UNITED STATES SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM S-8

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

CYCLACEL PHARMACEUTICALS, INC.

(Exact name of registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

91-1707622 (I.R.S. Employer Identification No.)

200 Connell Drive Suite 1500 Berkeley Heights, New Jersey 07922 (Address of Principal Executive Offices) (Zip Code)

CYCLACEL PHARMACEUTICALS, INC. 2015 EQUITY INCENTIVE PLAN

(Full title of the plan)

Spiro Rombotis President and Chief Executive Officer Cyclacel Pharmaceuticals, Inc. 200 Connell Drive, Suite 1500 Berkeley Heights, NJ 07922 (908) 517-7330 (Name and address of agent for service)

(Telephone number, including area code, of agent for service)

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 definition of "accelerated filer," "large accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act. Check one:

Large accelerated filer \Box Non-accelerated filer \Box (Do not check if smaller reporting company) Accelerated filer \Box Smaller reporting company \boxtimes

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.

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)	Proposed Maximum Offering Price Per Share (2)	Proposed Maximum Aggregate Offering Price (2)	Amount of Registration Fee
Common Stock, par value \$0.001 per share	600,000	\$ 4.24 \$	2,544,000 \$	294.85

- (1) The number of shares of common stock, par value \$0.001 per share ("Common Stock"), of Cyclacel Pharmaceuticals, Inc. (the "Registrant"), stated above consists of the aggregate number of shares not previously registered that may be issued and sold pursuant to awards that may be hereafter granted under the Cyclacel Pharmaceuticals, Inc. 2015 Equity Incentive Plan, as amended (the "2015 Plan"). The maximum number of shares that may be sold upon the exercise of options or issuance of other stock-based awards granted under the Plan is subject to adjustment in accordance with certain anti-dilution and other provisions of the Plan. Accordingly, pursuant to Rule 416 under the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement covers, in addition to the number of shares stated above, an indeterminate number of shares which may be subject to grant or otherwise issuable after the operation of any such anti-dilution and other provisions.
- (2) This calculation is made solely for the purpose of determining the registration fee pursuant to the provisions of Rule 457(c) and (h) under the Securities Act. The offering price per share and the aggregate offering price are based upon the average of the high and low sale prices per share of the Common Stock as reported on the NASDAQ Capital Market as of a date (June 26, 2017) within five business days prior to filing this Registration Statement.

EXPLANATORY NOTE

Cyclacel Pharmaceuticals, Inc. 2015 Equity Incentive Plan

Cyclacel Pharmaceuticals, Inc. (the "Company" or the "Registrant") is hereby registering 600,000 shares of the Company's common stock, par value \$0.001 per share ("Common Stock"), which may be issued and sold pursuant to the Cyclacel Pharmaceuticals, Inc. 2015 Equity Incentive Plan, as amended (the "2015 Plan"). On May 30, 2017, the Company's stockholders approved an amendment to the 2015 Plan to increase the maximum number of shares that may be issued and sold under the 2015 Plan by 600,000 shares. The Company has previously registered on Form S-8 (Registration No. 333-205153) an aggregate of 4,731,954 shares of Common Stock issuable under the 2015 Plan.

PART I

INFORMATION REQUIRED IN THE SECTION 10(a) PROSPECTUS

EXPLANATORY NOTE

In accordance with the instructional Note to Part I of Form S-8 as promulgated by the Securities and Exchange Commission (the "Commission"), the information specified by Part I of Form S-8 has been omitted from this Registration Statement on Form S-8 for offers of Common Stock pursuant to the 2015 Plan. The documents containing the information specified in Part I will be delivered to the participants in the 2015 Plan covered by this Registration Statement as required by Rule 428(b)(1) under the Securities Act.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 3. Incorporation of Documents by Reference.

The following documents filed by the Registrant with the Commission are incorporated herein by reference:

- (a) Annual Report on Form 10-K for the year ended December 31, 2016 filed with the Commission on March 31, 2017;
- (b) Quarterly Report on Form 10-Q for the fiscal quarter ended March 31, 2017, filed with the Commission on May 12, 2017;

(c) Current Reports on Form 8-K filed with the Commission on February 23, 2017, March 13, 2017 and June 1, 2017 (except for the information furnished under Items 2.02 or 7.01 and the exhibits furnished thereto);

(d) The portions of the Registrant's Definitive Proxy Statement on Schedule 14A filed on April 12, 2017 that are deemed "filed" with the Commission under the Securities Exchange Act of 1934, as amended (the "Exchange Act"); and

(e) The description of the Registrant's common stock contained in the Registrant's registration statement on Form 8-A filed with the Commission under Section 12 of the Exchange Act on March 8, 2004, including any amendments or reports filed for the purpose of updating such description.

