval in March 2015 of a CDK inhibitor for palbociclib, and more recently in 2017, ribociclib, for a type of breast cancer, has led to great interest in the development of this class of drugs as oncology therapeutics.

Cyclacel's founding scientist, Professor Sir David Lane, is a globally recognized authority in cell cycle biology, who discovered p53, a key tumor suppressor gene that malfunctions in about two-thirds of human cancers. Under his guidance, Cyclacel's drug discovery and development programs concentrated on the CDK2/9 isoforms, which operate as key components of the p53 pathway. These efforts resulted in bringing two molecules into clinical trials: seliciclib, a first-generation CDK inhibitor, and CYC065, a second-generation CDK inhibitor, which has benefited from the Company's clinical experience with seliciclib.

Seliciclib, our first-generation CDK inhibitor, is being evaluated in an all-oral Phase 1/2 combination study with our sapacitabine in patients with BRCA mutations, and has been evaluated to date in approximately 450 patients.

CYC065 is being evaluated in an ongoing, first-in-human, Phase 1 trial in patients with advanced solid tumors.

Similar to palbociclib and ribociclib, CYC065 may be most useful as a therapy for patients with both liquid and solid tumors in combination with other anticancer agents, including Bcl-2 antagonists, such as venetoclax, or HER2 inhibitors, such as trastuzumab.

DNA Damage Response, or DDR

Many cancers have defects in the way in which cells monitor and repair damaged DNA, collectively termed DNA damage response, or DDR. These deficiencies in DDR pathways render cells more susceptible to DNA damage. Many traditional cancer treatments, such as DNA-damaging chemotherapy and radiotherapy, are based on this finding.

However, such treatments are often accompanied by significant and unwanted side effects. Developing treatments which target specific DDR deficiencies to preferentially kill cancer cells, while minimizing the impact on normal cells, has potential for more selective, better tolerated therapies to improve survival in multiple cancers.

We have focused on developing treatments targeting DNA damage pathways for several years. For example, our drug candidate sapacitabine is an oral nucleoside analogue prodrug whose metabolite, CNDAC, generates single-strand DNA breaks, or SSB, either leading to arrest of the cell cycle at G2 phase or development of double-strand DNA breaks, or DSB. CNDAC-induced DSB repair is dependent on a type of genetic recombination in which nucleotide sequences are exchanged between similar or identical molecules of DNA called homologous recombination, or HR. BRCA mutations in cancer cells are a cause of HR deficiency, making such cancer cells susceptible to cell death induced by sapacitabine.

We are evaluating sapacitabine in a Phase 1/2 combination study with seliciclib in patients with BRCA mutations.

Sapacitabine in AML

We are also evaluating sapacitabine in SEAMLESS, a Phase 3 study in acute myeloid leukemia, or AML, in the elderly, in an alternating schedule with decitabine. On February 23, 2017, we announced that the trial did not meet its primary endpoint of demonstrating statistically significant improvement in overall survival for the experimental arm versus an active control arm of decitabine alone. However, an improvement in complete remission rate was observed. In the stratified subgroup of patients with low baseline peripheral white blood cell count, comprising approximately two-thirds of the study's population, an improvement in overall survival was observed for the experimental arm.

We currently retain virtually all marketing rights worldwide to the compounds associated with our drug programs. To optimize our commercial return, we intend to enter into selected partnering arrangements.

TABLE OF CONTENTS

Other Programs

Polo-Like-Kinase inhibitor: CYC140

In our polo-like kinase, or PLK, inhibitor program, we have discovered potent and selective small molecule inhibitors of PLK1, a kinase active during cell division, which target the mitotic phase of the cell cycle. PLK was discovered by Professor David Glover, our Chief Scientist. We received a grant award of approximately \$3.5 million from the Biomedical Catalyst of the United Kingdom government to complete IND-directed preclinical development of CYC140, which was achieved in November 2016.

Preclinical data presented at the 2017 American Academy of Cancer Research (AACR) Annual Meeting demonstrated that the CYC140 is a potent and selective inhibitor of PLK1, an oncogenic regulator of cell division. These preclinical data suggest that CYC140 can be targeted against esophageal cancer and acute leukemia. In addition, the data demonstrate the potential for CYC140 to be used in synergistic combinations with other targeted agents, including EGFR inhibitors and PI3K pathway inhibitors, to enhance cancer cell death or growth suppression. Without additional funding, we will not be able to progress this program through clinical development. We have retained worldwide rights to commercialize CYC140.

Investigator-Sponsored Trials

Preclinical results from several independent investigators suggest that cell cycle inhibitors, such as seliciclib and related molecules, arrest the progress of the cell cycle and may have therapeutic benefit in the treatment of patients with autoimmune and inflammatory diseases as well as in diseases characterized by uncontrolled cell proliferation. Published data indicate potential benefit in glomerulonephritis, graft-versus-host disease, idiopathic pulmonary fibrosis, lupus nephritis, polycystic kidney disease and rheumatoid arthritis. Based on these data investigators have approached us to be provided with seliciclib so that they can evaluate it in various indications in clinical trials. In this regard, there are ongoing investigator sponsored trials, or ISTs, evaluating seliciclib in endocrinologic and inflammatory indications in patients who have failed prior treatments. In an IST at Cedars-Sinai, Los Angeles, the first patients are being treated in an ongoing Phase 2 trial to evaluate seliciclib as a potential therapy for Cushing's disease caused by pituitary tumors. There are limited options for Cushing's disease patients today. The investigator was awarded a grant from The National Institute of Diabetes and Digestive and Kidney Diseases. In a European IST, seliciclib is being evaluated as a potential treatment for rheumatoid arthritis, or RA, where it may work for RA by targeting proliferating fibroblasts, a different type of approach than conventional RA therapies. This study is also being supported by an approximately \$1.5 million grant from the United Kingdom's Medical Research Council.

Risks Associated with Our Business

Our business and ability to execute our business strategy are subject to a number of risks of which you should be aware before you decide to buy our common stock. In particular, you should consider the following risks, which are discussed more fully in the section entitled "Risk Factors" in this prospectus, as well as the other risks described in "Risk Factors."

- We expect to continue to incur substantial operating losses and may be unable to obtain additional financing, causing our independent registered public accounting firm to express substantial doubt about our ability to continue as a going concern.
- We will need additional funding, and we cannot guarantee that we will find adequate sources of capital in the future.
- Funding constraints may negatively impact our research and development, forcing us to delay our efforts to develop certain product candidates in favor of developing others, which may prevent us from commercializing our product candidates as quickly as possible.
- We depend on key personnel, the loss of which could impact the ability to manage our business.

TABLE OF CONTENTS

- We may be subject to future litigation, which could result in substantial liabilities that may exceed our insurance coverage.

- Confidentiality agreements with employees, treating physicians and others may not adequately prevent disclosure of trade secrets and other proprietary information.

- We may be subject to regulatory, enforcement and investigative proceedings, which could adversely affect our financial condition or operations.

- We may not fully comply with complex and increasing regulation by state and federal authorities, which could negatively impact our business operations.

- Our share price is volatile and may be influenced by numerous factors, some of which are beyond our control.

- We are substantially dependent on the success of our lead product candidates, the clinical and commercial successes of which will depend on a number of factors, many of which are beyond our control.

- Our product candidates may cause or have attributed to them undesirable side effects or have the properties that delay or prevent their regulatory approval or limit their commercial potential.

- If we fail to comply with the continued listing requirements of the NASDAQ Capital Market, our common stock may be delisted and the price of our common stock and our ability to access the capital markets could be negatively impacted.

Corporate Information

We were incorporated in Delaware in August 1997. Our corporate headquarters are located at 200 Connell Drive, Suite 1500, Berkeley Heights, New Jersey 07922, and our telephone number is 908-517-7330. This is also where our medical and regulatory functions are located. Our research facility is located in Dundee, Scotland, which is also the center of our translational work and development programs.

We are a “smaller reporting company” as defined in Rule 12b-2 of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and have elected to take advantage of certain of the scaled disclosure available for smaller reporting companies.

Our corporate website address is www.cyclacel.com. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and amendments to reports filed pursuant to Sections 13(a) and 15(d) of the Securities Exchange Act of 1934, as amended, are available free of charge on our website as soon as reasonably practicable after we electronically file such material with, or furnish it to, the Securities and Exchange Commission. The Securities and Exchange Commission maintains an internet site that contains our public filings with the Securities and Exchange Commission and other information regarding our company, at www.sec.gov. These reports and other information concerning our company may also be accessed at the Securities and Exchange Commission’s Public Reference Room at 100 F Street, NE, Washington, DC 20549. The public may obtain information on the operation of the Public Reference Room by calling the Securities and Exchange Commission at 1-800-SEC-0330. The contents of these websites are not incorporated into this prospectus. Further, our references to the URLs for these websites are

intended to be inactive textual reference only.

4

TABLE OF CONTENTS

THE OFFERING

Issuer

Cyclacel Pharmaceuticals, Inc.

Class A Units Offered

We are offering 667,476 Class A Units. Each Class A Unit consists of one share of common stock and a warrant to purchase one share of our common stock (together with the shares of common stock underlying such warrants).

Offering Price per Class A Unit

\$ combined price for each Class A Unit.

Class B Units Offered

We are also offering 8,250 Class B Units to purchasers who prefer not to beneficially own more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock following the consummation of this offering. Each Class B Unit will consist of one share of Series A Preferred Stock, par value \$0.001 per share, convertible into a number of shares of common stock equal to \$1,000 divided by \$4.12 (the "Conversion Price") and warrants to purchase a number of shares of our common stock equal to \$1,000 divided by the Conversion Price (together with the shares of common stock underlying such shares of Series A Preferred Stock and such warrants).

Offering Price per Class B Unit

\$1,000 combined price for each Class B Unit.

Description of warrants

The warrants will be exercisable beginning on the closing date and expire on the seventh anniversary of the closing date and have an initial exercise price per share equal to \$ per share, subject to appropriate adjustment in the event of recapitalization events, stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our common stock

Description of Series A Preferred Stock

Each share of Series A Preferred Stock is convertible at any time at the holder's option into a number of shares of common stock equal to \$1,000 divided by the Conversion Price. Notwithstanding the foregoing, we shall not effect any conversion of Series A Preferred Stock, with certain exceptions, to the extent that, after giving effect to an attempted conversion, the holder of shares of Series A Preferred Stock (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of our common stock in excess of 4.99% (or, at the election of the purchaser, 9.99%) of the shares of our common stock then outstanding after giving effect to such exercise. For additional information, see "Description of Capital Stock" on page 46 of this prospectus.

Shares of common stock underlying the warrants

2,669,903 shares

Common stock to be outstanding after this offering

4,940,423 shares

Series A Preferred Stock to be outstanding after this offering

8,250 shares

5

TABLE OF CONTENTS

Use of proceeds:

We intend to use the net proceeds from this offering to continue funding our Transcriptional Regulation, CDK inhibitor and DNA Damage Response programs, and, to a lesser extent, for other development of our clinical and preclinical programs, other research and development activities, business development and general corporate purposes, which may include capital expenditures and funding our working capital needs. See “Use of Proceeds.”

Risk factors:

The shares of common stock offered hereby involve a high degree of risk and purchasers may lose their entire investment. You should read the “Risk Factors” beginning on page 7 for a discussion of certain factors to consider carefully before deciding to purchase any shares of our common stock.

Dividend policy:

We currently intend to retain any future earnings to fund the development and growth of our business. Therefore, we do not currently anticipate paying cash dividends on our common stock.

Trading Symbol:

Our common stock currently trades on the NASDAQ Capital Market under the symbol “CYCC.”

The number of shares of common stock to be outstanding after this offering is based on 4,272,947 shares of common stock outstanding as of March 31, 2017, which does not include:

- 387,519 shares of common stock issuable upon the exercise of outstanding stock options as of March 31, 2017, at a weighted average exercise price of \$22.78 per share; and

- 8,529 shares of common stock reserved for future issuance under our equity incentive plan as of March 31, 2017.

The number of shares of Series A Preferred Stock to be outstanding after this offering is based on 0 shares of Series A Preferred Stock outstanding as of March 31, 2017.

TABLE OF CONTENTS

RISK FACTORS

Any investment in our common stock involves a high degree of risk. Investors should carefully consider the risks described below, together with all of the other information included in this prospectus, before deciding whether to purchase shares of our common stock. Each of the following risk factors, either alone or taken together, could adversely affect our business, operating results and financial condition, as well as adversely affect the value of an investment in our company. This prospectus also contains forward-looking statements that involve risks and uncertainties. Our operating results could differ materially from those anticipated in these forward-looking statements as a result of certain risk factors, including the risks we face as described below and elsewhere in this prospectus.

Risks Associated with Development and Commercialization of Our Drug Candidates

Our SEAMLESS Phase 3 study recently failed to meet its primary endpoint of demonstrating statistically significant improvement in overall survival for the experimental arm versus an active control. While we may discuss the data from the SEAMLESS Phase 3 study with regulatory authorities once subgroup analyses are completed over the next few months, we may be unable to identify a viable path forward for continued development for, or be able to obtain regulatory approval for, or commercialize, this product indication.

To date, we have devoted significant research, development and clinical efforts and financial resources toward the development of sapacitabine. On February 23, 2017, we announced top-line results from the pivotal Phase 3 SEAMLESS study in elderly patients aged 70 years or older with newly diagnosed AML, who are not candidates for or have refused intensive induction chemotherapy. The trial did not meet its primary endpoint of demonstrating statistically significant improvement in overall survival for the experimental arm versus an active control. Our clinical development strategy in oncology will henceforth concentrate on our two ongoing, clinical programs in DNA damage response and transcriptional regulation, which include our area of historical expertise in CDK inhibitors. These programs target biomarker-selected patients, such as those with BRCA mutations or resistance to existing cancer therapies.

An improved rate of complete remission, a secondary endpoint, was observed in patients who had discontinued therapy at the time of analysis. While we plan to discuss the data from the SEAMLESS Phase 3 study with European and U.S. regulatory authorities once subgroup analyses are completed over the next few months, we may be unable to salvage any value from the Phase 3 trial and may be unable to identify a viable plan for continued clinical development of this product indication. Even if we are able to design further trials and identify a path forward toward potential regulatory approval, such development will likely require significant financial and personnel resources, and no assurance can be given that additional capital would be available or that such capital would be available at acceptable terms. Our continuing analyses of data from the topline Phase 3 trial may also produce negative or inconclusive results.

Clinical trial designs that were discussed with the FDA and the EMA and in some cases agreed to prior to their commencement may subsequently be considered insufficient for approval at the time of application for regulatory approval. Thus, our Special Protocol Assessment (“SPA”) regarding our SEAMLESS trial does not guarantee marketing approval of our sapacitabine oral capsules for the treatment of AML.

On February 23, 2017, we announced top-line results from the pivotal Phase 3 SEAMLESS study in elderly patients aged 70 years or older with newly diagnosed AML, who are not candidates for or have refused intensive induction chemotherapy. The trial did not meet its primary endpoint of demonstrating statistically significant improvement in overall survival for the experimental arm versus an active control. As the trial did not achieve the primary basis for an efficacy claim the SPA agreement with the FDA is no longer binding on the FDA.

On September 13, 2010, and as amended on October 11, 2011, we reached agreement with the FDA regarding an SPA on the design of a pivotal Phase 3 clinical trial for our sapacitabine oral capsules as a front-line treatment in elderly patients aged 70 years or older with newly diagnosed AML, who are not candidates for intensive induction chemotherapy, or the SEAMLESS trial. An SPA is an agreement between a sponsor of an NDA and the FDA on the design of the Phase 3 clinical trial protocol design and statistical analysis that will form the primary basis of an efficacy claim. If such an agreement is reached, it will be binding on the FDA unless the sponsor fails to follow the agreed upon protocol, data supporting the

TABLE OF CONTENTS

request are found to be false or incomplete, or the FDA determines that a substantial scientific issue essential to product efficacy or safety was identified. An SPA, however, neither guarantees approval nor provides any assurance that a marketing application will be approved by the FDA. There are companies that have been granted SPAs but that have ultimately failed to obtain final approval to market their drugs.

In January 2011, we opened enrollment in the lead-in portion of the SEAMLESS trial and in October 2011, we opened enrollment in the randomized portion of the trial. We completed enrollment of the SEAMLESS trial in December 2014.

In addition, the FDA or EMA may revise previous guidance or decide to ignore previous guidance at any time during the course of clinical activities or after the completion of clinical trials. The FDA or EMA may raise issues relating to, among other things, safety, study conduct, bias, deviation from the protocol, Statistical power, patient completion rates, changes in scientific or medical parameters or internal inconsistencies in the data prior to making its final decision. The FDA may also seek the guidance of an outside advisory committee prior to making its final decision. Even with successful clinical safety and efficacy data, including such data from a clinical trial conducted pursuant to an SPA, we may be required to conduct additional, expensive clinical trials to obtain regulatory approval.

Clinical trials are expensive, time consuming, subject to delay and may be required to continue beyond our available funding and we cannot be certain that we will be able to raise sufficient funds to complete the development and commercialize any of our product candidates currently in clinical development, should they succeed.

Clinical trials are expensive, complex, can take many years to conduct and may have uncertain outcomes. We estimate that clinical trials of our most advanced drug candidates may be required to continue beyond our available funding and may take several more years to complete. The designs used in some of our trials have not been used widely by other pharmaceutical companies. Failure can occur at any stage of the testing and we may experience numerous unforeseen events during, or as a result of, the clinical trial process that could delay or prevent commercialization of our current or future drug candidates, including, but not limited to:

- delays in securing clinical investigators or trial sites for our clinical trials;
- delays in obtaining Institutional Review Board, or IRB, and regulatory approvals to commence a clinical trial;
- slower than anticipated rates of patient recruitment and enrollment, or not reaching the targeted number of patients because of competition for patients from other trials, or if there is limited or no availability of coverage, reimbursement and adequate payment from health maintenance organizations and other third party payors for the use of agents used in our clinical trials, such as decitabine in SEAMLESS, or other reasons;
- negative or inconclusive results from clinical trials, as demonstrated by our recent announcement that our SEAMLESS Phase 3 study failed to reach its primary endpoint;
- unforeseen safety issues;
- uncertain dosing issues that may or may not be related to suboptimal pharmacokinetic and pharmacodynamics behaviors;
- approval and introduction of new therapies or changes in standards of practice or regulatory guidance that render our clinical trial endpoints or the targeting of our proposed indications obsolete;

- inability to monitor patients adequately during or after treatment or problems with investigator or patient compliance with the trial protocols;
- inability to replicate in large controlled studies safety and efficacy data obtained from a limited number of patients in uncontrolled trials;

TABLE OF CONTENTS

- inability or unwillingness of medical investigators to follow our clinical protocols; and

- unavailability of clinical trial supplies.

If we suffer significant delays, setbacks or negative results in, or termination of, our clinical trials, we may be unable to continue development of our drug candidates or generate revenue and our development costs could increase significantly. Adverse events have been observed in our clinical trials and may force us to stop development of our product candidates or prevent regulatory approval of our product candidates.

Adverse or inconclusive results from our clinical trials may substantially delay, or halt entirely, any further development of our drug candidates. Many companies have failed to demonstrate the safety or effectiveness of drug candidates in later stage clinical trials notwithstanding favorable results in early stage clinical trials. Previously unforeseen and unacceptable side effects could interrupt, delay or halt clinical trials of our drug candidates and could result in the FDA or EMA denying approval of our drug candidates. We will need to demonstrate safety and efficacy for specific indications of use, and monitor safety and compliance with clinical trial protocols and other good clinical practice requirements throughout the development process. To date, long-term safety and efficacy has not been demonstrated in clinical trials for any of our drug candidates.

Toxicity and serious adverse events have been noted in preclinical and clinical trials involving certain of our drug candidates. For example, neutropenia and gastro-intestinal toxicity were observed in patients receiving sapacitabine and elevations of liver enzymes and decrease in potassium levels have been observed in patients receiving seliciclib. In addition, we may pursue clinical trials for sapacitabine and seliciclib in more than one indication. There is a risk that unacceptable toxicity or adverse events observed in a trial for one indication could result in the delay or suspension of all trials involving the same drug candidate. Even if we believe that the data collected from clinical trials of our drug candidates are promising with respect to safety and efficacy, such data may not be deemed sufficient by regulatory authorities to warrant product approval. Clinical data can be interpreted in different ways. Regulatory officials could interpret such data in different ways than we do which could delay, limit or prevent regulatory approval. The FDA, EMA or we may suspend or terminate clinical trials at any time. Any failure or significant delay in completing clinical trials for our drug candidates, or in receiving regulatory approval for the commercialization of our drug candidates, may severely harm our business and reputation.

We are making use of biomarkers, which are not scientifically validated, and our reliance on biomarker data may thus cause us to direct our resources inefficiently.

We are making some use of biomarkers in an effort to facilitate our drug development and to optimize our clinical trials. Biomarkers are proteins or other substances whose presence in the blood can serve as an indicator of specific cell processes. We believe that these biological markers serve a useful purpose in helping us to evaluate whether our drug candidates are having their intended effects through their assumed mechanisms, and that they may thus enable us to identify more promising drug candidates at an early stage and to direct our resources efficiently. We also believe that biomarkers may eventually allow us to improve patient selection in connection with clinical trials and monitor patient compliance with trial protocols.

For most purposes, however, biomarkers have not been scientifically validated. If our understanding and use of biomarkers is inaccurate or flawed, or if our reliance on them is otherwise misplaced, then we will not only fail to realize any benefits from using biomarkers, but may also be led to invest time and financial resources inefficiently in attempting to develop inappropriate drug candidates. Moreover, although the FDA has issued for comment a draft guidance document on the potential use of biomarker data in clinical development, such data are not currently accepted by the FDA or other regulatory agencies in the United States, the European Union or elsewhere in applications for regulatory approval of drug candidates, and there is no guarantee that such data will ever be accepted by the relevant authorities in this connection. Our biomarker data should not be interpreted as evidence of efficacy.

TABLE OF CONTENTS

Due to our reliance on contract research organizations and other third parties to conduct clinical trials, we may be unable to directly control the timing, conduct and expense of our clinical trials.

We do not have the ability to independently conduct clinical trials required to obtain regulatory approvals for our drug candidates. We must rely on third parties, such as contract research organizations, data management companies, contract clinical research associates, medical institutions, clinical investigators and contract laboratories to conduct our clinical trials. In addition, we rely on third parties to assist with our preclinical development of drug candidates. If these third parties do not successfully carry out their contractual duties or regulatory obligations or meet expected deadlines, if the third parties need to be replaced or if the quality or accuracy of the data they obtain is compromised due to the failure to adhere to our clinical protocols or regulatory requirements or for other reasons, our preclinical development activities or clinical trials may be extended, delayed, suspended or terminated, and we may not be able to obtain regulatory approval for or successfully commercialize our drug candidates.

If we fail to enter into and maintain successful strategic alliances for our drug candidates, we may have to reduce or delay our drug candidate development or increase our expenditures.

An important element of our strategy for developing, manufacturing and commercializing our drug candidates is entering into strategic alliances with pharmaceutical companies or other industry participants to advance our programs and enable us to maintain our financial and operational capacity.

We face significant competition in seeking appropriate alliances. We may not be able to negotiate alliances on acceptable terms, if at all. In addition, these alliances may be unsuccessful. If we fail to create and maintain suitable alliances, we may have to limit the size or scope of, or delay, one or more of our drug development or research programs. If we elect to fund drug development or research programs on our own, we will have to increase our expenditures and will need to obtain additional funding, which may be unavailable or available only on unfavorable terms.

To the extent we are able to enter into collaborative arrangements or strategic alliances, we will be exposed to risks related to those collaborations and alliances.

Although we are not currently party to any collaboration arrangement or strategic alliance that is material to our business, in the future we expect to be dependent upon collaborative arrangements or strategic alliances to complete the development and commercialization of some of our drug candidates, particularly after the Phase 2 stage of clinical testing. These arrangements may place the development of our drug candidates outside our control, may require us to relinquish important rights, or may otherwise be on terms unfavorable to us.

Dependence on collaborative arrangements or strategic alliances will subject us to a number of risks, including the risks that:

- we may not be able to control the amount and timing of resources that our collaborators may devote to the drug candidates;
- our collaborators may experience financial difficulties;
- we may be required to relinquish important rights such as marketing and distribution rights;
- business combinations or significant changes in a collaborator's business strategy may also adversely affect a collaborator's willingness or ability to complete its obligations under any arrangement;
- a collaborator could independently move forward with a competing drug candidate developed either independently or in collaboration with others, including our competitors; and
-

collaborative arrangements are often terminated or allowed to expire, which would delay development and may increase the cost of developing our drug candidates.

We have no manufacturing capacity and will rely on third party manufacturers for the late stage development and commercialization of any drugs we may develop or sell.

We do not currently operate manufacturing facilities for clinical or commercial production of our drug candidates under development. We currently lack the resources or the capacity to manufacture any of our

10

TABLE OF CONTENTS

products on a clinical or commercial scale. We anticipate future reliance on a limited number of third party manufacturers until we are able, or decide to, expand our operations to include manufacturing capacities. If the FDA or EMA approve any of our drug candidates for commercial sale, or if we significantly expand our clinical trials, we will need to manufacture them in larger quantities and will be required to secure additional or alternative third-party suppliers to our current suppliers. To date, our drug candidates have been manufactured in small quantities for preclinical testing and clinical trials and we may not be able to successfully increase the manufacturing capacity, whether in collaboration with our current or future third-party manufacturers or on our own, for any of our drug candidates in a timely or economic manner, or at all. Significant scale-up of manufacturing may require additional validation studies, which the FDA and EMA must review and approve. If we are unable to successfully increase the manufacturing capacity for a drug candidate, whether for late stage clinical trials or for commercial sale, or are unable to secure alternative third-party suppliers to our current suppliers, the drug development, regulatory approval or commercial launch of any related drugs may be delayed or blocked or there may be a shortage in supply. Even if any third party manufacturer makes improvements in the manufacturing process for our drug candidates, we may not own, or may have to share, the intellectual property rights to such innovations. Any performance failure on the part of manufacturers could delay late stage clinical development or regulatory approval of our drugs, the commercialization of our drugs or our ability to sell our commercial products, producing additional losses and depriving us of potential product revenues.

As we evolve from a company primarily involved in discovery and development to one also involved in the commercialization of drugs and devices, we may encounter difficulties in managing our growth and expanding our operations successfully.

In order to execute our business strategy, we will need to expand our development, control and regulatory capabilities and develop financial, manufacturing, marketing and sales capabilities or contract with third parties to provide these capabilities for us. If our operations expand, we expect that we will need to manage additional relationships with various collaborative partners, suppliers and other third parties. Our ability to manage our operations and any growth will require us to make appropriate changes and upgrades, as necessary, to our operational, financial and management controls, reporting systems and procedures wherever we may operate. Any inability to manage growth could delay the execution of our business plan or disrupt our operations.

Our drug candidates are subject to extensive regulation, which can be costly and time-consuming, and we may not obtain approvals for the commercialization of any of our drug candidates.

The clinical development, manufacturing, selling and marketing of our drug candidates are subject to extensive regulation by the FDA and EMA in the United States, the European Union and elsewhere. These regulations also vary in important, meaningful ways from country to country. We are not permitted to market a potential drug in the United States until we receive approval of an NDA from the FDA or an MAA from the EMA. We have not received an NDA or MAA approval from the FDA or EMA for any of our drug candidates.

Obtaining an NDA or MAA approval is expensive and is a complex, lengthy and uncertain process. For example, the FDA approval process for a new drug involves submission of an IND, which must include information about preclinical studies, proposed clinical protocols and manufacturing information. Clinical development under an IND typically involves three phases of study: Phases 1, 2 and 3. The most significant costs associated with clinical development are typically the pivotal late Phase 2 or Phase 3 clinical trials, as they tend to be the longest and largest studies conducted during the drug development process. After completion of clinical trials, an NDA may be submitted to the FDA. In responding to an NDA, the FDA may refuse to file the application, or if accepted for filing, the FDA may request additional information or deny the application if it determines that the application does not provide an adequate basis for approval. If the NDA supports the safety and efficacy of the drug candidate and satisfies other requirements, the FDA may grant marketing approval. Failure to comply with the FDA and other applicable foreign and U.S. regulatory requirements may subject us to administrative or judicially imposed sanctions. These include warning letters, civil and criminal penalties, injunctions, product seizure or detention, product recalls, total or partial suspension of production and refusal to approve either pending NDAs, or supplements to approved NDAs.

TABLE OF CONTENTS

There is substantial time and expense invested in the preparation and submission of an NDA or EMA, and regulatory approval is never guaranteed. Depending on the final data from our SEAMLESS study, we may meet with regulatory authorities in the United States and the European Union to discuss registration submissions for sapacitabine for the AML indication. As the trial did not meet its primary endpoint of demonstrating statistically significant improvement in overall survival for the experimental arm versus an active control, there can be no assurance that data from SEAMLESS will be sufficient to submit registration submissions or that regulatory authorities will accept or approve any such submissions.

The FDA and other regulatory authorities in the United States and the EMA for the European Union and elsewhere exercise substantial discretion in the drug approval process. The number, size and design of preclinical studies and clinical trials that will be required for FDA or EMA approval will vary depending on the drug candidate, the disease or condition for which the drug candidate is intended to be used and the regulations and guidance documents applicable to any particular drug candidate. The FDA or EMA can delay, limit or deny approval of a drug candidate for many reasons, including, but not limited to:

- those discussed in the risk factor which immediately follows;
- the fact that FDA or EMA officials may find that our or our third party manufacturer's processes or facilities are not in compliance with cGMP; or
- the fact that new regulations may be enacted by the FDA or EMA pursuant to which they may change their approval policies or adopt new regulations requiring new or different evidence of safety and efficacy for the intended use of a drug candidate.

Our applications for regulatory approval could be delayed or denied due to problems with studies conducted before we in-licensed the rights to some of our product candidates.

We currently license some of the compounds and drug candidates used in our research programs from third parties. These include sapacitabine which was licensed from Daiichi Sankyo. Our present research involving these compounds relies upon previous research conducted by third parties over whom we had no control and before we in-licensed the drug candidates. In order to receive regulatory approval of a drug candidate, we must present all relevant data and information obtained during our research and development, including research conducted prior to our licensure of the drug candidate. Although we are not currently aware of any such problems, any problems that emerge with preclinical research and testing conducted prior to our in-licensing may affect future results or our ability to document prior research and to conduct clinical trials, which could delay, limit or prevent regulatory approval for our drug candidates. Even if our product candidates receive regulatory approval, we may still face future development and regulatory difficulties.

Our product candidates, if approved, will also be subject to ongoing regulatory requirements for labeling, packaging, storage, advertising, promotion, record-keeping and submission of safety and other post-market information. In addition, approved products, manufacturers and manufacturers' facilities are required to comply with extensive FDA and EMA regulatory requirements and requirements of other similar agencies, including ensuring that quality control and manufacturing procedures conform to the FDA's or EMA's cGMP[1]. As such, we and our contract manufacturers are subject to continual review and periodic inspections to assess compliance with cGMP. Accordingly, we and others with whom we work must continue to expend time, money and effort in all areas of regulatory compliance, including manufacturing, production and quality control. We will also be required to report certain adverse reactions and production problems, if any, to the FDA and EMA and to comply with certain requirements concerning advertising and promotion for our products. Promotional communications with respect to prescription drugs are subject to a variety of legal and regulatory restrictions and must be consistent with the information in the product's approved label. Accordingly, we may not promote our approved products, if any, for indications or uses for which they are not approved.

TABLE OF CONTENTS

If we or a regulatory agency discovers previously unknown problems with a product, such as adverse events of unanticipated severity or frequency, or problems with the facility where the product is manufactured, or if a regulatory agency disagrees with the promotion, marketing or labeling of a product, it may impose restrictions on that product or us, including requiring withdrawal of the product from the market. If our product candidates fail to comply with applicable regulatory requirements, the FDA and EMA may:

- issue warning letters;
- mandate modifications to promotional materials or require us to provide corrective information to healthcare practitioners;
- require us or our collaborators to enter into a consent decree or permanent injunction, which can include the imposition of various fines, reimbursements for inspection costs, required due dates for specific actions and penalties for noncompliance;
- impose other administrative or judicial civil or criminal penalties;
- withdraw regulatory approval;
- refuse to approve pending applications or supplements to approved applications filed by us or our potential future collaborators;
- impose restrictions on operations, including costly new manufacturing requirements; or
- seize or detain products.

Even if we successfully complete the clinical trials for one or more of our product candidates, the product candidates may fail for other reasons.

Even if we successfully complete the clinical trials for one or more of our product candidates, the product candidates may fail for other reasons, including, without limitation, the possibilities that the product candidates will:

- fail to receive the regulatory approvals required to market them as drugs;
- be subject to proprietary rights held by others requiring the negotiation of a license agreement prior to marketing;
- be difficult or expensive to manufacture on a commercial scale;
- have adverse side effects that make their use less desirable; or
-

fail to compete effectively with product candidates or other treatments commercialized by our competitors.

If we are unable to receive the required regulatory approvals, secure our intellectual property rights, minimize the incidence of any adverse side effects or fail to compete with our competitors' products, our business, financial condition, and results of operations could be materially and adversely affected.

We face intense competition and our competitors may develop drugs that are less expensive, safer, or more effective than our drug candidates.

A large number of drug candidates are in development for the treatment of leukemia, lung cancer, lymphomas and nasopharyngeal cancer. Several pharmaceutical and biotechnology companies have nucleoside analogs or other products on the market or in clinical trials which may be competitive to sapacitabine in both hematological and oncology indications. Our competitors, either alone or together with collaborators, may have substantially greater financial resources and research and development staff. Our competitors may also have more experience:

- developing drug candidates;

- conducting preclinical and clinical trials;

TABLE OF CONTENTS

- obtaining regulatory approvals; and
- commercializing product candidates.

Our competitors may succeed in obtaining patent protection and regulatory approval and may market drugs before we do. If our competitors market drugs that are less expensive, safer, more effective or more convenient to administer than our potential drugs, or that reach the market sooner than our potential drugs, we may not achieve commercial success. Scientific, clinical or technical developments by our competitors may render our drug candidates obsolete or noncompetitive. We anticipate that we will face increased competition in the future as new companies enter the markets and as scientific developments progress. If our drug candidates obtain regulatory approvals, but do not compete effectively in the marketplace, our business will suffer.

The commercial success of our drug candidates depends upon their market acceptance among physicians, patients, healthcare providers and payors and the medical community.

If our drug candidates are approved, or are approved by the FDA or EMA, together with another agent such as decitabine, the resulting drugs, if any, must still gain market acceptance among physicians, healthcare providers and payors, patients and the medical community. The degree of market acceptance of any of our approved drugs will depend on a variety of factors, including:

- timing of market introduction, number and clinical profile of competitive drugs;
- our ability to provide acceptable evidence of safety and efficacy;
- relative convenience and ease of administration;
- pricing and cost-effectiveness, which may be subject to regulatory control;
- availability of coverage, reimbursement and adequate payment from health maintenance organizations and other third party payors; and
- prevalence and severity of adverse side effects; and other potential advantages over alternative treatment methods.

If any product candidate that we develop does not provide a treatment regimen that is at least as beneficial as the current standard of care or otherwise does not provide some additional patient benefit over the current standard of care, that product will not achieve market acceptance and we will not generate sufficient revenues to achieve profitability.

If our drug candidates or distribution partners' products fail to achieve market acceptance, we may not be able to generate significant revenue and our business would suffer.

Reimbursement decisions by third-party payors may have an adverse effect on pricing and market acceptance. If there is not sufficient reimbursement for our products, it is less likely that they will be widely used. Market acceptance and sales of our product candidates that we develop, if approved, will depend on reimbursement policies, and may be affected by future healthcare reform measures. Government authorities and third-party payors, such as private health insurers and health maintenance organizations, decide which drugs they will cover and establish payment levels. We cannot be certain that reimbursement will be available for our product candidates that we develop. Also, we cannot be

certain that reimbursement policies will not reduce the demand for, or the price paid for, our products. If reimbursement is not available or is available on a limited basis, we may not be able to successfully commercialize any of our product candidates.

Our business may be affected by the efforts of government and third-party payors to contain or reduce the cost of healthcare through various means. For example, the Patient Protection and Affordable Care Act and the Health Care and Education Affordability Reconciliation Act of 2010, referred to jointly as ACA, enacted in March 2010, substantially changed the way healthcare is financed by both governmental and private insurers, and significantly impacted the pharmaceutical industry. With regard to pharmaceutical products, the ACA may have the effect of expanding and increasing industry rebates for drugs covered under Medicaid programs and make changes to the coverage requirements under the Medicare Part D

14

TABLE OF CONTENTS

program. Additionally, the 2016 federal elections, which resulted in the election of the Republican presidential nominee and Republican majorities in both houses of Congress has prompted renewed legislative efforts to significantly modify or repeal the ACA, is likely to impact how the executive branch implements the law, and may impact how the federal government responds to lawsuits challenging the ACA. We cannot predict what further reform proposals, if any, will be adopted, when they may be adopted, or what impact they may have on our business, including whether it will impact the appetite of investors to make investments in companies like ours. Regardless of whether or not ACA is overturned or repealed, we expect both government and private health plans to continue to require healthcare providers, including healthcare providers that may one day purchase our products, to contain costs and demonstrate the value of the therapies they provide.

The United States and several other jurisdictions are considering, or have already enacted, a number of legislative and regulatory proposals to change the healthcare system in ways that could affect our ability to sell our products profitably. Among policy makers and payors in the United States and elsewhere, there is significant interest in promoting changes in healthcare systems with the stated goals of containing healthcare costs, improving quality and/or expanding access to healthcare. In the United States, the pharmaceutical industry has been a particular focus of these efforts and has been significantly affected by major legislative initiatives. We expect to experience pricing pressures in connection with the sale of products that we develop, due to the trend toward cost containment and additional legislative proposals.

If we are unable to compete successfully in our market place, it will harm our business.

There are existing products in the marketplace that compete with our products. Companies may develop new products that compete with our products. Certain of these competitors and potential competitors have longer operating histories, substantially greater product development capabilities and financial, scientific, marketing and sales resources.

Competitors and potential competitors may also develop products that are safer, more effective or have other potential advantages compared to our products. In addition, research, development and commercialization efforts by others could render our products obsolete or non-competitive. Certain of our competitors and potential competitors have broader product offerings and extensive customer bases, allowing them to adopt aggressive pricing policies that would enable them to gain market share. Competitive pressures could result in price reductions, reduced margins and loss of market share. We could encounter potential customers that, due to existing relationships with our competitors, are committed to products offered by those competitors. As a result, those potential customers may not consider purchasing our products.

The failure to attract and retain skilled personnel and key relationships could impair our drug development and commercialization efforts.

We are highly dependent on our senior management and key clinical development, scientific and technical personnel. Competition for these types of personnel is intense. The loss of the services of any member of our senior management, clinical development, scientific or technical staff may significantly delay or prevent the achievement of drug development and other business objectives and could have a material adverse effect on our business, operating results and financial condition. We also rely on consultants and advisors to assist us in formulating our strategy. All of our consultants and advisors are either self-employed or employed by other organizations, and they may have conflicts of interest or other commitments, such as consulting or advisory contracts with other organizations, that may affect their ability to contribute to us. We intend to expand and develop new drug candidates. We will need to hire additional employees in order to continue our clinical trials and market our drug candidates. This strategy will require us to recruit additional executive management and clinical development, scientific, technical and sales and marketing personnel. There is currently intense competition for skilled executives and employees with relevant clinical development, scientific, technical and sales and marketing expertise, and this competition is likely to continue. The inability to attract and retain sufficient clinical development, scientific, technical and managerial personnel could limit or delay our product development efforts, which would adversely affect the development of our drug candidates and commercialization of our potential drugs and growth of our business.

TABLE OF CONTENTS

We may be exposed to product liability claims that may damage our reputation and we may not be able to obtain adequate insurance.

Because we conduct clinical trials in humans, we face the risk that the use of our drug candidates will result in adverse effects. We believe that we have obtained reasonably adequate product liability insurance coverage for our trials. We cannot predict, however, the possible harm or side effects that may result from our clinical trials. Such claims may damage our reputation and we may not have sufficient resources to pay for any liabilities resulting from a claim excluded from, or beyond the limit of, our insurance coverage or if the amount of the insurance coverage is insufficient to meet any liabilities resulting from any claims.

We may also be exposed to additional risks of product liability claims. These risks exist even with respect to drugs that are approved for commercial sale by the FDA or other regulatory authorities in the United States, the European Union or elsewhere and manufactured in facilities licensed and regulated by the FDA, EMA or other such regulatory authorities. We have secured limited product liability insurance coverage, but may not be able to maintain such insurance on acceptable terms with adequate coverage, or at a reasonable cost. There is also a risk that third parties that we have agreed to indemnify could incur liability. Even if we were ultimately successful in product liability litigation, the litigation would consume substantial amounts of our financial and managerial resources and may exceed insurance coverage creating adverse publicity, all of which would impair our ability to generate sales of the litigated product as well as our other potential drugs.

We may be required to defend lawsuits or pay damages in connection with the alleged or actual violation of healthcare statutes such as fraud and abuse laws, and our corporate compliance programs can never guarantee that we are in compliance with all relevant laws and regulations.

Our commercialization efforts in the United States and elsewhere are subject to various federal and state laws pertaining to promotion and healthcare fraud and abuse, including federal and state anti-kickback, fraud and false claims laws. Anti-kickback laws make it illegal for a manufacturer to offer or pay any remuneration in exchange for, or to induce, the referral of business, including the purchase of a product. The federal government has published many regulations relating to the anti-kickback statutes, including numerous safe harbors or exemptions for certain arrangements. False claims laws prohibit anyone from knowingly and willingly presenting, or causing to be presented for payment to third-party payers including Medicare and Medicaid, claims for reimbursed products or services that are false or fraudulent, claims for items or services not provided as claimed, or claims for medically unnecessary items or services.

Our activities relating to the sale and marketing of our products will be subject to scrutiny under these laws and regulations. It may be difficult to determine whether or not our activities comply with these complex legal requirements. Violations are punishable by significant criminal and/or civil fines and other penalties, as well as the possibility of exclusion of the product from coverage under governmental healthcare programs, including Medicare and Medicaid. If the government were to investigate or make allegations against us or any of our employees, or sanction or convict us or any of our employees, for violations of any of these legal requirements, this could have a material adverse effect on our business, including our stock price. Our activities could be subject to challenge for many reasons, including the broad scope and complexity of these laws and regulations, the difficulties in interpreting and applying these legal requirements, and the high degree of prosecutorial resources and attention being devoted to the biopharmaceutical industry and health care fraud by law enforcement authorities. During the last few years, numerous biopharmaceutical companies have paid multi-million dollar fines and entered into burdensome settlement agreements for alleged violation of these requirements, and other companies are under active investigation. Although we have developed and implemented corporate and field compliance programs as part of our commercialization efforts, we cannot assure you that we or our employees, directors or agents were, are or will be in compliance with all laws and regulations or that we will not come under investigation, allegation or sanction.

In addition, we may be required to prepare and report product pricing-related information to federal and state governmental authorities, such as the Department of Veterans Affairs and under the Medicaid program. The calculations used to generate the pricing-related information are complex and require the exercise of judgment. If we fail to accurately and timely report product pricing-related information or to comply with any of these or any other laws or regulations, various negative consequences could result,

TABLE OF CONTENTS

including criminal and/or civil prosecution, substantial criminal and/or civil penalties, exclusion of the approved product from coverage under governmental healthcare programs including Medicare and Medicaid, costly litigation and restatement of our financial statements. In addition, our efforts to comply with this wide range of laws and regulations are, and will continue to be, time-consuming and expensive.

If a supplier upon whom we rely fails to produce on a timely basis the finished goods in the volumes that we require or fails to meet quality standards and maintain necessary licensure from regulatory authorities, we may be unable to meet demand for our products, potentially resulting in lost revenues.

If any third party manufacturer service providers do not meet our or our licensor's requirements for quality, quantity or timeliness, or do not achieve and maintain compliance with all applicable regulations, demand for our products or our ability to continue supplying such products could substantially decline. As the third party manufacturers are the sole supplier of the products, any delays may impact our sales.

In all the countries where we may sell our products, governmental regulations exist to define standards for manufacturing, packaging, labeling and storing. All of our suppliers of raw materials and contract manufacturers must comply with these regulations. Failure to do so could result in supply interruptions. In the United States, the FDA requires that all suppliers of pharmaceutical bulk material and all manufacturers of pharmaceuticals for sale in or from the United States achieve and maintain compliance with the FDA's cGMPs. Similar requirements exist in the European Union through the EMA. Failure of our third-party manufacturers to comply with applicable regulations could result in sanctions being imposed on them or us, including fines, injunctions, civil penalties, disgorgement, suspension or withdrawal of approvals, license revocation, seizures or recalls of products, operating restrictions and criminal prosecutions, any of which could significantly and adversely affect supplies of our products. In addition, before any product batch produced by our manufacturers can be shipped, it must conform to release specifications for the content of the pharmaceutical product. If the operations of one or more of our manufacturers were to become unavailable for any reason, any required FDA or EMA review and approval of the operations of an alternative supplier could cause a delay in the manufacture of our products.

The commercialization of our products will be substantially dependent on our ability to develop effective sales and marketing capabilities.

One of our primary strategies for product candidates under development is to develop compounds through the Phase 2 stage of clinical testing and market or co-promote certain of our drugs. We currently have no sales, marketing or distribution capabilities. We will depend primarily on strategic alliances with third parties, which have established distribution systems and sales forces, to commercialize our drugs. To the extent that we are unsuccessful in commercializing any drugs ourselves or through a strategic alliance, product revenues may suffer, we may incur significant additional losses, and our share price would be negatively affected.

If we market products in a manner that violates healthcare fraud and abuse laws, or if we violate government price reporting laws, we may be subject to civil or criminal penalties.

In addition to FDA restrictions on marketing of pharmaceutical products, several other types of state and federal healthcare laws, commonly referred to as "fraud and abuse" laws, have been applied in recent years to restrict certain marketing practices in the pharmaceutical industry. Other jurisdictions, such as Europe, have similar laws. These laws include false claims and anti-kickback statutes. If we market our products and our products are paid for by governmental programs, it is possible that some of our business activities could be subject to challenge under one or more of these laws.

Federal false claims laws prohibit any person from knowingly presenting, or causing to be presented, a false claim for payment to the federal government or knowingly making, or causing to be made, a false statement to get a false claim paid. The federal healthcare program anti-kickback statute prohibits, among other things, knowingly and willfully offering, paying, soliciting or receiving remuneration to induce, or in return for, purchasing, leasing, ordering or arranging for the purchase, lease or order of any healthcare item or service covered by Medicare, Medicaid or other federally financed healthcare programs. This statute has been interpreted to apply to arrangements between pharmaceutical manufacturers, on the one hand, and prescribers, purchasers or formulary managers, on the other.

Although there are several statutory

TABLE OF CONTENTS

exemptions and regulatory safe harbors protecting certain common activities from prosecution, the exemptions and safe harbors are drawn narrowly, and practices that involve remuneration intended to induce prescribing, purchasing or recommending may be subject to scrutiny if they do not qualify for an exemption or safe harbor. Most states also have statutes or regulations similar to the federal anti-kickback law and federal false claims laws, which apply to items and services covered by Medicaid and other state programs, or, in several states, apply regardless of the payor. Administrative, civil and criminal sanctions may be imposed under these federal and state laws.

Over the past few years, a number of pharmaceutical and other healthcare companies have been prosecuted under these laws for a variety of promotional and marketing activities, such as: providing free trips, free goods, sham consulting fees and grants and other monetary benefits to prescribers; reporting inflated average wholesale prices that were then used by federal programs to set reimbursement rates; engaging in off-label promotion; and submitting inflated best price information to the Medicaid Rebate Program to reduce liability for Medicaid rebates.

We face potential product liability exposure, and if successful claims are brought against us, we may incur substantial liability for a product candidate and may have to limit its commercialization.

The use of our product candidates in clinical trials and the sale of any products for which we may obtain marketing approval expose us to the risk of product liability claims. Product liability claims may be brought against us or our collaborators by participants enrolled in our clinical trials, patients, health care providers or others using, administering or selling our products. If we cannot successfully defend ourselves against any such claims, we would incur substantial liabilities. Regardless of merit or eventual outcome, product liability claims may result in:

- withdrawal of clinical trial participants;
- termination of clinical trial sites or entire trial programs;
- costs of related litigation;
- substantial monetary awards to patients or other claimants;
- decreased demand for our product candidates and loss of revenues;
- impairment of our business reputation;
- diversion of management and scientific resources from our business operations; and
- the inability to commercialize our product candidates.

We have obtained limited product liability insurance coverage for our clinical trials in the United States and in selected other jurisdictions where we are conducting clinical trials. Our primary product liability insurance coverage for clinical trials in the United States is currently limited to an aggregate of \$5.0 million and outside of the United States, we have coverage for lesser amounts that vary by country. As such, our insurance coverage may not reimburse us or may not be sufficient to reimburse us for any expenses or losses we may suffer. Moreover, insurance coverage is becoming increasingly expensive, and, in the future, we may not be able to maintain insurance coverage at a reasonable cost or in sufficient amounts to protect us against losses due to product liability. We intend to expand our insurance coverage for products to include the sale of commercial products if we obtain marketing approval for our

product candidates in development, but we may be unable to obtain commercially reasonable product liability insurance for any products approved for marketing. Large judgments have been awarded in class action lawsuits based on drugs that had unanticipated side effects. A successful product liability claim or series of claims brought against us, particularly if judgments exceed our insurance coverage, could decrease our cash resources and adversely affect our business.

Defending against claims relating to improper handling, storage or disposal of hazardous chemical, radioactive or biological materials could be time consuming and expensive.

Our research and development involves the controlled use of hazardous materials, including chemicals, radioactive and biological materials such as chemical solvents, phosphorus and bacteria. Our operations produce hazardous waste products. We cannot eliminate the risk of accidental contamination or discharge

18

TABLE OF CONTENTS

and any resultant injury from those materials. Various laws and regulations govern the use, manufacture, storage, handling and disposal of hazardous materials. We may be sued for any injury or contamination that results from our use or the use by third parties of these materials. Compliance with environmental laws and regulations may be expensive, and current or future environmental regulations may impair our research, development and production efforts.

Our business and operations would suffer in the event of system failures.

Despite the implementation of security measures, our internal computer systems, and those of our CROs and other third parties on which we rely, are vulnerable to damage from computer viruses, unauthorized access, natural disasters, terrorism, war and telecommunication and electrical failures. If such an event were to occur and cause interruptions in our operations, it could result in a material disruption of our drug development programs. For example, the loss of clinical trial data from completed or ongoing or planned clinical trials could result in delays in our regulatory approval efforts and significantly increase our costs to recover or reproduce the data. To the extent that any disruption or security breach were to result in a loss of or damage to our data or applications, or inappropriate disclosure of confidential or proprietary information, we could incur liability and the further development of our product candidates could be delayed.

Risks Related to Our Business and Financial Condition

Our ability to raise additional capital in the future may not be available to us on reasonable terms, if at all, when or as we require additional funding. If we issue additional shares of our common stock or other securities that may be convertible into, or exercisable or exchangeable for, our common stock, our existing stockholders would experience further dilution. If we fail to obtain additional funding, we may be unable to complete the development and commercialization of our lead drug candidate, sapacitabine, or continue to fund our research and development programs.

We have funded all of our operations and capital expenditures with proceeds from the issuance of public equity securities, private placements of our securities, interest on investments, licensing revenue, government grants, research and development tax credits and product revenue. In order to conduct the lengthy and expensive research, preclinical testing and clinical trials necessary to complete the development and marketing of our drug candidates, we will require substantial additional funds. We may have insufficient public equity available for issue to raise the required additional substantial funds to implement our operating plan and we may not be able to obtain the appropriate stockholder approvals necessary to increase our available public equity for issuance within a time that we may require additional funding. Based on our current operating plan, we expect our existing resources to be sufficient to fund our planned operations through the end of 2018, although our estimates may prove to be incorrect and we could spend our available financial resources faster than we currently expect. To meet our long-term financing requirements, we may raise funds through public or private equity offerings, debt financings or strategic alliances. Raising additional funds by issuing equity or convertible debt securities may cause our stockholders to experience substantial dilution in their ownership interests and new investors may have rights superior to the rights of our other stockholders. Raising additional funds through debt financing, if available, may involve covenants that restrict our business activities and options. To the extent that we raise additional funds through collaborations and licensing arrangements, we may have to relinquish valuable rights to our drug discovery and other technologies, research programs or drug candidates, or grant licenses on terms that may not be favorable to us. Additional funding may not be available to us on favorable terms, or at all, particularly in light of the current economic conditions. If we are unable to obtain additional funds, we may be forced to delay or terminate our current clinical trials and the development and marketing of our drug candidates including sapacitabine.

Unstable market and economic conditions may have serious adverse consequences on our business, financial condition and stock price.

As widely reported, global credit and financial markets have experienced extreme disruptions in the past several years, including severely diminished liquidity and credit availability, declines in consumer confidence, declines in economic growth, increases in unemployment rates, and uncertainty about economic

TABLE OF CONTENTS

stability. There can be no assurance that further deterioration in credit and financial markets and confidence in economic conditions will not continue to occur. Our general business strategy may be adversely affected by any such economic downturn, volatile business environment or continued unpredictable and unstable market conditions. If the current financial markets deteriorate, or do not improve, it may make any necessary financing more difficult, more costly, and more dilutive. Failure to secure any necessary financing in a timely manner and on favorable terms could have a material adverse effect on our growth strategy, financial performance and stock price and could require us to delay or abandon clinical development or other operating or strategic plans for our business.

A recent vote by the United Kingdom electorate in favor of a referendum for its exit from the European Union could adversely impact our business, results of operations and financial condition.

The announcement in June 2016 of the referendum of the United Kingdom's Membership of the European Union, or Brexit, advising for the exit of the United Kingdom from the European Union, could cause disruptions to and create uncertainty surrounding our business, including affecting our relationships with our future customers, suppliers and employees, which could have an adverse effect on our business, financial results and operations. The referendum is non-binding; however, if passed into law, negotiations would commence to determine the future terms of the United Kingdom's relationship with the European Union, including the terms of trade between the United Kingdom and the European Union. The effects of Brexit will depend on any agreements the United Kingdom makes to retain access to European Union markets either during a transitional period or more permanently. The measures could potentially disrupt the markets and tax jurisdictions in which we operate, including our wholly owned subsidiary Cyclacel Limited, which was organized under the laws of England and Wales, and our research facility in Dundee, Scotland, which is also the center of our translational work and development programs, and adversely change tax benefits or liabilities in these or other jurisdictions, and may cause us to lose potential customers, suppliers, and employees. In addition, Brexit could lead to legal uncertainty and potentially divergent national laws and regulations as the United Kingdom determines which European Union laws to replace or replicate.

The announcement of Brexit caused significant volatility in global stock markets and currency exchange rate fluctuations that resulted in the strengthening of the U.S. dollar against foreign currencies in which we conduct business. The strengthening of the U.S. dollar relative to other currencies may adversely affect our results of operations.

The implementation of Brexit may also create global economic uncertainty, which may cause partners, suppliers and potential customers to closely monitor their costs and reduce their spending budget.

Since Scottish voters were overwhelming in favor of the United Kingdom remaining in the European Union, Scotland may in the future seek independence from the United Kingdom, as it unsuccessfully sought to do by referendum in September 2014. Any such efforts by Scotland to separate from the United Kingdom, even if unsuccessful, could lead to uncertainty and further disrupt the markets and tax jurisdictions in which we operate, and may cause us to lose potential customers, suppliers, and employees.

Any of these effects of Brexit, among others, could materially adversely affect our business, business opportunities, results of operations, financial condition and cash flows.

We are at an early stage of development as a company and we do not have, and may never have, any products that generate significant revenues.

We are at an early stage of development as a company and have a limited operating history on which to evaluate our business and prospects. While we earned modest product revenues from the ALIGN business prior to terminating operations effective September 30, 2012, we have not generated any product revenues from our product candidates currently in development. We cannot guarantee that any of our product candidates currently in development will ever become marketable products. We must demonstrate that our drug candidates satisfy rigorous standards of safety and efficacy for their intended uses before the FDA, EMA and other regulatory authorities in the United States, the European Union and elsewhere. Significant additional research, preclinical testing and clinical testing is required before we can file applications with the FDA or EMA for approval of our drug candidates. In addition, to compete effectively, our drugs must be easy to administer, cost-effective and economical to manufacture on a commercial scale.

TABLE OF CONTENTS

We may not achieve any of these objectives. As our Phase 3 study for AML did not meet its primary endpoint of demonstrating statistically significant improvement in overall survival for the experimental arm versus an active control our clinical development programs are now all at an early stage of testing in Phase 1/2. CYC065 is in a first-in-human Phase 1 study and a combination of sapacitabine and seliciclib, is currently in a Phase 1/2 clinical trial. We cannot be certain that the clinical development of these or any other drug candidates in preclinical testing or clinical development will be successful, that we will receive the regulatory approvals required to commercialize them or that any of our other research and drug discovery programs will yield a drug candidate suitable for investigation through clinical trials. Our commercial revenues from our product candidates currently in development, if any, will be derived from sales of drugs that will not become marketable for several years, if at all.

We have a history of operating losses and we may never become profitable. Our stock is a highly speculative investment.

We have incurred operating losses in each year since beginning operations in 1996 due to costs incurred in connection with our research and development activities and selling, general and administrative costs associated with our operations, and we may never achieve profitability. As of March 31, 2017, our accumulated deficit was \$336.6 million. Our net loss was \$14.3 million and \$11.8 million for the years ended December 31, 2015 and 2016 and \$1.6 million for the quarter ended March 31, 2017, respectively. In addition to the SEAMLESS study, which we recently announced failed to reach its primary endpoint, our drug candidates are in the early- to mid-stages of clinical testing and we must conduct significant additional clinical trials before we can seek the regulatory approvals necessary to begin commercial sales of our drugs. We expect to incur continued losses for several years as we continue our research and development of our drug candidates, seek regulatory approvals and commercialize any approved drugs. If our drug candidates are unsuccessful in clinical trials or we are unable to obtain regulatory approvals, or if our drugs are unsuccessful in the market, we will not be profitable. If we fail to become and remain profitable, or if we are unable to fund our continuing losses, particularly in light of the current economic conditions, you could lose all or part of your investment.

If we fail to comply with the continued listing requirements of the NASDAQ Capital Market, our common stock may be delisted and the price of our common stock and our ability to access the capital markets could be negatively impacted.

Our common stock is currently listed for trading on the NASDAQ Capital Market. We must satisfy NASDAQ's continued listing requirements, including, among other things, a minimum stockholders' equity of \$2.5 million and a minimum bid price for our common stock of \$1.00 per share, or risk delisting, which would have a material adverse effect on our business. A delisting of our common stock from the NASDAQ Capital Market could materially reduce the liquidity of our common stock and result in a corresponding material reduction in the price of our common stock. In addition, delisting could harm our ability to raise capital through alternative financing sources on terms acceptable to us, or at all, and may result in the potential loss of confidence by investors, suppliers, customers and employees and fewer business development opportunities.

On February 2, 2016, the Company received a letter from the Listing Qualifications Staff (the "Staff") of The NASDAQ Stock Market LLC indicating that the Company had not regained compliance with the \$1.00 minimum bid price requirement for continued listing on The NASDAQ Capital Market, as set forth in NASDAQ Listing Rule 5450(a)(1), by the end of the previously granted compliance period that expired on February 2, 2016. As a result, the Staff indicated that the Company would be subject to delisting unless it timely requested a hearing before a NASDAQ Listing Qualifications Panel (the "Panel").

The Company had a hearing before the Panel on March 31, 2016, at which it presented its plan to regain compliance with the minimum bid price requirement, and requested a further extension of time to do so. On April 4, 2016, the Company received a written ruling from the Panel stating that the Panel had granted the Company's request to remain listed on The NASDAQ Capital Market. At the 2016 Annual Meeting of Stockholders, which was held on May 26, 2016, holders of the Company's common stock approved a proposed amendment to the Company's amended and restated certificate of incorporation, by way of a certificate of amendment, to effectuate a reverse stock split at a ratio of up to and including

TABLE OF CONTENTS

one-for-twenty. Pursuant thereto, the Board determined to use a ratio of one-for-twelve, and the reverse stock split became effective at 5:00 p.m., Eastern Time, on May 27, 2016, with the Company's common stock trading on the NASDAQ Capital Market on a post-split basis at the open of business on May 31, 2016. On June 15, 2016, we received notification from the Staff that we have regained compliance with the minimum bid price rule for continued listing on The NASDAQ Capital Market. The notification stated that as of June 14, 2016, we have evidenced a closing per share bid price of our common stock in excess of the \$1.00 minimum closing bid price requirement for at least ten consecutive trading days. Accordingly, we have regained compliance with NASDAQ Listing Rule 5550(a)(2) and will continue to trade on The NASDAQ Capital Market.

Notwithstanding the reverse stock split and our compliance with The NASDAQ Capital market requirements, we cannot be sure that our share price will comply with the requirements for continued listing of our common stock on The NASDAQ Capital Market in the future, or that we will comply with the other continued listing requirements. If our shares of Common Stock lose their status on the NASDAQ Capital Market, we believe that our shares of Common Stock would likely be eligible to be quoted on the inter-dealer electronic quotation and trading system operated by Pink OTC Markets Inc., commonly referred to as the Pink Sheets and now known as the OTCQB market. Our shares of Common Stock may also be quoted on the Over-the-Counter Bulletin Board, an electronic quotation service maintained by the Financial Industry Regulatory Authority. These markets are generally not considered to be as efficient as, and not as broad as, the NASDAQ Capital Market. Selling our shares of Common Stock on these markets could be more difficult because smaller quantities of shares would likely be bought and sold, and transactions could be delayed. In addition, in the event our shares of Common Stock are delisted, broker-dealers have certain regulatory burdens imposed upon them, which may discourage broker-dealers from effecting transactions in our Common Stock, further limiting the liquidity of our Common Stock. These factors could result in lower prices and larger spreads in the bid and ask prices for our Common Stock.

To the extent we elect to fund the development of a drug candidate or the commercialization of a drug at our expense, we will need substantial additional funding.

We plan to market drugs on our own, with or without a partner, that can be effectively commercialized and sold in concentrated markets that do not require a large sales force to be competitive. To achieve this goal, we will need to establish our own specialized sales force, marketing organization and supporting distribution capabilities. The development and commercialization of our drug candidates is very expensive. To the extent we elect to fund the full development of a drug candidate or the commercialization of a drug at our expense, we will need to raise substantial additional funding to:

- fund research and development and clinical trials connected with our research;
- fund clinical trials and seek regulatory approvals;
- build or access manufacturing and commercialization capabilities;
- implement additional internal control systems and infrastructure;
- commercialize and secure coverage, payment and reimbursement of our drug candidates, if any such candidates receive regulatory approval;
- maintain, defend and expand the scope of our intellectual property; and
-

hire additional management, sales and scientific personnel.

Our future funding requirements will depend on many factors, including:

- the scope, rate of progress and cost of our clinical trials and other research and development activities, including our discussions with European and United States regulatory authorities concerning the top-line data from our pivotal Phase 3 SEAMLESS study;
- the costs and timing of seeking and obtaining regulatory approvals;
- the costs of filing, prosecuting, defending and enforcing any patent claims and other intellectual property rights;

TABLE OF CONTENTS

- the costs associated with establishing sales and marketing capabilities;

- the costs of acquiring or investing in businesses, products and technologies;

- the effect of competing technological and market developments; and

- the payment, other terms and timing of any strategic alliance, licensing or other arrangements that we may establish.

If we are not able to secure additional funding when needed, especially in light of the current economic conditions and financial market turmoil, we may have to delay, reduce the scope of or eliminate one or more of our clinical trials or research and development programs or future commercialization efforts.

Our insurance policies are expensive and only protect us from some business risks, which will leave us exposed to significant uninsured liabilities.

We do not carry insurance for all categories of risk that our business may encounter. Some of the policies we currently maintain include property, general liability, employment benefits liability, workers' compensation, products liability and clinical trials (U.S and foreign), and directors' and officers', employment practices and fiduciary liability insurance. We do not know, however, if we will be able to maintain insurance with adequate levels of coverage. Any significant uninsured liability may require us to pay substantial amounts, which would adversely affect our financial position and results of operations.

Any future workforce and expense reductions may have an adverse impact on our internal programs, strategic plans, and our ability to hire and retain key personnel, and may also be distracting to our management.

Any workforce and expense reductions similar to those carried out in September 2008 and June 2009 could result in significant delays in implementing our strategic plans. In addition, employees, whether or not directly affected by such reduction, may seek future employment with our business partners or competitors. Although our employees are required to sign a confidentiality agreement at the time of hire, the confidential nature of certain proprietary information may not be maintained in the course of any such future employment. In addition, any workforce reductions or restructurings would be expected to involve significant expense as a result of contractual terms in certain of our existing agreements, including potential severance obligations. Further, we believe that our future success will depend in large part upon our ability to attract and retain highly skilled personnel. We may have difficulty retaining and attracting such personnel as a result of a perceived risk of future workforce and expense reductions. Finally, the implementation of expense reduction programs may result in the diversion of the time and attention of our executive management team and other key employees, which could adversely affect our business.

Funding constraints may negatively impact our research and development, forcing us to delay our efforts to develop certain product candidates in favor of developing others, which may prevent us from commercializing our product candidates as quickly as possible.

Research and development is an expensive process. As part of our operating plan, since announcing that our SEAMLESS trial failed to meet its primary endpoint, we have decided to focus our clinical development strategy in oncology on our two ongoing, clinical programs in transcriptional regulation and DNA damage response, which include our area of historical expertise in CDK inhibitors, or additional programs. Because we have to prioritize our development candidates as a result of budget constraints, we may not be able to fully realize the value of our product candidates in a timely manner, if at all.

We are exposed to risks related to foreign currency exchange rates.

Some of our costs and expenses are denominated in foreign currencies. Most of our foreign expenses are associated with our research and development expenditures, including the operating costs of our United Kingdom-based wholly-owned subsidiary. When the United States dollar weakens against the British pound or the Euro, the United States dollar value of the foreign currency denominated expense increases, and when the United States dollar

strengthens against the British pound or the Euro, the United States dollar value of the foreign currency denominated expense decreases. Consequently, changes in exchange rates, and in particular a weakening of the United States dollar, may adversely affect our results of operations.

23

TABLE OF CONTENTS

Risks Related to our Intellectual Property

If we fail to enforce adequately or defend our intellectual property rights, our business may be harmed.

Our commercial success depends in large part on obtaining and maintaining patent and trade secret protection for our drug candidates, the methods used to manufacture those drug candidates and the methods for treating patients using those drug candidates.

Sapacitabine is protected by granted, composition of matter patents claiming certain, stable crystalline forms of sapacitabine and their pharmaceutical compositions and therapeutic uses that expire in 2022 (and may be eligible for a Hatch-Waxman term restoration of up to five years, which could extend the expiration date to 2027); United States and European granted patents that expire in 2029, claiming the combination of sapacitabine with hypomethylating agents, including decitabine, which is being tested as the active arm in the SEAMLESS Phase 3 trial, and a United States granted patent claiming a specified method of administration of sapacitabine with patent exclusivity until July 2030. We have used a stable, crystalline form of sapacitabine in nearly all our Phase 1 and in all our Phase 2 and Phase 3 clinical studies. We have also chosen this crystalline form for commercialization. Additional patents and applications claim certain medical uses, combinations, formulations and dosing regimens of sapacitabine which have emerged in our clinical trials, as well as a process for the preparation of sapacitabine. Seliciclib is protected by granted patents and applications claiming certain medical uses of seliciclib, including combination use with sapacitabine, which have emerged in our preclinical research and clinical trials. The latest to expire of the granted patents expires in 2028. Failure to obtain, maintain or extend the patents could adversely affect our business. We will only be able to protect our drug candidates and our technologies from unauthorized use by third parties to the extent that valid and enforceable patents or trade secrets cover them.

Our ability to obtain patents is uncertain because legal means afford only limited protections and may not adequately protect our rights or permit us to gain or keep any competitive advantage. Some legal principles remain unresolved and the breadth or interpretation of claims allowed in patents in the United States, the European Union or elsewhere can still be difficult to ascertain or predict. In addition, the specific content of patents and patent applications that are necessary to support and interpret patent claims is highly uncertain due to the complex nature of the relevant legal, scientific and factual issues. Changes in either patent laws or in interpretations of patent laws in the United States, the European Union or elsewhere may diminish the value of our intellectual property or narrow the scope of our patent protection. Our existing patents and any future patents we obtain may not be sufficiently broad to prevent others from practicing our technologies or from developing competing products and technologies. In addition, we generally do not control the patent prosecution of subject matter that we license from others and have not controlled the earlier stages of the patent prosecution. Accordingly, we are unable to exercise the same degree of control over this intellectual property as we would over our own.

Even if patents are issued regarding our drug candidates or methods of using them, those patents can be challenged by our competitors who may argue such patents are invalid and/or unenforceable. Patents also will not protect our drug candidates if competitors devise ways of making or using these product candidates without legally infringing our patents. The FDA and FDA regulations and policies and equivalents in other jurisdictions provide incentives to manufacturers to challenge patent validity or create modified, non-infringing versions of a drug in order to facilitate the approval of abbreviated new drug applications for generic substitutes. These same types of incentives encourage manufacturers to submit NDAs that rely on literature and clinical data not prepared for or by the drug sponsor.

Proprietary trade secrets and unpatented know-how are also very important to our business. We rely on trade secrets to protect our technology, especially where we do not believe that patent protection is appropriate or obtainable.

However, trade secrets are difficult to protect. Our employees, consultants, contractors, outside scientific collaborators and other advisors may unintentionally or willfully disclose our confidential information to competitors, and confidentiality agreements may not provide an adequate remedy in the event of unauthorized disclosure of confidential information. Enforcing a claim that a third-party obtained illegally and is using trade secrets is expensive and time consuming, and the outcome is unpredictable. Moreover, our competitors may independently develop equivalent knowledge, methods and know-how. Failure to obtain or maintain trade secret protection could adversely affect our competitive business position.

TABLE OF CONTENTS

If we do not obtain protection under the Hatch-Waxman Act and similar legislation outside of the United States by extending the patent terms and obtaining data exclusivity for our product candidates, our business may be materially harmed.

Depending upon the timing, duration and specifics of FDA marketing approval of sapacitabine and our other product candidates, if any, one or more of our United States patents may be eligible for limited patent term restoration under the Drug Price Competition and Patent Term Restoration Act of 1984, referred to as the Hatch-Waxman Act. The Hatch-Waxman Act permits a patent restoration term of up to five years as compensation for patent term lost during product development and the FDA regulatory review process. However, we may not be granted an extension because, for example, of failing to apply within applicable deadlines, failing to apply prior to expiration of relevant patents or otherwise failing to satisfy applicable requirements. Moreover, the applicable time period or the scope of patent protection afforded could be less than we request. If we are unable to obtain patent term extension or restoration or the term of any such extension is less than what we request, the period during which we will have the right to exclusively market our product will be shortened and our competitors may obtain approval of competing products following our patent expiration, and our revenue could be reduced, possibly materially.

Intellectual property rights for our drug candidate seliciclib are licensed from others, and any termination of these licenses could harm our business.

We have in-licensed certain patent rights in connection with the development program of our drug candidate seliciclib. Pursuant to the CNRS and Institut Curie license under which we license seliciclib, we are obligated to pay license fees, milestone payments and royalties and to provide regular progress reports. We are also obligated to use reasonable efforts to develop and commercialize products based on the licensed patents. If we fail to satisfy any of our obligations under these licenses, they could be terminated, which could harm our business.

We may be subject to damages resulting from claims that our employees or we have wrongfully used or disclosed alleged trade secrets of their former employers.

Many of our employees were previously employed at universities or other biotechnology or pharmaceutical companies, including our competitors or potential competitors. Although no claims against us are currently pending, we may be subject to claims that these employees or we have inadvertently or otherwise used or disclosed trade secrets or other proprietary information of their former employers. Litigation may be necessary to defend against these claims. If we fail in defending such claims, in addition to paying monetary damages, we may lose valuable intellectual property rights or personnel. A loss of key research personnel or their work product could hamper or prevent our ability to commercialize certain potential drugs, which could severely harm our business. Even if we are successful in defending against these claims, litigation could result in substantial costs and be a distraction to management. Confidentiality agreements with employees and others may not adequately prevent disclosure of our trade secrets and other proprietary information and may not adequately protect our intellectual property, which could limit our ability to compete.

Because we operate in the highly technical field of drug discovery and development of small molecule drugs, we rely in part on trade secret protection in order to protect our proprietary technology and processes. However, trade secrets are difficult to protect. We enter into confidentiality and intellectual property assignment agreements with our corporate partners, employees, consultants, outside scientific collaborators, sponsored researchers, and other advisors. These agreements generally require that the other party keep confidential and not disclose to third parties all confidential information developed by the party or made known to the party by us during the course of the party's relationship with us. These agreements also generally provide that inventions conceived by the party in the course of rendering services to us will be our exclusive property. However, these agreements may not be honored and may not effectively assign intellectual property rights to us. Enforcing a claim that a party illegally obtained and is using our trade secrets is difficult, expensive and time consuming, and the outcome is unpredictable. In addition, courts outside the United States may be less willing to protect trade secrets. The failure to obtain or maintain trade secret protection could adversely affect our competitive position.

TABLE OF CONTENTS

Intellectual property rights of third parties may increase our costs or delay or prevent us from being able to commercialize our drug candidates.

There is a risk that we are infringing or will infringe on the proprietary rights of third parties because patents and pending applications belonging to third parties exist in the United States, the European Union and elsewhere in the world in the areas of our research. Others might have been the first to make the inventions covered by each of our or our licensors' pending patent applications and issued patents and might have been the first to file patent applications for these inventions. We are aware of several published patent applications, and understand that others may exist, that could support claims that, if granted and held valid, could cover various aspects of our developmental programs, including in some cases particular uses of our drug candidates sapacitabine, seliciclib, CYC065 or other therapeutic candidates, or substances, processes and techniques that we use in the course of our research and development and manufacturing processes. We are aware that other patents exist that claim substances, processes and techniques, which, if held valid, could potentially restrict the scope of our research, development or manufacturing operations. In addition, we understand that other applications and patents exist relating to potential uses of sapacitabine, seliciclib and CYC065 that are not part of our current clinical programs for these compounds. Numerous third-party United States and foreign issued patents and pending applications exist in the area of kinases, including CDK and PLK for which we have research programs. For example, some pending patent applications contain broad claims that could represent freedom to operate limitations for some of our kinase programs should they be issued unchanged. Although we intend to continue to monitor these applications, we cannot predict what claims will ultimately be allowed and if allowed what their scope would be. In addition, because the patent application process can take several years to complete, there may be currently pending applications, unknown to us, which may later result in issued patents that cover the production, manufacture, commercialization or use of our drug candidates. If we wish to use the technology or compound claimed in issued and unexpired patents owned by others, we will need to obtain a license from the owner, enter into litigation to challenge the validity of the patents or incur the risk of litigation in the event that the owner asserts that we infringe its patents. In one case we have opposed a European patent relating to human aurora kinase and the patent has been finally revoked (no appeal was filed).

There has been substantial litigation and other proceedings regarding patent and other intellectual property rights in the pharmaceutical and biotechnology industries. Defending against third party claims, including litigation in particular, would be costly and time consuming and would divert management's attention from our business, which could lead to delays in our development or commercialization efforts. If third parties are successful in their claims, we might have to pay substantial damages or take other actions that are adverse to our business. As a result of intellectual property infringement claims, or to avoid potential claims, we might:

- be prohibited from selling or licensing any product that we may develop unless the patent holder licenses the patent to us, which it is not required to do;
- be required to pay substantial royalties or grant a cross license to our patents to another patent holder; decide to locate some of our research, development or manufacturing operations outside of Europe or the United States;
- be required to pay substantial damages for past infringement, which we may have to pay if a court determines that our product candidates or technologies infringe a competitor's patent or other proprietary rights; or
- be required to redesign the manufacturing process or formulation of a drug candidate so it does not infringe which may not be possible or could require substantial funds and time.

We may incur substantial costs as a result of litigation or other proceedings relating to patent and other intellectual property rights.

If we choose to go to court to stop another party from using the inventions claimed in any patents we obtain, that individual or company has the right to ask the court to rule that such patents are invalid or should not be enforced against that third party. These lawsuits are expensive and would consume time and

26

TABLE OF CONTENTS

resources and divert the attention of managerial and scientific personnel even if we were successful in stopping the infringement of such patents. In addition, there is a risk that the court will decide that such patents are not valid and that we do not have the right to stop the other party from using the inventions.

There is also a risk that, even if the validity of such patents is upheld, the court will refuse to stop the other party on the ground that such other party's activities do not infringe our rights to such patents. In addition, the United States Supreme Court has recently modified some tests used by the United States Patent and Trademark Office, or USPTO, in granting patents over the past 20 years, which may decrease the likelihood that we will be able to obtain patents and increase the likelihood of challenge of any patents we obtain or license.

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

Periodic maintenance fees, renewal fees, annuity fees and various other governmental fees on patents and/or applications will be due to be paid to the USPTO and various governmental patent agencies outside of the United States in several stages over the lifetime of the patents and/or applications. We have systems in place to remind us to pay these fees, and we employ an outside firm and rely on our outside counsel to pay these fees. The USPTO and various non-United States governmental patent agencies require compliance with a number of procedural, documentary, fee payment and other similar provisions during the patent application process. We employ reputable law firms and other professionals to help us comply, and in many cases, an inadvertent lapse can be cured by payment of a late fee or by other means in accordance with the applicable rules. However, there are situations in which noncompliance can result in abandonment or lapse of the patent or patent application, resulting in partial or complete loss of patent rights in the relevant jurisdiction. In such an event, our competitors might be able to enter the market and this circumstance would have a material adverse effect on our business.

The patent applications of pharmaceutical and biotechnology companies involve highly complex legal and factual questions, which, if determined adversely to us, could negatively impact our patent position.

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions. The U.S. Patent and Trademark Office's, or USPTO's, standards are uncertain and could change in the future. Consequently, the issuance and scope of patents cannot be predicted with certainty. Patents, if issued, may be challenged, invalidated or circumvented. U.S. patents and patent applications may also be subject to interference proceedings, and U.S. patents may be subject to Inter Partes Review (IPR) or reexamination proceedings in the USPTO (and foreign patents may be subject to opposition or comparable proceedings in the corresponding foreign patent office), which proceedings could result in either loss of the patent or denial of the patent application or loss or reduction in the scope of one or more of the claims of the patent or patent application. Similarly, opposition or invalidity proceedings could result in loss of rights or reduction in the scope of one or more claims of a patent in foreign jurisdictions. In addition, such interference, reexamination and opposition proceedings may be costly. Accordingly, rights under any issued patents may not provide us with sufficient protection against competitive products or processes.

In addition, changes in or different interpretations of patent laws in the United States and foreign countries may permit others to use our discoveries or to develop and commercialize our technology and products without providing any compensation to us or may limit the number of patents or claims we can obtain. In particular, there have been proposals to shorten the exclusivity periods available under U.S. patent law that, if adopted, could substantially harm our business. The product candidates that we are developing are protected by intellectual property rights, including patents and patent applications. If any of our product candidates becomes a marketable product, we will rely on our exclusivity under patents to sell the compound and recoup our investments in the research and development of the compound. If the exclusivity period for patents is shortened, then our ability to generate revenues without competition will be reduced and our business could be materially adversely impacted. The laws of some countries do not protect intellectual property rights to the same extent as U.S. laws, and those countries may lack adequate rules and procedures for defending our intellectual property rights. For example, some countries do not

TABLE OF CONTENTS

grant patent claims directed to methods of treating humans and, in these countries, patent protection may take the form of alternative claim constructions or may not be available at all to protect our product candidates. In addition, U.S. patent laws may change, which could prevent or limit us from filing patent applications or patent claims to protect our products and/or technologies or limit the exclusivity periods that are available to patent holders. For example, the Leahy-Smith America Invents Act, or the Leahy-Smith Act, was signed into law and includes a number of significant changes to U.S. patent law. These include changes to transition from a “first-to-invent” system to a “first-to-file” system and to the way issued patents are challenged. These changes may favor larger and more established companies that have more resources to devote to patent application filing and prosecution. The USPTO has been in the process of implementing regulations and procedures to administer the Leahy-Smith Act, and many of the substantive changes to patent law associated with the Leahy-Smith Act may affect our ability to obtain, enforce or defend our patents. Accordingly, it is not clear what, if any, impact the Leahy-Smith Act will ultimately have on the cost of prosecuting our patent applications, our ability to obtain patents based on our discoveries and our ability to enforce or defend our issued patents.

If we fail to obtain and maintain patent protection and trade secret protection of our product candidates, proprietary technologies and their uses, we could lose our competitive advantage and competition we face would increase, reducing our potential revenues and adversely affecting our ability to attain or maintain profitability.

Risks Related to Securities Regulations and Investment in Our Securities

Failure to achieve and maintain internal controls in accordance with Sections 302 and 404 of the Sarbanes-Oxley Act of 2002 could have a material adverse effect on our business and stock price.

If we fail to maintain our internal controls or fail to implement required new or improved controls, as such control standards are modified, supplemented or amended from time to time, we may not be able to conclude on an ongoing basis that we have effective internal controls over financial reporting. Effective internal controls are necessary for us to produce reliable financial reports and are important in the prevention of financial fraud. If we cannot produce reliable financial reports or prevent fraud, our business and operating results could be harmed.

We incur increased costs and management resources as a result of being a public company, and we may fail to comply with public company obligations.

As a public company, we face and will continue to face increased legal, accounting, administrative and other costs and expenses as a public company that we would not incur as a private company. Compliance with the Sarbanes Oxley Act of 2002, as well as other rules of the SEC, the Public Company Accounting Oversight Board and NASDAQ resulted in a significant initial cost to us as well as an ongoing compliance cost. As a public company, we are subject to Section 404 of the Sarbanes Oxley Act relating to internal control over financial reporting. We have completed a formal process to evaluate our internal controls for purposes of Section 404, and we concluded that as of March 31, 2017, our internal control over financial reporting was effective. As our business grows and changes, there can be no assurances that we can maintain the effectiveness of our internal controls over financial reporting. In addition, our independent certified public accounting firm has not provided an opinion on the effectiveness of our internal controls over financial reporting for the quarter ended March 31, 2017 because we are a smaller reporting company. In the event our independent auditor is required to provide an opinion on such controls in the future, there is a risk that the auditor would conclude that such controls are ineffective.

Effective internal controls over financial reporting are necessary for us to provide reliable financial reports and, together with adequate disclosure controls and procedures, are designed to prevent fraud. If we cannot provide reliable financial reports or prevent fraud, our operating results could be harmed. We have completed a formal process to evaluate our internal control over financial reporting. However, guidance from regulatory authorities in the area of internal controls continues to evolve and substantial uncertainty exists regarding our on-going ability to comply by applicable deadlines. Any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations. Ineffective internal controls could also cause investors to lose confidence in our reported financial information, which could have a negative effect on the trading price of our common stock.

TABLE OF CONTENTS

Our common stock may have a volatile public trading price.

An active public market for our common stock has not developed. Our stock can trade in small volumes which may make the price of our stock highly volatile. The last reported price of our stock may not represent the price at which you would be able to buy or sell the stock. The market prices for securities of companies comparable to us have been highly volatile. Often, these stocks have experienced significant price and volume fluctuations for reasons that are both related and unrelated to the operating performance of the individual companies. In addition, the stock market as a whole and biotechnology and other life science stocks in particular have experienced significant recent volatility. Like our common stock, these stocks have experienced significant price and volume fluctuations for reasons unrelated to the operating performance of the individual companies. Factors giving rise to this volatility may include:

- disclosure of actual or potential clinical results with respect to product candidates we are developing;
- regulatory developments in both the United States and abroad;
- developments concerning proprietary rights, including patents and litigation matters;
- public concern about the safety or efficacy of our product candidates or technology, or related technology, or new technologies generally;
- concern about the safety or efficacy of our product candidates or technology, or related technology, or new technologies generally;
- public announcements by our competitors or others; and
- general market conditions and comments by securities analysts and investors.

For example, on February 23, 2017, we announced top-line results from the pivotal Phase 3 SEAMLESS study in elderly patients aged 70 years or older with newly diagnosed AML, who are not candidates for or have refused intensive induction chemotherapy. The trial did not meet its primary endpoint of demonstrating statistically significant improvement in overall survival for the experimental arm versus an active control. As a result of this announcement, the last reported sale price of our common stock on The NASDAQ Capital Market on February 23, 2017 dropped to \$4.05 from a last reported sale price of our common stock on February 22, 2017 of \$5.41.

We executed a reverse stock split in order to help maintain our continued listing on The NASDAQ Capital Market. The reduction in our outstanding shares may result in reduced liquidity for all stockholders and in increased volatility in our stock price over time.

The reduced trading volume which results from the decreased number of shares that are publically held may make it more difficult to buy or sell our stock, even though we may maintain our listing on The NASDAQ Capital Market. The reduced volume of stock trades that may result as a consequence of the reverse stock split may also increase the volatility of our stock price over time.

Fluctuations in our operating losses could adversely affect the price of our common stock.

Our operating losses may fluctuate significantly on a quarterly basis. Some of the factors that may cause our operating losses to fluctuate on a period-to-period basis include the status of our preclinical and clinical development programs, level of expenses incurred in connection with our preclinical and clinical development programs, implementation or termination of collaboration, licensing, manufacturing or other material agreements with third parties, non-recurring

revenue or expenses under any such agreement, and compliance with regulatory requirements. Period-to-period comparisons of our historical and future financial results may not be meaningful, and investors should not rely on them as an indication of future performance. Our fluctuating losses may fail to meet the expectations of securities analysts or investors. Our failure to meet these expectations may cause the price of our common stock to decline. If securities or industry analysts do not publish research or reports about us, if they change their recommendations regarding our stock adversely or if our operating results do not meet their expectations, our stock price and trading volume could decline.

The trading market for our common stock is influenced by the research and reports that industry or securities analysts publish about us. If analysts do not publish research reports or one or more of these

29

TABLE OF CONTENTS

analysts who were publishing research cease coverage of us or fail to regularly publish reports on us, we could lose visibility in the financial markets, which in turn could cause our stock price or trading volume to decline. Moreover, if one or more of the analysts who cover us downgrade our stock or if our operating results do not meet their expectations, our stock price could decline.

Anti-takeover provisions in our charter documents and provisions of Delaware law may make an acquisition more difficult and could result in the entrenchment of management.

We are incorporated in Delaware. Anti-takeover provisions of Delaware law and our amended and restated certificate of incorporation and amended and restated bylaws may make a change in control or efforts to remove management more difficult. Also, under Delaware law, our Board of Directors may adopt additional anti-takeover measures.

We have the authority to issue up to 5 million shares of preferred stock and to determine the terms of those shares of stock without any further action by our stockholders. If the Board of Directors exercises this power to issue preferred stock, it could be more difficult for a third party to acquire a majority of our outstanding voting stock and vote the stock they acquire to remove management or directors. Our amended and restated certificate of incorporation and amended and restated bylaws also provides staggered terms for the members of our Board of Directors. Under Section 141 of the Delaware General Corporation Law, our directors may be removed by stockholders only for cause and only by vote of the holders of a majority of voting shares then outstanding. These provisions may prevent stockholders from replacing the entire board in a single proxy contest, making it more difficult for a third-party to acquire control of us without the consent of our Board of Directors. These provisions could also delay the removal of management by the Board of Directors with or without cause. In addition, our directors may only be removed for cause and amended and restated bylaws limit the ability our stockholders to call special meetings of stockholders.

Under Section 203 of the Delaware General Corporation Law, a corporation may not engage in a business combination with any holder of 15% or more of its capital stock until the holder has held the stock for three years unless, among other possibilities, the Board of Directors approves the transaction. Our Board of Directors could use this provision to prevent changes in management. The existence of the foregoing provisions could limit the price that investors might be willing to pay in the future for shares of our common stock.

Certain severance-related agreements in our executive employment agreements may make an acquisition more difficult and could result in the entrenchment of management.

In March 2008 (as subsequently amended, most recently as of January 1, 2017), we entered into employment agreements with our President and Chief Executive Officer and our Executive Vice President, Finance, Chief Financial Officer and Chief Operating Officer, which contain severance arrangements in the event that such executive's employment is terminated without "cause" or as a result of a "change of control" (as each such term is defined in each agreement). The financial obligations triggered by these provisions may prevent a business combination or acquisition that would be attractive to stockholders and could limit the price that investors would be willing to pay in the future for our stock.

In the event of an acquisition of our common stock, we cannot assure our common stockholders that we will be able to negotiate terms that would provide for a price equivalent to, or more favorable than, the price at which our shares of common stock may be trading at such time.

We may not effect a consolidation or merger with another entity without the vote or consent of the holders of at least a majority of the shares of our preferred stock (in addition to the approval of our common stockholders), unless the preferred stock that remains outstanding and its rights, privileges and preferences are unaffected or are converted into or exchanged for preferred stock of the surviving entity having rights, preferences and limitations substantially similar, but no less favorable, to our convertible preferred stock.

In addition, in the event a third party seeks to acquire our company or acquire control of our company by way of a merger, but the terms of such offer do not provide for our preferred stock to remain outstanding or be converted into or exchanged for preferred stock of the surviving entity having rights, preferences and limitations substantially similar, but no less favorable, to our preferred stock, the terms of

TABLE OF CONTENTS

the Certificate of Designations of our preferred stock provide for an adjustment to the conversion ratio of our preferred stock such that, depending on the terms of any such transaction, preferred stockholders may be entitled, by their terms, to receive up to \$10.00 per share in common stock, causing our common stockholders not to receive as favorable a price as the price at which such shares may be trading at the time of any such transaction. As of March 31, 2017, there were 335,273 shares of our preferred stock issued and outstanding. If the transaction were one in which proceeds were received by the Company for distribution to stockholders, and the terms of the Certificate of Designations governing the preferred stock were strictly complied with, approximately \$4.0 million would be paid to the preferred holders before any distribution to the common stockholders, although the form of transaction could affect how the holders of preferred stock are treated. In such an event, although such a transaction would be subject to the approval of our holders of common stock, we cannot assure our common stockholders that we will be able to negotiate terms that would provide for a price equivalent to, or more favorable than, the price at which our shares of common stock may be trading at such time. Thus, the terms of our preferred stock might hamper a third party's acquisition of our company.

Our certificate of incorporation and bylaws and certain provisions of Delaware law may delay or prevent a change in our management and make it more difficult for a third-party to acquire us.

Our amended and restated certificate of incorporation and bylaws contain provisions that could delay or prevent a change in our Board of Directors and management teams. Some of these provisions:

- authorize the issuance of preferred stock that can be created and issued by the Board of Directors without prior stockholder approval, commonly referred to as "blank check" preferred stock, with rights senior to those of our common stock;
- provide for the Board of Directors to be divided into three classes; and
- require that stockholder actions must be effected at a duly called stockholder meeting and prohibit stockholder action by written consent.

In addition, because we are incorporated in Delaware, we are governed by the provisions of Section 203 of the Delaware General Corporation Law, which limits the ability of large stockholders to complete a business combination with, or acquisition of, us. These provisions may prevent a business combination or acquisition that would be attractive to stockholders and could limit the price that investors would be willing to pay in the future for our stock. These provisions also make it more difficult for our stockholders to replace members of our Board of Directors. Because our Board of Directors is responsible for appointing the members of our management team, these provisions could in turn affect any attempt to replace our current management team. Additionally, these provisions may prevent an acquisition that would be attractive to stockholders and could limit the price that investors would be willing to pay in the future for our common stock.

We may have limited ability to pay cash dividends on our preferred stock, and there is no assurance that future quarterly dividends will be declared.

Delaware law may limit our ability to pay cash dividends on our preferred stock. Under Delaware law, cash dividends on our preferred stock may only be paid from surplus or, if there is no surplus, from the corporation's net profits for the current or preceding fiscal year. Delaware law defines "surplus" as the amount by which the total assets of a corporation, after subtracting its total liabilities, exceed the corporation's capital, as determined by its board of directors.

Since we are not profitable, our ability to pay cash dividends will require the availability of adequate surplus. Even if adequate surplus is available to pay cash dividends on our preferred stock, we may not have sufficient cash to pay dividends on the preferred stock or we may choose not to declare the dividends.

TABLE OF CONTENTS

Our common and preferred stock may experience extreme price and volume fluctuations, which could lead to costly securities-related litigation, including securities class action litigation or securities-related investigations, which could make an investment in us less appealing.

The market price of our common and preferred stock may fluctuate substantially due to a variety of factors, including:

- additions to or departures of our key personnel;
- announcements of technological innovations or new products or services by us or our competitors;
- announcements concerning our competitors or the biotechnology industry in general;
- new regulatory pronouncements and changes in regulatory guidelines;
- general and industry-specific economic conditions;
- changes in financial estimates or recommendations by securities analysts;
- variations in our quarterly results; and
- announcements about our collaborators or licensors; and changes in accounting principles.

The stock markets have from time to time experienced significant price and volume fluctuations that have affected the market prices for publicly traded securities. The market prices of the securities of biotechnology companies, particularly companies like us without product revenues and earnings, have been highly volatile and are likely to remain highly volatile in the future. This volatility has often been unrelated to the performance of particular companies. In the past, companies that experience volatility in the market price of their securities have often faced securities class action and derivative litigation, and as a public company, we could be subject to sanctions or investigations by NASDAQ, the SEC or other regulatory authorities. Moreover, market prices for stocks of biotechnology-related and technology companies frequently reach levels that bear no relationship to the performance of these companies. These market prices generally are not sustainable and are highly volatile.

As a result of our recent announcement of top-line results from the pivotal Phase 3 SEAMLESS study, our stock price declined substantially. In the past, securities class action litigation has often been brought against a company following a decline in the market price of its securities.

Whether or not meritorious, litigation brought against us could result in substantial costs, divert our management's attention and resources and harm our financial condition and results of operations.

The future sale of our common and preferred stock and future issuances of our common stock upon conversion of our preferred stock could negatively affect our stock price and cause dilution to existing holders of our common stock. If our common or preferred stockholders sell substantial amounts of our stock in the public market, or the market perceives that such sales may occur, the market price of our common and preferred stock could fall. If additional holders of preferred stock elect to convert their shares to shares of common stock at renegotiated prices, such conversion as well as the sale of substantial amounts of our common stock, could cause dilution to existing holders of our common stock, thereby also negatively affecting the price of our common stock. For example, in 2013, we issued an aggregate of 140,373 shares of our common stock in exchange for an aggregate of 877,869 shares of our preferred

stock in arms-length negotiations between us and the other parties who had approached us to propose the exchanges. If we exchange the convertible preferred stock for debentures, the exchange will be taxable, but we will not provide any cash to pay any tax liability that any convertible preferred stockholder may incur.

An exchange of convertible preferred stock for debentures, as well as any dividend make-whole or interest make-whole payments paid in our common stock, will be taxable events for United States federal income tax purposes, which may result in tax liability for the holder of convertible preferred stock without any corresponding receipt of cash by the holder. In addition, the debentures may be treated as having

32

TABLE OF CONTENTS

original issue discount, a portion of which would generally be required to be included in the holder's gross income even though the cash to which such income is attributable would not be received until maturity or redemption of the debenture. We will not distribute any cash to the holders of the securities to pay these potential tax liabilities.

If we automatically convert the preferred stock, there is a substantial risk of fluctuation in the price of our common stock from the date we elect to automatically convert to the conversion date.

We may automatically convert the preferred stock into common stock if the closing price of our common stock exceeds \$2,961 per share. There is a risk of fluctuation in the price of our common stock between the time when we may first elect to automatically convert the preferred and the automatic conversion date.

We do not intend to pay cash dividends on our common stock in the foreseeable future.

We do not anticipate paying cash dividends on our common stock in the foreseeable future. Any payment of cash dividends will depend on our financial condition, results of operations, capital requirements, the outcome of the review of our strategic alternatives and other factors and will be at the discretion of our Board of Directors.

Accordingly, investors will have to rely on capital appreciation, if any, to earn a return on their investment in our common stock. Furthermore, we may in the future become subject to contractual restrictions on, or prohibitions against, the payment of dividends.

The number of shares of common stock which are registered is significant in relation to our currently outstanding common stock and could cause downward pressure on the market price for our common stock.

The number of shares of common stock registered for resale is significant in relation to the number of shares of common stock currently outstanding. If the security holder determines to sell a substantial number of shares into the market at any given time, there may not be sufficient demand in the market to purchase the shares without a decline in the market price for our common stock. Moreover, continuous sales into the market of a number of shares in excess of the typical trading volume for our common stock, or even the availability of such a large number of shares, could depress the trading market for our common stock over an extended period of time.

If persons engage in short sales of our common stock, including sales of shares to be issued upon exercise of our outstanding warrants, the price of our common stock may decline.

Selling short is a technique used by a stockholder to take advantage of an anticipated decline in the price of a security.

In addition, holders of options and warrants will sometimes sell short knowing they can, in effect, cover through the exercise of an option or warrant, thus locking in a profit. A significant number of short sales or a large volume of other sales within a relatively short period of time can create downward pressure on the market price of a security.

Further sales of common stock issued upon exercise of our outstanding warrants could cause even greater declines in the price of our common stock due to the number of additional shares available in the market upon such exercise, which could encourage short sales that could further undermine the value of our common stock. You could, therefore, experience a decline in the value of your investment as a result of short sales of our common stock.

We are exposed to risk related to the marketable securities we may purchase.

We may invest cash not required to meet short term obligations in short term marketable securities. We may purchase securities in United States government, government-sponsored agencies and highly rated corporate and asset-backed securities subject to an approved investment policy. Historically, investment in these securities has been highly liquid and has experienced only very limited defaults. However, recent volatility in the financial markets has created additional uncertainty regarding the liquidity and safety of these investments. Although we believe our marketable securities investments are safe and highly liquid, we cannot guarantee that our investment portfolio will not be negatively impacted by recent or future market volatility or credit restrictions.

TABLE OF CONTENTS

Claims for indemnification by our directors and officers may reduce our available funds to satisfy successful stockholder claims against us and may reduce the amount of money available to us.

As permitted by Section 102(b)(7) of the Delaware General Corporation Law, our restated certificate of incorporation limits the liability of our directors to the fullest extent permitted by law. In addition, as permitted by Section 145 of the Delaware General Corporation Law, our restated certificate of incorporation and restated bylaws provide that we shall indemnify, to the fullest extent authorized by the Delaware General Corporation Law, each person who is involved in any litigation or other proceeding because such person is or was a director or officer of our company or is or was serving as an officer or director of another entity at our request, against all expense, loss or liability reasonably incurred or suffered in connection therewith. Our restated certificate of incorporation provides that the right to indemnification includes the right to be paid expenses incurred in defending any proceeding in advance of its final disposition, provided, however, that such advance payment will only be made upon delivery to us of an undertaking, by or on behalf of the director or officer, to repay all amounts so advanced if it is ultimately determined that such director is not entitled to indemnification.

If we do not pay a proper claim for indemnification in full within 60 days after we receive a written claim for such indemnification, except in the case of a claim for an advancement of expenses, in which case such period is 20 days, our restated certificate of incorporation and our restated bylaws authorize the claimant to bring an action against us and prescribe what constitutes a defense to such action.

Section 145 of the Delaware General Corporation Law permits a corporation to indemnify any director or officer of the corporation against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with any action, suit or proceeding brought by reason of the fact that such person is or was a director or officer of the corporation, if such person acted in good faith and in a manner that he reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, if he or she had no reason to believe his or her conduct was unlawful. In a derivative action, (i.e., one brought by or on behalf of the corporation), indemnification may be provided only for expenses actually and reasonably incurred by any director or officer in connection with the defense or settlement of such an action or suit if such person acted in good faith and in a manner that he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification shall be provided if such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the court in which the action or suit was brought shall determine that the defendant is fairly and reasonably entitled to indemnity for such expenses despite such adjudication of liability.

The rights conferred in the restated certificate of incorporation and the restated bylaws are not exclusive, and we are authorized to enter into indemnification agreements with our directors, officers, employees and agents and to obtain insurance to indemnify such persons. We have entered into indemnification agreements with each of our officers and directors.

The above limitations on liability and our indemnification obligations limit the personal liability of our directors and officers for monetary damages for breach of their fiduciary duty as directors by shifting the burden of such losses and expenses to us. Although we obtained coverage under our directors' and officers' liability insurance, certain liabilities or expenses covered by our indemnification obligations may not be covered by such insurance or the coverage limitation amounts may be exceeded. As a result, we may need to use a significant amount of our funds to satisfy our indemnification obligations, which could severely harm our business and financial condition and limit the funds available to stockholders who may choose to bring a claim against our company.

Risks Related to this Offering

Our management team will have broad discretion over the use of the net proceeds from this offering.

Our management will use its discretion to direct the net proceeds from this offering. We intend to use all of the net proceeds, together with cash on hand, for general corporate purposes. General corporate purposes may include working capital, capital expenditures, development costs, strategic investments or possible acquisitions. Our management's judgments may not result in positive returns on your investment and you will not have an opportunity to evaluate the economic, financial or other information upon which our management bases its decisions.

TABLE OF CONTENTS

Failure to maintain effective internal controls could adversely affect our operating results and the market for our common stock.

Section 404 of the Sarbanes-Oxley Act of 2002 requires that we maintain internal control over financial reporting that meets applicable standards. As with many smaller companies with small staff, material weaknesses in our financial controls and procedures may be discovered. If we are unable, or are perceived as unable, to produce reliable financial reports due to internal control deficiencies, investors could lose confidence in our reported financial information and operating results, which could result in a negative market reaction and adversely affect our ability to raise capital.

Our stock price may be subject to substantial volatility, and the value of our stockholders' investment may decline. Sales of a substantial number of shares of our common stock in the public market following this offering could cause the market price of our common stock to decline. Additionally, the price at which our common stock will trade may fluctuate as a result of a number of factors, including the number of shares available for sale in the market, quarterly variations in our operating results and actual or anticipated announcements of our trials, regulatory investigations or determinations, acquisitions or strategic alliances by us or our competitors, recruitment or departures of key personnel, changes in the estimates of our operating performance, actual or threatened litigation, market conditions in our industry and the economy as a whole.

Numerous factors, including many over which we have no control, may have a significant impact on the market price of our common stock, including:

- announcements of new programs or developments by us or our competitors;
- current events affecting the political, economic and social situation in the United States and other countries where we operate;
- trends in our industry and the markets in which we operate;
- adoption of new laws, rules and regulations affecting the health care industry;
- changes in financial estimates and recommendations by securities analysts;
- acquisitions and financings by us or our competitors;
- the gain or loss of a significant customer;
- quarterly variations in operating results;
- the operating and stock price performance of other companies that investors may consider to be comparable;
- purchases or sales of blocks of our securities; and
- issuances of stock.

Furthermore, stockholders may initiate securities class action lawsuits if the market price of our stock drops significantly, which may cause us to incur substantial costs and could divert the time and attention of our management.

If you purchase shares of our common stock in this offering, you will suffer immediate dilution of your investment. We expect the public offering price of our common stock to be substantially higher than the pro forma net tangible book value per share of our common stock. Therefore, if you purchase shares of our common stock in this offering, you will pay a price per share that substantially exceeds our pro forma as adjusted net tangible book value per share after this offering. Based on an assumed public offering price of \$4.12 per share, which is the last reported sale price for our common stock as reported on the NASDAQ Capital

35

TABLE OF CONTENTS

Market on June 23, 2017, after deducting estimated underwriting discounts pro forma and commissions and estimated offering expenses payable by us, you will experience immediate dilution of \$0.70 per share, representing the difference between our as adjusted net tangible book value per share after this offering and the assumed public offering price.

In addition, as of June 23, 2017, we had outstanding stock options to purchase 387,886 shares of common stock. To the extent these outstanding options are exercised, there may be further dilution to investors in this offering.

Future issuances of common stock and hedging activities may depress the trading price of our common stock.

Any future issuance of equity securities could dilute the interests of our existing stockholders, and could substantially decrease the trading price of our common stock. As of June 23, 2017, we have outstanding options to purchase approximately 387,886 shares of our common stock. We may issue equity securities in the future for a number of reasons, including to finance our operations and business strategy, in connection with acquisitions, to adjust our ratio of debt to equity, to satisfy our obligations upon the exercise of outstanding warrants or options or for other reasons.

Because we do not anticipate paying any cash dividends on our common stock in the foreseeable future, capital appreciation, if any, will be your sole source of gain.

We have never declared or paid cash dividends on our common stock. We anticipate that we will retain our earnings, if any, for future growth and therefore do not anticipate paying cash dividends in the future. As a result, only appreciation of the price of our common stock will provide a return to stockholders.

You may experience future dilution as a result of future equity offerings.

In order to raise additional capital, we may in the future offer additional shares of our common stock or other securities convertible into or exchangeable for our common stock. We cannot assure you that we will be able to sell shares or other securities in any other offering at a price per share that is equal to or greater 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 other securities convertible into or exchangeable for our common stock in future transactions may be higher or lower than the price per share in this offering.

TABLE OF CONTENTS

CAUTIONARY NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains “forward-looking statements” within the meaning of the Private Securities Litigation Reform Act of 1995. These statements may be made directly in this prospectus, and they may also be made a part of this prospectus by reference to other documents filed with the Securities and Exchange Commission, which is known as “incorporation by reference.” Statements in this prospectus that are not descriptions of historical facts, including statements regarding our future results of operations and financial position, business strategy, prospective products, product approvals, research and development costs, timing and likelihood of success, plans and objectives of management for future operations, and future results of anticipated products, are forward-looking statements that are based on management’s current expectations and assumptions and are subject to risks and uncertainties.

Words such as “may,” “anticipate,” “estimate,” “expects,” “projects,” “intends,” “plans,” “believes” and words and terms of similar substance used in connection with any discussion of future operating or financial performance identify forward-looking statements. All forward-looking statements are management’s present expectations of future events and are subject to a number of risks and uncertainties that could cause actual results to differ materially from those described in the forward-looking statements. Forward-looking statements might include one or more of the following:

- anticipated results of financing activities;
- anticipated agreements with marketing partners;
- anticipated clinical trial timelines or results;
- anticipated research and product development results;
- projected regulatory timelines;
- descriptions of plans or objectives of management for future operations, products or services;
- forecasts of future economic performance; and
- descriptions or assumptions underlying or relating to any of the above items.

Please also see the discussion of risks and uncertainties under the heading “Risk Factors” beginning on page 7. In light of these assumptions, risks and uncertainties, the results and events discussed in the forward-looking statements contained in this prospectus or in any document incorporated by reference might not occur. Investors are cautioned not to place undue reliance on the forward-looking statements, which speak only as of the date of this prospectus or the date of the document incorporated by reference in this prospectus. We are not under any obligation, and we expressly disclaim any obligation, to update or alter any forward-looking statements, whether as a result of new information, future events or otherwise. All subsequent forward-looking statements attributable to Cyclacel or to any person acting on its behalf are expressly qualified in their entirety by the cautionary statements contained or referred to in this section.

TABLE OF CONTENTS**USE OF PROCEEDS**

We estimate that the net proceeds from this offering will be approximately \$ million, based on an assumed offering price of \$4.12 per Class A Unit and \$1,000 per Class B Unit, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. If the underwriters exercise their over-allotment option in full, we estimate that our net proceeds will be approximately \$ million, after deducting the underwriting discounts and commissions and estimated offering expenses payable by us. We will not receive any additional proceeds from any future conversions of the Series A Preferred Stock. We will only receive additional proceeds from the exercise of the warrants issuable in connection with this offering if the warrants are exercised and the holders of such warrants pay the exercise price in cash upon such exercise and do not utilize the cashless exercise provision of the warrants. We intend to use the net proceeds from this offering to continue funding our Transcriptional Regulation-CDK inhibitor and DNA Damage Response programs, and, to a lesser extent, for other development of our clinical and preclinical programs, other research and development activities, business development and general corporate purposes, which may include capital expenditures and funding our working capital needs.

Our management will have broad discretion in the application of the net proceeds from this offering, and investors will be relying on the judgment of our management with regard to the use of these net proceeds. Pending the use of the net proceeds from this offering as described above, we intend to hold the net proceeds in cash or invest in short-term, investment-grade, interest-bearing instruments.

MARKET FOR COMMON EQUITY AND RELATED STOCKHOLDER MATTERS

Our common stock is traded on The NASDAQ Capital Market, or NASDAQ, under the symbol “CYCC.” Our preferred stock currently trades on NASDAQ under the symbol “CYCCP.” The following table summarizes, for the periods indicated, the high and low sales prices for the common stock as reported by NASDAQ:

	High	Low
2017		
1st Quarter	\$ 6.14	\$ 3.13
2nd Quarter	\$ 10.90	\$ 3.77
3rd Quarter (through July 13, 2017)	\$ 3.87	\$ 3.37
2016		
1st Quarter	\$ 6.45	\$ 3.60
2nd Quarter	\$ 8.27	\$ 3.84
3rd Quarter	\$ 9.72	\$ 4.21
4th Quarter	\$ 6.18	\$ 3.05
2015		
1st Quarter	\$ 2.13	\$ 0.51
2nd Quarter	\$ 1.10	\$ 0.68
3rd Quarter	\$ 0.80	\$ 0.49
4th Quarter	\$ 1.05	\$ 0.47

On July 13, 2017, we had approximately 49 registered holders of record of our common stock. On July 13, 2017, the closing sale price of our common stock as reported by NASDAQ was \$4.12 per share.

TABLE OF CONTENTS

DIVIDEND POLICY

We have never declared any cash dividends with respect to our common stock. Future payment of dividends is within the discretion of our board of directors and will depend on our earnings, capital requirements, financial condition and other relevant factors. Although there are no material restrictions limiting, or that are likely to limit, our ability to pay dividends on our common stock, we presently intend to retain future earnings, if any, for use in our business and have no present intention to pay cash dividends on our common stock.

CAPITALIZATION

The following table sets forth our capitalization as of March 31, 2017:

- On an actual basis;
- on an as adjusted basis to give effect to the sale of 667,476 Class A Units and 8,250 Class B Units in this offering (based on an assumed public offering price per share of \$4.12), the application of the net proceeds of this offering and after deducting estimated offering expenses payable by us; and
- on a pro forma basis to also reflect the conversion of all outstanding shares of our Series A Preferred Stock into 2,002,427 shares of common stock.

You should read this table together with the sections entitled “Use of Proceeds,” as well as our financial statements and the related notes, which appear elsewhere in this prospectus.

(In thousands, except for number of shares)	As of March 31, 2017		
	Actual (unaudited)	As adjusted (unaudited)	Pro Forma As Adjusted (unaudited)
Preferred stock, \$0.001 par value; 5,000,000 shares authorized; 335,273 shares issued and outstanding; aggregate liquidation preference of \$4,006,512 as of March 31, 2017, actual; and 343,523 issued and outstanding, as adjusted, and 335,273 pro forma as adjusted	—	—	—
Common stock, \$0.001 par value; 100,000,000 shares authorized; 4,272,947 shares issued and outstanding as of March 31, 2017, actual; and 4,940,423 issued and outstanding, as adjusted, and 6,942,850 pro forma as adjusted	4	5	7
Additional paid-in capital	350,156	360,958	360,956
Accumulated other comprehensive income (loss)	(748)	(748)	(748)
Accumulated deficit	(336,594)	(336,594)	(336,594)
Total Stockholders' equity (deficit)	(12,818)	(23,621)	(23,623)
Total capitalization	\$ 17,073	\$ 27,876	\$ 27,876

The number of shares of common stock to be outstanding after this offering is based on 4,272,947 shares of common stock outstanding as of March 31, 2017, which does not include:

- 167,000 shares of common stock issued in April 2017 under the Company's sales agreement with FBR;
-

387,519 shares of common stock issuable upon the exercise of outstanding stock options as of March 31, 2017, at a weighted average exercise price of \$22.78 per share; and

•

8,529 shares of common stock reserved for future issuance under our equity incentive plan as of March 31, 2017.

TABLE OF CONTENTSDILUTION

If you acquire shares of our common stock in this offering, your ownership interest will be diluted to the extent of the difference between the public offering price per share of our common stock and the pro forma net tangible book value per share of our common stock after this offering. Our historical net tangible book value of common stock as of March 31, 2017 was \$12.8 million, or \$3.00 per share of common stock. Historical net tangible book value per share represents the amount of our total tangible assets less total liabilities, divided by the total number of shares of common stock outstanding.

After giving effect to the sale of 667,476 shares of common stock and the conversion of all outstanding shares of our Series A Preferred Stock into 2,002,427 shares of common stock at \$4.12 per share, and after deducting estimated offering expenses payable by us, our pro forma net tangible book value as of March 31, 2017 would have been \$23.6 million, or \$3.40 per share of common stock. This represents an immediate increase in pro forma net tangible book value of \$0.40 per share to our existing stockholders and an immediate dilution in pro forma net tangible book value of \$(0.72) per share to investors participating in this offering. The following table illustrates this per share dilution:

Assumed public offering price per share	4.12
Historical net tangible book value per share as of March 31, 2017	3.00
Increase in net tangible book value per share attributable to this offering	0.40
Pro forma net tangible book value per share after this offering	3.40
Dilution per share to investors participating in this offering	(0.72)

The table and calculations set forth above are based on the number of shares of common stock outstanding as of March 31, 2017 and assumes no exercise of any outstanding options. To the extent that options are exercised, there will be further dilution to new investors.

The number of shares outstanding after this offering does not include:

- 167,000 shares of common stock issued in April 2017 under the Company's sales agreement with FBR;
- 8,529 shares of common stock authorized and reserved for future issuance under our equity incentive plans;
- 387,519 shares of common stock issuable upon exercise of outstanding stock options; and
- 4,672,330 shares of our common stock that may be issued upon conversion of shares of Series A Preferred Stock and exercise of warrants issued in this offering.

TABLE OF CONTENTS

SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT

The following table sets forth certain information with respect to the beneficial ownership of our Common Stock and Preferred Stock as of April 5, 2017 for (a) the executive officers named in the Summary Compensation Table on page 17 of this proxy statement, (b) each of our directors and director nominees, (c) all of our current directors and executive officers as a group, and (d) each stockholder known by us to own beneficially more than 5% of our Common Stock or Preferred Stock, relying solely upon the amounts and percentages disclosed in their public filings. Beneficial ownership is determined in accordance with the rules of the SEC and includes voting or investment power with respect to the securities. We deem shares of Common Stock that may be acquired by an individual or group within 60 days of April 5, 2017 pursuant to the exercise of options or warrants to be outstanding for the purpose of computing the percentage ownership of such individual or group, but are not deemed to be outstanding for the purpose of computing the percentage ownership of any other person shown in the table. Except as indicated in footnotes to this table, we believe that the stockholders named in this table have sole voting and investment power with respect to all shares of stock shown to be beneficially owned by them based on information provided to us by these stockholders. Percentage of ownership of Common Stock is based on 4,272,021 shares of Common Stock outstanding as of April 5, 2017. Percentage of ownership of Preferred Stock is based on 335,273 shares of Preferred Stock outstanding as of April 5, 2017.

The address for each of the directors, director nominees and named executive officers is c/o Cyclacel Pharmaceuticals, Inc., 200 Connell Drive Suite 1500, Berkeley Heights, New Jersey 07922. Addresses of other beneficial owners are noted in the table.

	Number of Shares of Common Stock Beneficially Owned(1)	Percentage of Common Stock Owned	Number of Shares of Preferred Stock Beneficially Owned	Percentage of Preferred Stock Owned
Directors, Director Nominee and Named Executive Officers				
Sir John Banham(2)	5,967	*	0	0%
Dr. Samuel L. Barker(3)	3,508	*	0	0%
Dr. Judy Chiao(4)	26,215	*	0	0%
Dr. Christopher Henney(5)	7,564	*	0	0%
Paul McBarron(6)	29,703	*	0	0%
Spiro Rombotis(7)	54,138	1.3%	1,600	*
Dr. David U'Prichard(8)	7,865	*	0	0%
Lloyd Sems(9)	6,623	*	0	0%
Gregory T. Hradsky(10)	3,846	*	0	0%
Executive officers and directors as a group (10 persons)(11)	145,429	3.4%	0	0%
5% or more stockholders				
Eastern Capital Limited(12)	467,261	11.0%	0	0%
Portfolio Services Ltd.(12)	467,261	11.0%	0	0%
Kenneth B. Dart(12)	467,261	11.0%	0	0%
Kevin C. Tang(13)	559,900	13.2%	0	0%
Tang Capital Management LLC(13)	559,900	13.2%	0	0%
Tang Capital Partners LP(13)	559,900	13.2%	0	0%

*
Represents beneficial ownership of less than 1% of the outstanding shares of our Common Stock.

41

TABLE OF CONTENTS

(1)

Beneficial ownership is determined in accordance with the rules of the SEC and generally includes voting or investment power with respect to securities. Beneficial ownership also includes shares of Common Stock subject to options and warrants currently exercisable or convertible, or exercisable or convertible within 60 days of April 5, 2017. Except as indicated by footnote, to our knowledge, all persons named in the table above have sole voting and investment power with respect to all shares of Common Stock shown as beneficially owned.

(2)

Includes options to purchase 1,268 shares of Common Stock that are exercisable within 60 days of April 5, 2017.

(3)

Includes options to purchase 1,250 shares of Common Stock that are exercisable within 60 days of April 5, 2017.

(4)

Includes options to purchase 1,263 shares of Common Stock that are exercisable within 60 days of April 5, 2017.

(5)

Includes options to purchase 1,275 shares of Common Stock that are exercisable within 60 days of April 5, 2017.

(6)

Includes options to purchase 1,450 shares of Common Stock that are exercisable within 60 days of April 5, 2017.

(7)

Includes options to purchase 2,405 shares of Common Stock that are exercisable within 60 days of April 5, 2017. Of the shares of Common Stock reported, 11 shares are held indirectly by Mr. Rombotis through his IRA account. Does not include 12,263 shares of Common Stock beneficially owned by Kalliopi Rombotis, Mr. Rombotis' mother. Mr. Rombotis disclaims beneficial ownership of the foregoing shares.

(8)

Includes options to purchase 1,275 shares of Common Stock that are exercisable within 60 days of April 5, 2017.

(9)

Includes options to purchase 1,263 shares of Common Stock that are exercisable within 60 days of April 5, 2017.

(10)

Includes options to purchase 1,263 shares of Common Stock that are exercisable within 60 days of April 5, 2017.

(11)

See footnotes 2 through and including 10.

(12)

Based solely on a Schedule 13G/A filed by Eastern Capital Limited ("Eastern") with the SEC on February 14, 2017. Kenneth B. Dart is the beneficial owner of all of the outstanding shares of Portfolio Services Ltd., which, in turn, owns all of the outstanding shares of Eastern. The principal business address of each beneficial owner is 10 Market Street, #773, Camana Bay, Grand Cayman, KY1-9006, Cayman Islands.

(13)

Based solely on a Schedule 13D/A filed by Tang Capital Partners, LP on February 27, 2017. Kevin C. Tang is the manager of Tang Capital Management, LLC, which, in turn, is the general partner of Tang Capital Partners, LP. The principal business address of each beneficial owner is 4747 Executive Drive, Suite 510, San Diego, CA 92121.

TABLE OF CONTENTS

UNDERWRITING

We have entered into an underwriting agreement dated _____, 2017 with Ladenburg Thalmann & Co. Inc., as the representative of the underwriters (the “representative”) named below and the sole book-running manager of this offering. Subject to the terms and conditions of the underwriting agreement, the underwriters have agreed to purchase the number of our securities set forth opposite its name below.

Underwriter	Class A Units	Class B Units
Ladenburg Thalmann & Co. Inc.		
Total		

A copy of the underwriting agreement will be filed as an exhibit to the registration statement of which this prospectus is part.

We have been advised by the underwriters that they propose to offer the units directly to the public at the assumed public offering price set forth on the cover page of this prospectus. The underwriters may sell Class A Units or Class B Units separately to purchasers or may sell a combination of Class A Units and Class B Units to purchasers in any proportion. Any securities sold by the underwriters to securities dealers will be sold at the public offering price less a selling concession not in excess of \$ _____ per share. The underwriters may allow and these selected dealers may re-allow a concession of not more than \$ _____ per share to other brokers and dealers. The underwriting agreement provides that the underwriters’ obligation to purchase the securities we are offering is subject to conditions contained in the underwriting agreement.

No action has been taken by us or the underwriters that would permit a public offering of the units, or the shares of common stock, shares of preferred stock and warrants included in the units, in any jurisdiction outside the United States where action for that purpose is required. None of our securities included in this offering may be offered or sold, directly or indirectly, nor may this prospectus or any other offering material or advertisements in connection with the offer and sales of any of the securities offering hereby be distributed or published in any jurisdiction except under circumstances that will result in compliance with the applicable rules and regulations of that jurisdiction. Persons who receive this prospectus are advised to inform themselves about and to observe any restrictions relating to this offering of securities and the distribution of this prospectus. This prospectus is neither an offer to sell nor a solicitation of any offer to buy the securities in any jurisdiction where that would not be permitted or legal.

The underwriters have advised us that they do not intend to confirm sales to any account over which they exercise discretionary authority.

Underwriting Discount and Expenses

The following table summarizes the underwriting discount and commission to be paid to the underwriters by us.

	Per Class A Unit(1)	Per Class B Unit(1)	Total
Public offering price			
Underwriting discount to be paid to the underwriters by us (7.0%)(2)			
Proceeds to us (before expenses)			

(1)

The public offering price and underwriting discount corresponds to (x) in respect of the Class A Units (i) a public offering price per share of common stock of \$ _____ and (ii) a public offering price per warrant of \$ _____ and (y) in respect Class B Units (i) a public offering price per share of Series A Preferred Stock of \$ _____ and (ii) a public offering price per warrant of \$ _____.

(2)

We have granted a 45-day option to the representative to purchase up to 400,485 additional shares of common stock (up to 15% of the shares of common stock plus the number of shares of common stock issuable upon conversion of shares of Series A Preferred Stock) and/or additional warrants exercisable

TABLE OF CONTENTS

for up to an additional 400,485 shares of common stock (up to 15% of the warrants sold in this offering) at the assumed public offering price per share of common stock and the assumed public offering price per warrant set forth above less the underwriting discounts and commissions solely to cover over-allotments, if any.

We estimate the total expenses payable by us for this offering to be approximately \$, which amount includes (i) the underwriting discount of \$ (\$ if the underwriters' over-allotment option is exercised in full) and (ii) reimbursement of the accountable expenses of the representative equal to \$85,000 including the legal fees of the representative being paid by us and (iii) other estimated company expenses of approximately \$ which includes legal, accounting, and printing costs and various fees associated with the registration and listing of our shares.

The securities we are offering are being offered by the underwriters subject to certain conditions specified in the underwriting agreement.

Over-allotment Option

We have granted to the representative an option exercisable not later than 45 days after the date of this prospectus to purchase up to a number of additional shares of common stock and/or warrants equal to 15% of the number of shares of common stock sold in the primary offering (including the number of shares of common stock issuable upon conversion of shares of Series A Preferred Stock but excluding any shares of common stock underlying the warrants issued in this offering and any shares of common stock issued upon any exercise of the underwriter's over-allotment option) and/or 15% of the warrants sold in the primary offering at the assumed public offering price per share of common stock and the assumed public offering price per warrant set forth on the cover page hereto less the underwriting discounts and commissions. The representative may exercise the option solely to cover over-allotments, if any, made in connection with this offering. If any additional shares of common stock and/or warrants are purchased, the representative will offer these shares of common stock and/or warrants on the same terms as those on which the other securities are being offered.

Determination of Offering Price

Our common stock is listed on the NASDAQ Capital Market under the symbol "CYCC." On July 13, 2017, the last reported sale price for our common stock was \$3.65 per share. The price of our common stock on the NASDAQ Capital Market during recent periods will only be one of many factors in determining the public offering price. Other factors to be considered include our history, our prospects, the industry in which we operate, the previous experience of our executive officers and the general condition of the securities markets at the time of this offering. All share and warrant numbers of the securities being offered included in this prospectus are based on an assumed public offering price per Class A Unit of \$4.12 and an assumed initial Conversion Price of the Series A Preferred Stock of \$4.12, the last reported sale price for our common stock on June 23, 2017. We do not intend to apply for listing of the warrants offered hereby or the shares of Series A Preferred Stock on any securities exchange or trading system.

Lock-up Agreements

Our officers, directors and each of their respective affiliates and associated partners have agreed with the representative to be subject to a lock-up period of 90 days following the date of this prospectus. This means that, during the applicable lock-up period, such persons may not offer for sale, contract to sell, sell, distribute, grant any option, right or warrant to purchase, pledge, hypothecate or otherwise dispose of, directly or indirectly, any shares of our common stock or any securities convertible into, or exercisable or exchangeable for, shares of our common stock. The lock-up period is subject to an additional extension to accommodate for our reports of financial results or material news releases. Certain limited transfers are permitted during the lock-up period if the transferee agrees to these lock-up restrictions. We have also agreed, in the underwriting agreement, to similar lock-up restrictions on the issuance and sale of our securities until January 5, 2018, although we will be permitted to issue stock options or stock awards to directors, officers and employees under our existing plans. The representative may, in its sole discretion and without notice, waive the terms of any of these lock-up agreements.

TABLE OF CONTENTS

Other Relationships

Upon completion of this offering, we have granted the representative a right of first refusal to act as sole bookrunner or exclusive placement agent in connection with any subsequent public or private offering of equity securities or other capital markets financing by us. This right of first refusal does not apply to any “at-the-market,” continuous equity transaction or equity line. This right of first refusal extends for 9 months from the closing date of this offering. The terms of any such engagement of the representative will be determined by separate agreement.

Transfer Agent and Registrar

The transfer agent and registrar for our common stock is American Stock Transfer & Trust Company.

Stabilization, Short Positions and Penalty Bids

The underwriters may engage in syndicate covering transactions stabilizing transactions and penalty bids or purchases for the purpose of pegging, fixing or maintaining the price of our common stock:

- Syndicate covering transactions involve purchases of securities in the open market after the distribution has been completed in order to cover syndicate short positions. Such a naked short position would be closed out by buying securities in the open market. A naked short position is more likely to be created if the underwriters are concerned that there could be downward pressure on the price of the securities in the open market after pricing that could adversely affect investors who purchase in the offering.

- Stabilizing transactions permit bids to purchase the underlying security so long as the stabilizing bids do not exceed a specific maximum.

- 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 stabilizing or syndicate covering transaction to cover syndicate short positions.

These syndicate covering transactions, stabilizing transactions, and penalty bids may have the effect of raising or maintaining the market prices of our securities or preventing or retarding a decline in the market prices of our securities. As a result the price of our common stock may be higher than the price that might otherwise exist in the open market. Neither we nor the underwriters make any representation or prediction as to the effect that the transactions described above may have on the price of our common stock. These transactions may be effected on the Nasdaq Capital Market, in the over-the-counter market or on any other trading market and, if commenced, may be discontinued at any time.

In connection with this offering, the underwriters also may engage in passive market making transactions in our common stock in accordance with Regulation M during a period before the commencement of offers or sales of shares of our common stock in this offering and extending through the completion of the distribution. In general, a passive market maker must display its bid at a price not in excess of the highest independent bid for that security. However, if all independent bids are lowered below the passive market maker’s bid that bid must then be lowered when specific purchase limits are exceeded. Passive market making may stabilize the market price of the securities at a level above that which might otherwise prevail in the open market and, if commenced, may be discontinued at any time.

Neither we, nor the underwriters make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the prices of our securities. In addition, neither we nor the underwriters make any representation that the underwriters will engage in these transactions or that any transactions, once commenced will not be discontinued without notice.

Indemnification

We have agreed to indemnify the underwriters against certain liabilities, including certain liabilities arising under the Securities Act or to contribute to payments that the underwriters may be required to make for these liabilities.

TABLE OF CONTENTS

DESCRIPTION OF CAPITAL STOCK

Description of Securities Being Registered

Units

We are offering 667,476 Class A Units, with each Class A Unit consisting of one share of common stock and a warrant to purchase one share of our common stock at an exercise price per share of \$, together with the shares of common stock underlying such warrants, at a public offering price of \$ per Class A Unit. The Class A Units will not be certificated and the shares of common stock and warrants part of such units are immediately separable and will be issued separately in this offering.

We are also offering to those purchasers whose purchase of Class A Units in this offering would result in the purchaser, together with its affiliates and certain related parties, beneficially owning more than 4.99% (or, at the election of the purchaser, 9.99%) of our outstanding common stock following the consummation of this offering, the opportunity to purchase, in lieu of the number of Class A Units that would result in ownership in excess of 4.99% (or, at the election of the purchaser, 9.99%), 8,250 Class B Units. Each Class B Unit will consist of one share of Series A Preferred Stock, par value \$0.001 per share, convertible into shares of common stock and a warrant to purchase a number of shares of our common stock equal to \$1,000 divided by the Conversion Price at an exercise price per share of \$, together with the shares of common stock underlying such shares of Series A Preferred Stock and warrants, at a public offering price of \$ per Class B Unit. The Class B Units will not be certificated and the shares of Series A Preferred Stock and the warrants part of such units are immediately separable and will be issued separately in this offering.

Description of Common Stock

We are authorized to issue 100,000,000 shares of common stock, \$0.001 par value. As of July 13, 2017, 4,439,947 shares of common stock were issued and outstanding. The following descriptions of our common stock and provisions of our amended and restated certificate of incorporation and amended and restated by-laws are only summaries, and we encourage you to review complete copies of these documents, which have been filed as exhibits to our periodic reports with the SEC.

Dividends, Voting Rights and Liquidation

Holders of common stock are entitled to one vote for each share held of record on all matters submitted to a vote of the stockholders, and do not have cumulative voting rights. Subject to preferences that may be applicable to any outstanding shares of preferred stock, holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by our board of directors out of funds legally available for dividend payments. All outstanding shares of common stock are fully paid and non-assessable, and the shares of common stock to be issued upon completion of this offering will be fully paid and non-assessable. The holders of common stock have no preferences or rights of conversion, exchange, pre-emption or other subscription rights. There are no redemption or sinking fund provisions applicable to the common stock. In the event of any liquidation, dissolution or winding-up of our affairs, holders of common stock will be entitled to share ratably in our assets that are remaining after payment or provision for payment of all of our debts and obligations and after liquidation payments to holders of outstanding shares of preferred stock, if any.

Delaware Law and Certain Charter and By-law Provisions

The provisions of (1) Delaware law, (2) our amended and restated certificate of incorporation, and (3) our amended and restated bylaws discussed below could discourage or make it more difficult to accomplish a proxy contest or other change in our management or the acquisition of control by a holder of a substantial amount of our voting stock. It is possible that these provisions could make it more difficult to accomplish, or could deter, transactions that stockholders may otherwise consider to be in their best interests or in our best interests. These provisions are intended to enhance the likelihood of continuity and stability in the composition of our board of directors and in the policies formulated by the board of directors and to discourage certain types of transactions that may involve an actual or threatened change of

TABLE OF CONTENTS

control of us. These provisions are designed to reduce our vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. Such provisions also may have the effect of preventing changes in our management.

Delaware Statutory Business Combinations Provision. We are subject to the anti-takeover provisions of Section 203 of the Delaware General Corporation Law. In general, Section 203 prohibits a publicly-held Delaware corporation from engaging in a “business combination” with an “interested stockholder” for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the business combination is, or the transaction in which the person became an interested stockholder was, approved in a prescribed manner or another prescribed exception applies. For purposes of Section 203, a “business combination” is defined broadly to include a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder, and, subject to certain exceptions, an “interested stockholder” is a person who, together with his or her affiliates and associates, owns (or within three years prior, did own) 15% or more of the corporation’s voting stock.

Classified Board of Directors; Removal of Directors for Cause. Our amended and restated certificate of incorporation and amended and restated bylaws provide that our board of directors is divided into three classes, each serving staggered three-year terms ending at the annual meeting of our stockholders. All directors elected to our classified board of directors will serve until the election and qualification of their respective successors or their earlier resignation or removal. The board of directors is authorized to create new directorships and to fill such positions so created and is permitted to specify the class to which any such new position is assigned. The person filling such position would serve for the term applicable to that class. The board of directors (or its remaining members, even if less than a quorum) is also empowered to fill vacancies on the board of directors occurring for any reason for the remainder of the term of the class of directors in which the vacancy occurred. Members of the board of directors may only be removed for cause and only by the affirmative vote of 80% of our outstanding voting stock. These provisions are likely to increase the time required for stockholders to change the composition of the board of directors. For example, in general, at least two annual meetings will be necessary for stockholders to effect a change in a majority of the members of the board of directors.

Advance Notice Provisions for Stockholder Proposals and Stockholder Nominations of Directors. Our amended and restated bylaws provide that, for nominations to the board of directors or for other business to be properly brought by a stockholder before a meeting of stockholders, the stockholder must first have given timely notice of the proposal in writing to our Secretary. For an annual meeting, a stockholder’s notice generally must be delivered not less than 45 days nor more than 75 days prior to the anniversary of the mailing date of the proxy statement for the previous year’s annual meeting. For a special meeting, the notice must generally be delivered by the later of 90 days prior to the special meeting or ten days following the day on which public announcement of the meeting is first made. Detailed requirements as to the form of the notice and information required in the notice are specified in the amended and restated bylaws. If it is determined that business was not properly brought before a meeting in accordance with our bylaw provisions, such business will not be conducted at the meeting.

Special Meetings of Stockholders. Special meetings of the stockholders may be called only by our board of directors pursuant to a resolution adopted by a majority of the total number of directors.

No Stockholder Action by Written Consent. Our amended and restated certificate of incorporation and amended and restated bylaws do not permit our stockholders to act by written consent. As a result, any action to be effected by our stockholders must be effected at a duly called annual or special meeting of the stockholders.

Super-Majority Stockholder Vote Required for Certain Actions. The Delaware General Corporation Law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation’s certificate of incorporation or bylaws, unless the corporation’s certificate of incorporation or bylaws, as the case may be, requires a greater percentage. Our amended and restated certificate of incorporation requires the affirmative vote of the holders of at least 80% of our outstanding voting stock to amend or repeal any of the provisions discussed in the section of this prospectus entitled “Anti-Takeover Provisions” or to reduce the number of authorized shares of common stock or preferred stock. This 80% stockholder vote would be in addition to any separate class vote that might in the future be

TABLE OF CONTENTS

required pursuant to the terms of any preferred stock that might then be outstanding. In addition, an 80% vote is also required for any amendment to, or repeal of, our amended and restated bylaws by the stockholders. Our amended and restated bylaws may be amended or repealed by a simple majority vote of the board of directors.

Description of Series A Preferred Stock Included in the Units

Our board of directors has designated 8,250 shares of our preferred stock as Series A Preferred Stock (“Series A Preferred Stock”), none of which are currently issued and outstanding. The preferences and rights of the Series A Preferred Stock will be as set forth in a Certificate of Designation (the “Series A Certificate of Designation”) filed as an exhibit to the registration statement of which this prospectus is a part.

Pursuant to a transfer agency agreement between us and American Stock Transfer & Trust Company, LLC, as transfer agent, the Series A Preferred Stock will be issued in book-entry form and shall initially be represented only by one or more global certificates deposited with The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

In the event of a liquidation, the holders of Series A Preferred Shares are entitled to participate on an as-converted-to-Common Stock basis with holders of the Common Stock in any distribution of assets of the Company to the holders of the Common Stock. The Series A Certificate of Designation provides, among other things, that we shall not pay any dividends on shares of Common Stock (other than dividends in the form of Common Stock) unless and until such time as we pay dividends on each Series A Preferred Share on an as-converted basis. Other than as set forth in the previous sentence, the Series A Certificate of Designation provides that no other dividends shall be paid on Series A Preferred Shares and that we shall pay no dividends (other than dividends in the form of common stock) on shares of Common Stock unless we simultaneously comply with the previous sentence. The Series A Certificate of Designation does not provide for any restriction on the repurchase of Series A Preferred Shares by us while there is any arrearage in the payment of dividends on the Series A Preferred Shares. There are no sinking fund provisions applicable to the Series A Preferred Shares.

With certain exceptions, as described in the Series A Certificate of Designation, the Series A Preferred Stock has no voting rights. However, as long as any shares of Series A Preferred Stock remain outstanding, the Series A Certificate of Designation provides that we shall not, without the affirmative vote of holders of a majority of the then-outstanding Series A Preferred Stock, (a) alter or change adversely the powers, preferences or rights given to the Series A Preferred Stock or alter or amend the Series A Certificate of Designation, (b) increase the number of authorized shares of Series A Preferred Stock or (c) effect a stock split or reverse stock split of the Series A Preferred Stock or any like event.

Each share of Series A Preferred Stock is convertible at any time at the holder’s option into a number of shares of common stock equal to \$1,000 divided by the Series A Conversion Price. The “Series A Conversion Price” is initially \$4.12 and is subject to adjustment for stock splits, stock dividends, distributions, subdivisions and combinations. Notwithstanding the foregoing, the Series A Certificate of Designation further provides that we shall not effect any conversion of Series A Preferred Stock, with certain exceptions, to the extent that, after giving effect to an attempted conversion, the holder of Series A Preferred Shares (together with such holder’s affiliates, and any persons acting as a group together with such holder or any of such holder’s affiliates) would beneficially own a number of shares of Common Stock in excess of 4.99% (or, at the election of the holder, 9.99%) of the shares of our Common Stock then outstanding after giving effect to such exercise (the “Preferred Stock Beneficial Ownership Limitation”); provided, however, that upon notice to the Company, the holder may increase or decrease the Preferred Stock Beneficial Ownership Limitation, provided that in no event shall the Preferred Stock Beneficial Ownership Limitation exceed 9.99% and any increase in the Preferred Stock Beneficial Ownership Limitation will not be effective until 61 days following notice of such increase from the holder to us.

Subject to certain conditions, at any time following the issuance of the Series A Preferred Stock, we will have the right to cause each holder of the Series A Preferred Stock to convert all or part of such holder’s Series A Preferred Stock in the event that (i) the volume weighted average price of our common stock for 30 consecutive trading days (the “Measurement Period”) exceeds 300% of the initial conversion

TABLE OF CONTENTS

price of the Series A Preferred Stock (subject to adjustment for forward and reverse stock splits, recapitalizations, stock dividends and similar transactions), (ii) the daily trading volume on each Trading Day during such Measurement Period exceeds \$500,000 per trading day and (iii) the holder is not in possession of any information that constitutes or might constitute, material non-public information which was provided by the Company. Our right to cause each holder of the Series A Preferred Stock to convert all or part of such holder's Series A Preferred Stock shall be exercised ratably among the holders of the then outstanding preferred stock.

We do not intend to apply for listing of the Series A Preferred Shares on any securities exchange or other trading system.

Description of Warrants Included in the Units

The material terms and provisions of the warrants being offered pursuant to this prospectus are summarized below.

This summary of some provisions of the warrants is not complete. For the complete terms of the warrants, you should refer to the form of warrant filed as an exhibit to the registration statement of which this prospectus is a part. Pursuant to a warrant agency agreement between us and American Stock Transfer & Trust Company, LLC, as warrant agent, the warrants will be issued in book-entry form and shall initially be represented only by one or more global warrants deposited with the warrant agent, as custodian on behalf of The Depository Trust Company, or DTC, and registered in the name of Cede & Co., a nominee of DTC, or as otherwise directed by DTC.

Each Class A Unit includes a warrant to purchase one share of our common stock and each Class B Unit issued in this offering includes a warrant to purchase a number of shares of our common stock equal to \$1,000 divided by the Conversion Price at a price equal to \$ per share at any time for up to seven years after the date of the closing of this offering. The warrants issued in this offering will be governed by the terms of a global warrant held in book-entry form. The holder of a warrant will not be deemed a holder of our underlying common stock until the warrant is exercised.

Subject to certain limitations as described below the warrants are immediately exercisable upon issuance on the closing date and expire on the seven year anniversary of the closing date. Subject to limited exceptions, a holder of warrants will not have the right to exercise any portion of its warrants if the holder (together with such holder's affiliates, and any persons acting as a group together with such holder or any of such holder's affiliates) would beneficially own a number of shares of common stock in excess of 4.99% (or, at the election of the purchaser, 9.99%) of the shares of our Common Stock then outstanding after giving effect to such exercise.

The exercise price and the number of shares issuable upon exercise of the warrants is subject to appropriate adjustment in the event of recapitalization events, stock dividends, stock splits, stock combinations, reclassifications, reorganizations or similar events affecting our common stock. The warrant holders must pay the exercise price in cash upon exercise of the warrants, unless such warrant holders are utilizing the cashless exercise provision of the warrants.

On the expiration date, unexercised warrants will automatically be exercised via the "cashless" exercise provision.

In addition, in the event we consummate a merger or consolidation with or into another person or other reorganization event in which our common shares are converted or exchanged for securities, cash or other property, or we sell, lease, license, assign, transfer, convey or otherwise dispose of all or substantially all of our assets or we or another person acquire 50% or more of our outstanding shares of common stock, then following such event, the holders of the warrants will be entitled to receive upon exercise of such warrants the same kind and amount of securities, cash or property which the holders would have received had they exercised their warrants immediately prior to such fundamental transaction. Any successor to us or surviving entity shall assume the obligations under the warrants. In the event the successor or surviving entity is not a publicly traded corporation that assumes the warrants, the Company or the successor or surviving entity shall, at the warrant holder's option, purchase such holder's warrant by paying to the holder an amount of cash equal to the Black Scholes Value of the remaining unexercised portion of such warrant on the date of the consummation of the fundamental transaction; provided, however, if the fundamental transaction is not within the Company's control, the holder shall have the option to require the Company or the successor or surviving entity to purchase such holder's warrant for the Black Scholes Value

TABLE OF CONTENTS

of the unexercised portion of this warrant as of the date of consummation of such fundamental transaction using the same type or form of consideration (and in the same proportion) being offered and paid to the holders of Common Stock of the Company in connection with the fundamental transaction. For purposes of this paragraph, the “Black Scholes Value” means the value of the warrant based on the Black and Scholes Option Pricing Model obtained from the “OV” function on Bloomberg, L.P. determined as of the day of consummation of the applicable fundamental transaction for pricing purposes and reflecting (A) a risk-free interest rate corresponding to the U.S. Treasury rate for a period equal to the time between the date of the public announcement of the applicable fundamental transaction and the termination date of the warrant, (B) an expected volatility equal to the greater of 100 and the 100 day volatility obtained from the HVT function on Bloomberg, L.P. as of the trading day immediately following the public announcement of the applicable fundamental transaction, (C) the underlying price per share used in such calculation shall be the sum of the price per share being offered in cash, if any, plus the value of any non-cash consideration, if any, being offered in such fundamental transaction and (D) a remaining option time equal to the time between the date of the public announcement of the applicable fundamental transaction and the termination date of the warrant. Upon the holder’s exercise of a warrant, we will issue the shares of common stock issuable upon exercise of the warrant within three trading days following our receipt of a notice of exercise, provided that payment of the exercise price has been made (unless exercised to the extent permitted via the “cashless” exercise provision). Prior to the exercise of any warrants to purchase common stock, holders of the warrants will not have any of the rights of holders of the common stock purchasable upon exercise, including the right to vote, except as set forth therein. Warrant holders may exercise warrants only if the issuance of the shares of common stock upon exercise of the warrants is covered by an effective registration statement, or an exemption from registration is available under the Securities Act and the securities laws of the state in which the holder resides. We intend to use commercially reasonable efforts to have the registration statement, of which this prospectus forms a part, effective when the warrants are exercised. The warrant holders must pay the exercise price in cash upon exercise of the warrants unless there is not an effective registration statement or, if required, there is not an effective state law registration or exemption covering the issuance of the shares underlying the warrants (in which case, the warrants may only be exercised via a “cashless” exercise provision). We do not intend to apply for listing of the warrants on any securities exchange or other trading system.

Preferred Stock

We have the authority to issue up to 5,000,000 shares of preferred stock. As of July 13, 2017, 335,273 shares of our preferred stock were outstanding (see “6% Convertible Exchangeable Preferred Stock” below). The description of preferred stock provisions set forth below is not complete and is subject to and qualified in its entirety by reference to our certificate of incorporation and the certificate of designations relating to each series of preferred stock.

The board of directors has the right, without the consent of holders of common stock, to designate and issue one or more series of preferred stock, which may be convertible into common stock at a ratio determined by the board of directors. A series of preferred stock may bear rights superior to common stock as to voting, dividends, redemption, distributions in liquidation, dissolution, or winding up, and other relative rights and preferences. The board may set the following terms of any series of preferred stock:

- the number of shares constituting the series and the distinctive designation of the series;
- dividend rates, whether dividends are cumulative, and, if so, from what date; and the relative rights of priority of payment of dividends;
- voting rights and the terms of the voting rights;
- conversion privileges and the terms and conditions of conversion, including provision for adjustment of the conversion rate;

TABLE OF CONTENTS

- redemption rights and the terms and conditions of redemption, including the date or dates upon or after which shares may be redeemable, and the amount per share payable in case of redemption, which may vary under different conditions and at different redemption dates;

- sinking fund provisions for the redemption or purchase of shares;

- rights in the event of voluntary or involuntary liquidation, dissolution or winding up of the corporation, and the relative rights of priority of payment; and

- any other relative powers, preferences, rights, privileges, qualifications, limitations and restrictions of the series.

Dividends on outstanding shares of preferred stock will be paid or declared and set apart for payment before any dividends may be paid or declared and set apart for payment on the common stock with respect to the same dividend period.

If, upon any voluntary or involuntary liquidation, dissolution or winding up of the Company, the assets available for distribution to holders of preferred stock are insufficient to pay the full preferential amount to which the holders are entitled, then the available assets will be distributed ratably among the shares of all series of preferred stock in accordance with the respective preferential amounts (including unpaid cumulative dividends, if any) payable with respect to each series.

Holders of preferred stock will not be entitled to preemptive rights to purchase or subscribe for any shares of any class of capital stock of the corporation. The preferred stock will, when issued, be fully paid and non-assessable. The rights of the holders of preferred stock will be subordinate to those of our general creditors.

We have previously issued shares of preferred stock in one series, designated as 6% Convertible Exchangeable Preferred Stock, of which 335,273 are currently outstanding and are quoted on the NASDAQ Capital Market under the symbol "CYCCP."

6% Convertible Exchangeable Preferred Stock

General

Our board of directors has designated 2,046,813 shares of the preferred stock that were issued as convertible preferred stock on November 3, 2004. The shares of convertible preferred stock are duly and validly issued, fully paid and non-assessable. These shares will not have any preemptive rights if we issue other series of preferred stock. The convertible preferred stock is not subject to any sinking fund. We have no obligation to retire the convertible preferred stock. The convertible preferred stock has a perpetual maturity and may remain outstanding indefinitely, subject to the holder's right to convert the convertible preferred stock and our right to cause the conversion of the convertible preferred stock and exchange or redeem the convertible preferred stock at our option. Any convertible preferred stock converted, exchanged or redeemed or acquired by us will, upon cancellation, have the status of authorized but unissued shares of convertible preferred stock. We will be able to reissue these cancelled shares of convertible preferred stock.

Dividends

When and if declared by our board of directors out of the legally available funds, holders of the convertible preferred stock are entitled to receive cash dividends at an annual rate of 6% of the liquidation preference of the convertible preferred stock. Dividends are payable quarterly on the first day of February, May, August and November. If any dividends are not declared, they will accrue and be paid at such later date, if any, as determined by our board of directors. Dividends on the convertible preferred stock will be cumulative from the issue date. Dividends will be payable to holders of record as they appear on our stock books not more than 60 days nor less than 10 days preceding the payment dates, as fixed by our board of directors. If the convertible preferred stock is called for redemption on a redemption date between the dividend record date and the dividend payment date and the holder does not convert the

convertible preferred stock (as described below), the holder shall receive the dividend payment together with all other
51

TABLE OF CONTENTS

accrued and unpaid dividends on the redemption date instead of receiving the dividend on the dividend date.

Dividends payable on the convertible preferred stock for any period greater or less than a full dividend period will be computed on the basis of a 360-day year consisting of twelve 30-day months. Accrued but unpaid dividends will not bear interest.

If we do not pay or set aside cumulative dividends in full on the convertible preferred stock and any other preferred stock ranking on the same basis as to dividends, all dividends declared upon shares of the convertible preferred stock and any other preferred stock ranking on the same basis as to dividends will be declared on a pro rata basis until all accrued dividends are paid in full. For these purposes, "pro rata" means that the amount of dividends declared per share on the convertible preferred stock and any other preferred stock ranking on the same basis as to dividends bear to each other will be the same ratio that accrued and unpaid dividends per share on the shares of the convertible preferred stock and such other preferred stock bear to each other. We will not be able to redeem, purchase or otherwise acquire any of our stock ranking on the same basis as the convertible preferred stock as to dividends or liquidation preferences unless we have paid or set aside full cumulative dividends, if any, accrued on all outstanding shares of convertible preferred stock.

Unless we have paid or set aside cumulative dividends in full on the convertible preferred stock and any other of the convertible preferred stock ranking on the same basis as to dividends:

- we may not declare or pay or set aside dividends on common stock or any other stock ranking junior to the convertible preferred stock as to dividends or liquidation preferences, excluding dividends or distributions of shares, options, warrants or rights to purchase common stock or other stock ranking junior to the convertible preferred stock as to dividends; or

- we will not be able to redeem, purchase or otherwise acquire any of our other stock ranking junior to the convertible preferred stock as to dividends or liquidation preferences, except in very limited circumstances.

Under Delaware law, we may only make dividends or distributions to our stockholders from:

- our surplus; or

- the net profits for the current fiscal year before which the dividend or distribution is declared under certain circumstances.

As previously disclosed, the Board did not declare the quarterly cash dividend with respect to each of the four quarters of fiscal year 2009, the first, second and third quarters of fiscal year 2010, the second, third and fourth quarters of fiscal year 2011 and the first, second and third quarters of fiscal year 2012. To the extent that any dividends payable on the Preferred Stock are not paid, such unpaid dividends are accrued. As the Company failed to pay in an aggregate amount equal to at least six quarterly dividends (whether or not consecutive) on the Preferred Stock, the size of the Company's Board was increased by two members and the holders of the Preferred Stock, voting separately as a class, voted on May 24, 2011 and elected two directors to fill the vacancies created thereby, which directorships shall terminate when the Company pays all accrued but unpaid dividends. As of March 31, 2017, approximately \$0.7 million of dividends remain accrued and unpaid.

Conversion

Conversion Rights

Holders of our convertible preferred stock may convert the convertible preferred stock at any time into a number of shares of common stock determined by dividing the \$10.00 liquidation preference by the conversion price of \$1974.00. This conversion price is equivalent to a conversion rate of approximately 0.00507 shares of common stock for each share of convertible preferred stock. We will not make any adjustment to the conversion price for accrued or unpaid dividends upon conversion. We will not issue fractional shares of common stock upon conversion. However,

we will instead pay cash for each fractional share based upon the market price of the common stock on the last business day prior to the conversion

52

TABLE OF CONTENTS

date. If we call the convertible preferred stock for redemption, the holder's right to convert the convertible preferred stock will expire at the close of business on the business day immediately preceding the date fixed for redemption, unless we fail to pay the redemption price.

Automatic Conversion

Unless we redeem or exchange the convertible preferred stock, we may elect to convert some or all of the convertible preferred stock into shares of our common stock if the closing price of our common stock has exceeded 150% of the conversion price for at least 20 out of 30 consecutive trading days ending within five trading days prior to the notice of automatic conversion. If we elect to convert less than all of the shares of convertible preferred stock, we shall select the shares to be converted by lot or pro rata or in some other equitable manner in our discretion. On or after November 3, 2007, we may not elect to automatically convert the convertible preferred stock if full cumulative dividends on the convertible preferred stock for all past dividend periods have not been paid or set aside for payment.

Conversion Price Adjustment — General

The conversion price of \$1,974.00 will be adjusted if:

- (1) we dividend or distribute common stock in shares of our common stock;
- (2) we subdivide or combine our common stock;
- (3) we issue to all holders of common stock certain rights or warrants to purchase our common stock at less than the current market price;
- (4) we dividend or distribute to all holders of our common stock shares of our capital stock or evidences of indebtedness or assets, excluding:

- those rights, warrants, dividends or distributions referred to in (1) or (3), or

- dividends and distributions paid in cash;

- (5) we made a dividend or distribution consisting of cash to all holders of common stock;
- (6) we purchase common stock pursuant to a tender offer made by us or any of our subsidiaries; and
- (7) a person other than us or any of our subsidiaries makes any payment on a tender offer or exchange offer and, as of the closing of the offer, the board of directors is not recommending rejection of the offer. We will only make this adjustment if the tender or exchange offer increases a person's ownership to more than 25% of our outstanding common stock, and only if the payment per share of common stock exceeds the current market price of our common stock. We will not make this adjustment if the offering documents disclose our plan to engage in any consolidation, merger, or transfer of all or substantially all of our properties and if specified conditions are met.

If we implement a stockholder rights plan, this new rights plan must provide that, upon conversion of the existing convertible preferred stock the holders will receive, in addition to the common stock issuable upon such conversion, the rights under such rights plan regardless of whether the rights have separated from the common stock before the time of conversion. The distribution of rights or warrants pursuant to a stockholder rights plan will not result in an adjustment to the conversion price of the convertible preferred stock until a specified triggering event occurs.

The occurrence and magnitude of certain of the adjustments described above is dependent upon the current market price of our common stock. For these purposes, "current market price" generally means the lesser of:

- the closing sale price on certain specified dates, or

- the average of the closing prices of the common stock for the ten trading day period immediately prior to certain specified dates.

TABLE OF CONTENTS

We may make a temporary reduction in the conversion price of the convertible preferred stock if our board of directors determines that this decrease would be in our best interest. We may, at our option, reduce the conversion price if our board of directors deems it advisable to avoid or diminish any income tax to holders of common stock resulting from any dividend or distribution of stock or rights to acquire stock or from any event treated as such for income tax purposes.

Conversion Price Adjustment — Merger, Consolidation or Sale of Assets

If we are involved in a transaction in which shares of our common stock are converted into the right to receive other securities, cash or other property, or a sale or transfer of all or substantially all of our assets under which the holders of our common stock shall be entitled to receive other securities, cash or other property, then appropriate provision shall be made so that the shares of convertible preferred stock will convert into:

- (1) if the transaction is a common stock fundamental change, as defined below, common stock of the kind received by holders of common stock as a result of common stock fundamental change in accordance with paragraph (1) below under the subsection entitled “— Fundamental Change Conversion Price Adjustments,” and
- (2) if the transaction is not a common stock fundamental change, and subject to funds being legally available at conversion, the kind and amount of the securities, cash or other property that would have been receivable upon the recapitalization, reclassification, consolidation, merger, sale, transfer or share exchange by a holder of the number of shares of common stock issuable upon conversion of the convertible preferred stock immediately prior to the recapitalization, reclassification, consolidation, merger, sale, transfer or share exchange, after giving effect to any adjustment in the conversion price in accordance with paragraph (2) below under the subsection entitled “— Fundamental Change Conversion Price Adjustments.”

The company formed by the consolidation, merger, asset acquisition or share acquisition shall provide for this right in its organizational document. This organizational document shall also provide for adjustments so that the organizational document shall be as nearly practicably equivalent to adjustments in this section for events occurring after the effective date of the organizational document.

The following types of transactions, among others, would be covered by this adjustment:

- (1) we recapitalize or reclassify our common stock, except for:

- a change in par value,
- a change from par value to no par value,
- a change from no par value to par value, or
- a subdivision or combination of our common stock.

- (2) we consolidate or merge into any other person, or any merger of another person into us, except for a merger that does not result in a reclassification, conversion, exchange or cancellation of common stock,

- (3) we sell, transfer or lease all or substantially all of our assets and holders of our common stock become entitled to receive other securities, cash or other property, or

- (4) we undertake any compulsory share exchange.

TABLE OF CONTENTS

Fundamental Change Conversion Price Adjustments

If a fundamental change occurs, the conversion price will be adjusted as follows:

(1) in the case of a common stock fundamental change, the conversion price shall be the conversion price after giving effect to any other prior adjustments effected pursuant to the preceding paragraphs, multiplied by a fraction, the numerator of which is the purchaser stock price, as defined below, and the denominator of which is the applicable price, as defined below. However, in the event of a common stock fundamental change in which:

- 100% of the value of the consideration received by a holder of our common stock is common stock of the successor, acquirer or other third party, and cash, if any, paid with respect to any fractional interests in such common stock resulting from such common stock fundamental change, and

- All of our common stock shall have been exchanged for, converted into or acquired for, common stock of the successor, acquirer or other third party, and any cash with respect to fractional interests,

- the conversion price shall be the conversion price in effect immediately prior to such common stock fundamental change multiplied by a fraction, the numerator of which is one (1) and the denominator of which is the number of shares of common stock of the successor, acquirer or other third party received by a holder of one share of our common stock as a result of the common stock fundamental change; and

(2) in the case of a non-stock fundamental change, the conversion price shall be the lower of:

- the conversion price after giving effect to any other prior adjustments effected pursuant to the preceding paragraph and

- the product of

A. the applicable price, and

B. a fraction, the numerator of which is \$10 and the denominator of which is (x) the amount of the redemption price for one share of convertible preferred stock if the redemption date were the date of the non-stock fundamental change (or if the date of such non-stock fundamental change falls within the period beginning on the first issue date of the convertible preferred stock through October 31, 2005, the twelve-month period commencing November 1, 2005 and the twelve-month period commencing November 1, 2006, the product of 106.0%, 105.4% or 104.8%, respectively, and \$10) plus (y) any then-accrued and unpaid distributions on one share of convertible preferred stock.

Holders of convertible preferred stock may receive significantly different consideration upon conversion depending upon whether a fundamental change is a non-stock fundamental change or a common stock fundamental change. In the event of a non-stock fundamental change, the shares of convertible preferred stock will convert into stock and other securities or property or assets, including cash, determined by the number of shares of common stock receivable upon conversion at the conversion price as adjusted in accordance with (2) above. In the event of a common stock fundamental change, under certain circumstances, the holder of convertible preferred stock will receive different consideration depending on whether the holder converts his or her shares of convertible preferred stock on or after the common stock fundamental change.

Definitions for the Fundamental Change Adjustment Provision

“applicable price” means:

- in a non-stock fundamental change in which the holders of common stock receive only cash, the amount of cash received by a holder of one share of common stock, and

- in the event of any other fundamental change, the average of the daily closing price for one share of common stock during the 10 trading days immediately prior to the record date for the

TABLE OF CONTENTS

determination of the holders of common stock entitled to receive cash, securities, property or other assets in connection with the fundamental change or, if there is no such record date, prior to the date upon which the holders of common stock shall have the right to receive such cash, securities, property or other assets.

“common stock fundamental change” means any fundamental change in which more than 50% of the value, as determined in good faith by our board of directors, of the consideration received by holders of our common stock consists of common stock that, for the 10 trading days immediately prior to such fundamental change, has been admitted for listing or admitted for listing subject to notice of issuance on a national securities exchange or quoted on The NASDAQ National Market, except that a fundamental change shall not be a common stock fundamental change unless either:

- we continue to exist after the occurrence of the fundamental change and the outstanding convertible preferred stock continues to exist as outstanding convertible preferred stock, or

- not later than the occurrence of the fundamental change, the outstanding convertible preferred stock is converted into or exchanged for shares of preferred stock, which preferred stock has rights, preferences and limitations substantially similar, but no less favorable, to those of the convertible preferred stock.

“fundamental change” means the occurrence of any transaction or event or series of transactions or events pursuant to which all or substantially all of our common stock shall be exchanged for, converted into, acquired for or shall constitute solely the right to receive cash, securities, property or other assets, whether by means of an exchange offer, liquidation, tender offer, consolidation, merger, combination, reclassification, recapitalization or otherwise. However, for purposes of adjustment of the conversion price, in the case of any series of transactions or events, the fundamental change shall be deemed to have occurred when substantially all of the common stock shall have been exchanged for, converted into or acquired for, or shall constitute solely the right to receive, such cash, securities, property or other assets, but the adjustment shall be based upon the consideration that the holders of our common stock received in the transaction or event as a result of which more than 50% of our common stock shall have been exchanged for, converted into or acquired for, or shall constitute solely the right to receive, such cash, securities, property or other assets.

“non-stock fundamental change” means any fundamental change other than a common stock fundamental change.

“purchaser stock price” means the average of the daily closing price for one share of the common stock received by holders of the common stock in the common stock fundamental change during the 10 trading days immediately prior to the date fixed for the determination of the holders of the common stock entitled to receive such common stock or, if there is no such date, prior to the date upon which the holders of the common stock shall have the right to receive such common stock.

Liquidation Rights

In the event of our voluntary or involuntary dissolution, liquidation, or winding up, the holders of the convertible preferred stock shall receive a liquidation preference of \$10 per share and all accrued and unpaid dividends through the distribution date. Holders of any class or series of preferred stock ranking on the same basis as the convertible preferred stock as to liquidation shall also be entitled to receive the full respective liquidation preferences and any accrued and unpaid dividends through the distribution date. Only after the preferred stock holders have received their liquidation preference and any accrued and unpaid dividends will we distribute assets to common stock holders or any of our other stock ranking junior to the shares of convertible preferred stock upon liquidation. If upon such dissolution, liquidation or winding up, we do not have enough assets to pay in full the amounts due on the convertible preferred stock and any other preferred stock ranking on the same basis with the convertible preferred stock as to liquidation, the holders of the convertible preferred stock and such other preferred stock will share ratably in any such distributions of our assets:

- first in proportion to the liquidation preferences until the preferences are paid in full, and

- then in proportion to the amounts of accrued but unpaid dividends.

TABLE OF CONTENTS

After we pay any liquidation preference and accrued dividends, holders of the convertible preferred stock will not be entitled to participate any further in the distribution of our assets. The following events will not be deemed to be a dissolution, liquidation or winding up of Cyclacel:

- the sale of all or substantially all of the assets;
- our merger or consolidation into or with any other corporation; or
- our liquidation, dissolution, winding up or reorganization immediately followed by a reincorporation as another corporation.

Optional Redemption

The Company may, at its option, redeem the Preferred Stock in whole or in part, out of funds legally available at the redemption prices per share stated below, plus an amount equal to accrued and unpaid dividends up to the date of redemption:

Year from November 1, 2012 to October 31, 2013	\$ 10.12
Year from November 1, 2013 to October 31, 2014	\$ 10.06
November 1, 2014 and thereafter	\$ 10.00

If we redeem less than all of the shares of convertible preferred stock, we shall select the shares to be redeemed by lot or pro rata or in some other equitable manner in our sole discretion.

Exchange Provisions

We may exchange the convertible preferred stock in whole, but not in part, for debentures on any dividend payment date on or after November 1, 2005 at the rate of \$10 principal amount of debentures for each outstanding share of convertible preferred stock. Debentures will be issuable in denominations of \$1,000 and integral multiples of \$1,000, as discussed in the section entitled "Description of Debentures" below. If the exchange results in an amount of debentures that is not an integral multiple of \$1,000, we will pay in cash an amount in excess of the closest integral multiple of \$1,000. We will mail written notice of our intention to exchange the convertible preferred stock to each record holder not less than 30 nor more than 60 days prior to the exchange date.

We refer to the date fixed for exchange of the convertible preferred stock for debentures as the "exchange date." On the exchange date, the holder's rights as a stockholder of Cyclacel shall cease, the shares of convertible preferred stock will no longer be outstanding, and will only represent the right to receive the debentures and any accrued and unpaid dividends, without interest. We may not exercise our option to exchange the convertible preferred stock for the debentures if:

- full cumulative dividends on the convertible preferred stock to the exchange date have not been paid or set aside for payment, or
- an event of default under the indenture would occur on conversion, or has occurred and is continuing.

Voting Rights

Holders of our convertible preferred stock have no voting rights except as described below or as required by law. Shares of our convertible preferred stock held by us or any entity controlled by us will not have any voting rights. The Certificate of Designations governing the Preferred Stock provides that if the Company fails to pay dividends on its Preferred Stock for six quarterly periods, holders of Preferred Stock are entitled to nominate and elect two directors to the Company's Board of Directors. This right accrued to the holders of Preferred Stock as of August 2, 2010 and two directors were nominated and elected at the annual meeting held on May 24, 2011. These voting rights will

terminate when we have declared and either paid or set aside for payment all accrued and unpaid dividends. The terms of office of all directors so elected will terminate immediately upon the termination of these voting rights. On September 12, 2012, the Board decided not to

57

TABLE OF CONTENTS

declare the quarterly cash dividend on the Company's 6% Convertible Exchangeable Preferred Stock with respect to the third quarter of 2012 that would have otherwise been payable on November 1, 2012. As previously disclosed, the Board also did not declare the quarterly cash dividend with respect to each of the four quarters of fiscal year 2009, the first, second and third quarters of fiscal year 2010, the second, third and fourth quarters of fiscal year 2011 and the first, second and third quarters of fiscal year 2012.

Without the vote or consent of the holders of at least a majority of the shares of convertible preferred stock, we may not:

- adversely change the rights, preferences and limitations of the convertible preferred stock by modifying our certificate of incorporation or bylaws, or

- authorize, issue, reclassify any of our authorized stock into, increase the authorized amount of, or authorize or issue any convertible obligation or security or right to purchase, any class of stock that ranks senior to the convertible preferred stock as to dividends or distributions of assets upon liquidation, dissolution or winding up of the stock.

No class vote on the part of convertible preferred stock shall be required (except as otherwise required by law or resolution of our board of directors) in connection with the authorization, issuance or increase in the authorized amount of any shares of capital stock ranking junior to or on parity with the convertible preferred stock both as to the payment of dividends and as to distribution of assets upon our liquidation, dissolution or winding up, whether voluntary or involuntary, including our common stock and the convertible preferred stock.

In addition, without the vote or consent of the holders of at least a majority of the shares of convertible preferred stock we may not:

- enter into a share exchange that affects the convertible preferred stock, or

- consolidate with or merge into another entity, or

- permit another entity to consolidate with or merge into us,

unless the convertible preferred stock remains outstanding and its rights, privileges and preferences are unaffected or it is converted into or exchanged for convertible preferred stock of the surviving entity having rights, preferences and limitations substantially similar, but no less favorable, to the convertible preferred stock.

In determining a majority under these voting provisions, holders of convertible preferred stock will vote together with holders of any other preferred stock that rank on parity as to dividends and that have like voting rights.

Listing

Our common stock is listed on the NASDAQ Capital Market under the symbol "CYCC." Our preferred stock is listed on the NASDAQ Capital Market under the symbol "CYCCP."

Transfer Agent and Registrar

American Stock Transfer & Trust Company is the transfer agent and registrar for our common stock. Its address is 6201 15th Avenue, Brooklyn, NY 11219 and its telephone number is (718) 921-8200.

TABLE OF CONTENTS

LEGAL MATTERS

Certain legal matters in connection with the offering and the validity of the common stock offered by this prospectus will be passed upon for us by Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. Certain legal matters in connection with this offering will be passed upon for the underwriter by Ellenoff Grossman & Schole LLP.

EXPERTS

The consolidated balance sheets of Cyclacel Pharmaceuticals, Inc. as of December 31, 2016 and 2015, and the related consolidated statements of operations, comprehensive loss, stockholders' equity and cash flows for each of the years in the two-year period ended December 31, 2016, have been audited by RSM US LLP, independent registered public accounting firm, as stated in its report which is incorporated herein by reference. Such financial statements have been incorporated herein by reference in reliance on the report of such firm given upon their authority as experts in accounting and auditing.

WHERE YOU CAN FIND MORE INFORMATION

We file reports, proxy statements and other information with the Securities and Exchange Commission, or the SEC. Copies of our reports, proxy statements and other information may be inspected and copied at the public reference facilities maintained by the SEC at SEC Headquarters, Public Reference Room, 100 F Street, N.E., Washington D.C. 20549. The public may obtain information on the operation of the SEC's Public Reference Room by calling the SEC at 1-800-SEC-0330. The SEC maintains a website that contains reports, proxy statements and other information regarding Cyclacel. The address of the SEC website is <http://www.sec.gov>. We will also provide copies of our current reports on Form 8-K, annual reports on Form 10-K, quarterly reports on Form 10-Q and proxy statements, and all amendments to those reports at no charge through our website at www.cyclacel.com as soon as reasonably practicable after such material is electronically filed with, or furnished to, the SEC. We have not incorporated by reference in this prospectus the information on, or accessible through, our website. Copies are also available, without charge, from Cyclacel Pharmaceuticals, Inc., 200 Connell Drive, Suite 1500, Berkeley Heights, NJ 07922.

INCORPORATION OF INFORMATION BY REFERENCE

The SEC allows us to "incorporate by reference" information that we file with them. Incorporation by reference allows us to disclose important information to you by referring you to those other documents. The information incorporated by reference is an important part of this prospectus, and information that we file later with the SEC will automatically update and supersede this information. We filed a registration statement on Form S-1 under the Securities Act of 1933, as amended, with the SEC with respect to the securities we may offer pursuant to this prospectus. This prospectus omits certain information contained in the registration statement, as permitted by the SEC. You should refer to the registration statement, including the exhibits, for further information about us and the securities we may offer pursuant to this prospectus. Statements in this prospectus regarding the provisions of certain documents filed with, or incorporated by reference in, the registration statement are not necessarily complete and each statement is qualified in all respects by that reference. Copies of all or any part of the registration statement, including the documents incorporated by reference or the exhibits, may be obtained upon payment of the prescribed rates at the offices of the SEC listed above in "Where You Can Find More Information." The documents we are incorporating by reference are:

- our Annual Report on Form 10-K for the fiscal year ended December 31, 2016, filed on March 31, 2017;
- our Quarterly Report on Form 10-Q, filed on May 12, 2017;
- our Current Reports on Form 8-K, filed on February 23, 2017, March 13, 2017, March 28, 2017, May 11, 2017, June 1, 2017, June 27, 2017 and June 30, 2017 (other than the portions of those reports not deemed to be filed); and
- our Definitive Proxy Statement on Schedule 14A, filed on April 12, 2017.

Unless otherwise noted, the SEC file number for each of the documents listed above is 000-50626.

59

TABLE OF CONTENTS

In addition, all reports and other documents filed by us pursuant to the Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement shall be deemed to be incorporated by reference into this prospectus.

Any statement contained in this prospectus or in a document incorporated or deemed to be incorporated by reference into this prospectus will be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained in this prospectus or any other subsequently filed document that is deemed to be incorporated by reference into this prospectus modifies or supersedes the statement. Any statement so modified or superseded will not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

You may request, orally or in writing, a copy of any or all of the documents incorporated herein by reference. These documents will be provided to you at no cost, by contacting: Cyclacel Pharmaceuticals, Inc., 200 Connell Drive, Suite 1500, Berkeley Heights, NJ 07922. In addition, such incorporated reports and documents can be located on the Company's website at www.cyclacel.com.

You should rely only on information contained in, or incorporated by reference into, this prospectus and any prospectus supplement. We have not authorized anyone to provide you with information different from that contained in this prospectus or incorporated by reference in this prospectus. We are not making offers to sell the securities in any jurisdiction in which such an offer or solicitation is not authorized or in which the person making such offer or solicitation is not qualified to do so or to anyone to whom it is unlawful to make such offer or solicitation.

60

TABLE OF CONTENTS

Cyclacel Pharmaceuticals, Inc.

667,476 Class A Units consisting of common stock and warrants and

8,250 Class B Units consisting of shares of Series A Preferred Stock and warrants

(and 4,672,330 shares of common stock underlying shares of
Series A Preferred Stock and warrants)

PROSPECTUS

Ladenburg Thalmann

, 2017

TABLE OF CONTENTS

PART II — INFORMATION NOT REQUIRED IN PROSPECTUS

Item 13. Other Expenses of Issuance and Distributions

Securities and Exchange Commission Registration Fee*	\$ 2,932.27
Legal Fees and Expenses	175,000.00
Accounting Fees and Expenses	20,000.00
Miscellaneous Expenses	1,000.00
Total	\$ 198,932.27

*

All expenses except the registration fee are estimates.

Item 14. Indemnification of Directors and Officers

Our amended and restated certificate of incorporation, as amended, and amended and restated bylaws, as amended, provide that each person who was or is made a party or is threatened to be made a party to or is otherwise involved (including, without limitation, as a witness) in any action, suit or proceeding, whether civil, criminal, administrative or investigative, by reason of the fact that he or she is or was a director or an officer of Cyclacel Pharmaceuticals, Inc. or is or was serving at our request as a director, officer, or trustee of another corporation, or of a partnership, joint venture, trust or other enterprise, including service with respect to an employee benefit plan, whether the basis of such proceeding is alleged action in an official capacity as a director, officer or trustee or in any other capacity while serving as a director, officer or trustee, shall be indemnified and held harmless by us to the fullest extent authorized by the Delaware General Corporation Law against all expense, liability and loss (including attorneys' fees, judgments, fines, ERISA excise taxes or penalties and amounts paid in settlement) reasonably incurred or suffered by such. Section 145 of the Delaware General Corporation Law permits a corporation to indemnify any director or officer of the corporation against expenses (including attorney's fees), judgments, fines and amounts paid in settlement actually and reasonably incurred in connection with any action, suit or proceeding brought by reason of the fact that such person is or was a director or officer of the corporation, if such person acted in good faith and in a manner that he reasonably believed to be in, or not opposed to, the best interests of the corporation, and, with respect to any criminal action or proceeding, if he or she had no reason to believe his or her conduct was unlawful. In a derivative action, (i.e., one brought by or on behalf of the corporation), indemnification may be provided only for expenses actually and reasonably incurred by any director or officer in connection with the defense or settlement of such an action or suit if such person acted in good faith and in a manner that he or she reasonably believed to be in, or not opposed to, the best interests of the corporation, except that no indemnification shall be provided if such person shall have been adjudged to be liable to the corporation, unless and only to the extent that the court in which the action or suit was brought shall determine that the defendant is fairly and reasonably entitled to indemnity for such expenses despite such adjudication of liability.

Pursuant to Section 102(b)(7) of the Delaware General Corporation Law, our amended and restated certificate of incorporation eliminates the liability of a director to us or our stockholders for monetary damages for such a breach of fiduciary duty as a director, except for liabilities arising:

- from any breach of the director's duty of loyalty to us or our stockholders;
- from acts or omissions not in good faith or which involve intentional misconduct or a knowing violation of law;
- under Section 174 of the Delaware General Corporation Law; and

- from any transaction from which the director derived an improper personal benefit.

We carry insurance policies insuring our directors and officers against certain liabilities that they may incur in their capacity as directors and officers. In addition, we expect to enter into indemnification agreements with each of our directors and executive officers prior to completion of the offering.

II-1

TABLE OF CONTENTS

The Company has entered into indemnification agreements with each of its directors and executive officers. Pursuant to the indemnification agreements, the Company agrees to hold harmless and indemnify its directors and executive officers to the fullest extent authorized or permitted by the provisions of the Company's amended and restated certificate of incorporation, amended and restated by-laws and the DGCL, including for any amounts that such director or officer becomes obligated to pay because of any claim to which such director or officer is made or threatened to be made a party, witness or participant, by reason of such director's or officer's service as a director, officer, employee or other agent of the Company.

There are certain exceptions from the Company's obligation to indemnify its directors and executive officers pursuant to the indemnification agreements, including for "short-swing" profit claims under Section 16(b) of the Securities Exchange Act of 1934, as amended, losses that are as a result of conduct that is established by a final judgment as knowingly fraudulent or deliberately dishonest or that constituted willful misconduct, or that constituted a breach of the duty of loyalty to the Company or resulted in any improper personal profit or advantage, where payment is actually made to a director or officer under an insurance policy, indemnity clause, bylaw or agreement, except in respect of any excess beyond payment under such insurance, clause, bylaw or agreement, for indemnification which is not lawful, or in connection with any proceeding initiated by such director or officer, or any proceeding against the Company or its directors, officers, employees or other agents, unless (i) such indemnification is expressly required to be made by law, (ii) the proceeding was authorized by the board of directors of the Company, (iii) such indemnification is provided by the Company, in its sole discretion, pursuant to the powers vested in the Company under the DGCL, or (iv) the proceeding is initiated to enforce a claim for indemnification pursuant to the indemnification agreement.

All agreements and obligations of the Company contained in the indemnification agreements shall continue during the period when the director or officer who is a party to an indemnification agreement is a director, officer, employee or other agent of the Company (or is or is serving at the request of the Company as a director, officer, employee or other agent of another corporation, partnership, joint venture, trust, employee benefit plan or other enterprise) and shall continue thereafter so long as such director or officer shall be subject to any possible claim or threatened, pending or completed action, suit or proceeding, whether civil, criminal, arbitrational, administrative or investigative. In addition, the indemnification agreements provide for partial indemnification and advance of expenses.

Insofar as indemnification for liabilities arising under the Securities Act of 1933, as amended, may be permitted to our directors, officers or controlling persons pursuant to the foregoing provisions, or otherwise, we have been advised that in the opinion of the Securities and Exchange Commission this indemnification is against public policy as expressed in the Securities Act of 1933, as amended, and is, therefore, unenforceable.

Item 15. Recent Sales of Unregistered Securities

In the three years preceding the filing of this Registration Statement, we have sold the following securities that were not registered under the Securities Act. The following information gives effect to a one-for-twelve reverse stock split of our common stock effected on May 31, 2016.

FBR Sales Agreement

On June 23, 2016, the Company entered into a sales agreement with FBR (the "FBR Sales Agreement"), under which the Company may issue and sell shares of its common stock, from time to time through FBR, acting as its sales agent. Under the FBR Sales Agreement, FBR may sell the shares of common stock by any method that is deemed to be an "at the market offering". The Company will pay FBR a commission of 3.0% of the gross sales price per share sold. The Company is not obligated to make any sales of common stock under the FBR Sales Agreement. In the three months ended March 31, 2017, the Company sold 16,118 shares of common stock under the sales agreement for net proceeds of approximately \$0.1 million. During April 2017, the Company sold a further 167,000 shares of common stock for net proceeds of approximately \$1.0 million.

Aspire Stock Purchase Agreement

On November 14, 2013, the Company entered into a common stock purchase agreement with Aspire (the "Aspire Purchase Agreement"). Upon execution of the Aspire Purchase Agreement, Aspire purchased

TABLE OF CONTENTS

42,626 shares of common stock for an aggregate purchase price of \$2.0 million. During the year ended December 31, 2015, the Company sold all remaining 117,869 shares of common stock that were subject to the Aspire Purchase Agreement for net proceeds of approximately \$1.4 million and the Aspire Purchase Agreement was automatically terminated by its terms.

Item 16. Exhibits

Exhibit Number	Description
1.1*	Form of Underwriting Agreement.
3.1	Amended and Restated Certificate of Incorporation of Cyclacel Pharmaceuticals, Inc. (previously filed as Exhibit 3.1 to the Registrant's Annual Report on Form 10-K, originally filed with the SEC on April 1, 2013, and incorporated herein by reference).
3.2	Certificate of Amendment to the Amended and Restated Certificate of Incorporation of Cyclacel Pharmaceuticals, Inc. (previously filed as Exhibit 3.1 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on May 27, 2016, and incorporated herein by reference).
3.3	Amended and Restated Bylaws of Cyclacel Pharmaceuticals, Inc. (Previously filed as Exhibit 3.2 to the Registrant's Annual Report on Form 10-K, File No. 000-50626, originally filed with the SEC on March 31, 2011 and incorporated herein by reference).
3.4	Certificate of Designation of 6% Convertible Exchangeable Preferred Stock (previously filed as Exhibit 3.2 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on November 5, 2004, and incorporated herein by reference).
3.5*	Certificate of Designation of Series A Preferred Stock.
4.1	Form of Common Stock Certificate (previously filed as Exhibit 4.1 to Registrant's Registration Statement on Form S-1, File No. 333-109653, originally filed with the SEC on October 10, 2003, as subsequently amended, and incorporated herein by reference).
4.2**	Form of Series A Preferred Stock Certificate.
4.3*	Form of Warrant to purchase shares of Cyclacel Pharmaceuticals, Inc. Common Stock to be issued in the Offering.
5.1*	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
10.1	Stock Purchase Agreement, dated December 15, 2005, between Xcyte Therapies, Inc., and Cyclacel Group plc (previously filed as Exhibit 2.1 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on December 20, 2005, and incorporated herein by reference).
10.2	Amendment No. 1 to the Stock Purchase Agreement, dated January 13, 2006, between Xcyte Therapies Inc., and Cyclacel Group plc (previously filed as Exhibit 2.1 to the Registrant's current report on Form 8-K filed with the Commission on January 19, 2006, and incorporated herein by reference).
10.3†	Amended and Restated Equity Incentive Plan (previously filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K, originally filed with the SEC on May 24, 2012, and incorporated by reference).
10.4†	Equity Incentive Plan (previously filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K, originally filed with the SEC on May 22, 2015, and incorporated by reference).
10.5†	Employment Agreement by and between Cyclacel Pharmaceuticals, Inc. and Spiro Rombotis, dated as of January 1, 2014 (previously filed as Exhibit 10.4 to the Registrant's Annual Report on Form 10-K, originally filed with the SEC on March 24, 2014, and incorporated by reference).
10.6†	Employment Agreement by and between Cyclacel Pharmaceuticals, Inc. and Paul McBarron, dated as of January 1, 2014 (previously filed as Exhibit 10.5 to the Registrant's Annual Report on Form 10-K, originally filed with the SEC on March 24, 2014, and incorporated by reference).

TABLE OF CONTENTS

Exhibit Number	Description
10.7†	Form of Change in Control Agreement by and between Cyclacel Pharmaceuticals, Inc. and Dr. Judy Chiao, dated as of December 10, 2010 (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on December 14, 2010, and incorporated herein by reference).
10.8	Agreement between the Company and Scottish Enterprise dated March 27, 2006 (previously filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, for the quarterly period ended June 30, 2009, originally filed with the SEC on August 13, 2009, and incorporated herein by reference).
10.9	Addendum to Agreement between the Company and Scottish Enterprise dated June 22, 2009 (previously filed as Exhibit 10.3 to the Registrant's Quarterly Report on Form 10-Q, for the quarterly period ended June 30, 2009, originally filed with the SEC on August 13, 2009, and incorporated herein by reference).
10.10#	License Agreement by and between Sankyo Co., Ltd. and Cyclacel Limited, dated September 10, 2003, and letter amendments dated April 1, 2004 and April 28, 2004 (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, for the quarterly period ended June 30, 2011, originally filed with the SEC on August 12, 2011, and incorporated herein by reference).
10.11#	Amendment No. 4 to License Agreement between Daiichi Sankyo Company, Limited and Cyclacel Limited, dated July 11, 2011 (previously filed as Exhibit 10.2 to the Registrant's Quarterly Report on Form 10-Q, for the quarterly period ended June 30, 2011, originally filed with the SEC on August 12, 2011, and incorporated herein by reference).
10.12	Common Stock Purchase Agreement, dated November 14, 2013, by and between Cyclacel Pharmaceuticals, Inc. and Aspire Capital Fund, LLC (previously filed as Exhibit 10.1 to the Registrant's Quarterly Report on Form 10-Q, originally filed with the SEC on November 14, 2013, and incorporated herein by reference).
10.13	Form of Securities Purchase Agreement, by and between Cyclacel Pharmaceuticals, Inc. and certain investors (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K, originally filed with the SEC on March 4, 2015, and incorporated herein by reference).
10.14†	Employment Extension Agreement by and between Cyclacel Pharmaceuticals, Inc. and Spiro Rombotis, dated as of December 22, 2016 (previously filed as Exhibit 10.14 to the Registrant's Annual Report on Form 10-K, originally filed with the SEC on March 31, 2017, and incorporated herein by reference).
10.15†	Employment Extension Agreement by and between Cyclacel Pharmaceuticals, Inc. and Paul McBarron, dated as of December 22, 2016 (previously filed as Exhibit 10.15 to the Registrant's Annual Report on Form 10-K, originally filed with the SEC on March 31, 2017, and incorporated herein by reference).
21	Subsidiaries of Cyclacel Pharmaceuticals, Inc. (previously filed as Exhibit 21 to the Registrant's Annual Report on Form 10-K, originally filed with the SEC on March 26, 2014, and incorporated herein by reference).
23.1*	Consent of Independent Registered Public Accounting Firm.
23.2*	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1).
24.1**	Power of Attorney.

†
Indicates management compensatory plan, contract or arrangement.

Confidential treatment has been granted with respect to certain portions of this exhibit, which portions have been omitted and filed separately with the Securities and Exchange Commission as part of an application for confidential

treatment pursuant to the Securities and Exchange Act of 1934, as amended.

*

Filed herewith.

**

Previously filed.

II-4

TABLE OF CONTENTS

Item 17. Undertakings

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

The undersigned registrant hereby undertakes that:

(1)

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

(2)

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

TABLE OF CONTENTS

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized in the City of Berkeley Heights, State of New Jersey, on July 17, 2017.

CYCLACEL PHARMACEUTICALS, INC.

By:

/s/ Paul McBarron

Paul McBarron
Chief Operating Officer, Chief Financial Officer,
and Executive Vice President, Finance

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement has been signed by the following persons in the capacities and as of the dates indicated.

Signature	Title	Date
/s/ Spiro Rombotis	President & Chief Executive Officer (Principal Executive Officer)	July 17, 2017
Spiro Rombotis	and Director	
/s/ Paul McBarron	Chief Operating Officer, Chief Financial Officer, and Executive Vice President, Finance (Principal Financial and Accounting Officer) and Director	July 17, 2017
Paul McBarron		
*		
Dr. David U'Prichard	Chairman	July 17, 2017
*		
Dr. Christopher Henney	Vice Chairman	July 17, 2017
*		
Sir John Banham	Director	July 17, 2017
*		
Gregory Hradsky	Director	July 17, 2017
*		
Lloyd Sems	Director	July 17, 2017

* By:

/s/ Paul McBarron

Paul McBarron
Attorney-in-fact