All reports and other documents filed by the Registrant after the date hereof pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act (other than Current Reports furnished under Item 2.02 or Item 7.01 of Form 8-K and exhibits furnished on such form that relate to such items), prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference herein and to be part hereof from the date of filing of such reports and documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for the purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this Registration Statement.

Item 4. Description of Securities.

Not applicable.

Item 5. Interests of Named Experts and Counsel.

None.

Item 6. Indemnification of Directors and Officers.

The Company's 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 the Company's 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 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, 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, the Company's amended and restated certificate of incorporation eliminates the liability of a director to us or the Company's 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 the Company's 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.

The Company carries insurance policies insuring its directors and officers against certain liabilities that they may incur in their capacity as directors and officers.

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 Exchange Act, 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 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 may be permitted to the Company's directors, officers or controlling persons pursuant to the foregoing provisions, or otherwise, the Company has been advised that in the opinion of the Commission this indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable.

Item 7. Exemption from Registration Claimed.

Not applicable.

Item 8. Exhibits.

A list of exhibits included as part of this Registration Statement is set forth in the Exhibit Index to this Registration Statement and is incorporated herein by reference.

Item 9. Undertakings.

(a) The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective Registration Statement.
 - (iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

Provided, however, that paragraphs (1)(i) and (1)(ii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the Registration Statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned Registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Securities Exchange Act of 1934 that is incorporated by reference in this Registration Statement 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.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Registrant pursuant to the indemnification provisions summarized in Item 6, or otherwise, the Registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Registrant of expenses incurred or paid by a director, officer or controlling person of the Registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES AND POWERS OF ATTORNEY

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and 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 the 29th day of June, 2017.

CYCLACEL PHARMACEUTICALS, INC.

By /s/ Paul McBarron

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

Each person whose signature appears below constitutes and appoints Spiro Rombotis and Paul McBarron, and each of them singly, as his/her true and lawful attorneys-in-fact and agents, with full power of substitution and resubstitution in each of them singly, for him/her and in his/her name, place and stead, and in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8 of Cyclacel Pharmaceuticals, Inc., and to file the same, with all exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting to the attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite or necessary to be done in or about the premises, as full to all intents and purposes as he/she might or could do in person, hereby ratifying and confirming all that the attorneys-in-fact and agents or any of each of them or their substitute may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ Spiro Rombotis Spiro Rombotis	President and Chief Executive Officer (Principal Executive Officer)	June 29, 2017
/s/ Paul McBarron Paul McBarron	Chief Operating Officer, Chief Financial Officer and Executive Vice President, Finance (Principal Financial and Accounting Officer)	June 29, 2017
/s/ Dr. David U'Prichard Dr. David U'Prichard	Chairman	June 29, 2017
/s/ Dr. Christopher Henney Dr. Christopher Henney	Vice Chairman	June 29, 2017
/s/ Sir John Banham Sir John Banham	Director	June 29, 2017
/s/ Gregory Hradsky Gregory Hradsky	Director	June 29, 2017
/s/ Lloyd Sems Lloyd Sems	Director	June 29, 2017
/s/ Dr. Samuel L. Barker Dr. Samuel L. Barker	Director	June 29, 2017

EXHIBIT INDEX

Exhibit Number	Description
4.1	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 (File No. 000-50626), originally filed with the Commission on April 1, 2013, and incorporated herein by reference).
4.2	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).
4.3	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 Commission on March 31, 2011 and incorporated herein by reference).
4.4	Specimen 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 Commission on October 10, 2003, as subsequently amended, and incorporated herein by reference).
4.5	Specimen of Preferred Stock Certificate of Designation (previously filed as Exhibit 3.2 to Registrant's Registration Statement on Form S- 1, File No. 333-119585, originally filed with the Commission on October 7, 2004, as subsequently amended, and incorporated herein by reference).
5.1*	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
10.1	Cyclacel Pharmaceuticals, Inc. 2015 Equity Incentive Plan (previously filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K (File No. 000-50626), originally filed with the Commission on May 22, 2015 and incorporated herein by reference).
10.2	Amendment No. 1 to Cyclacel Pharmaceuticals, Inc. 2015 Equity Incentive Plan (previously filed as Appendix A to the Registrant's proxy statement (File No. 000-50626), originally filed with the Commission on April 12, 2017 and incorporated herein by reference).
10.3	Form of Stock Option Award Agreement under the Registrant's 2015 Equity Incentive Plan, as amended (previously filed as Exhibit 10.2 to the Registrant's Registration Statement on Form S-8 (File No. 333-205153), originally filed with the Commission on June 23, 2015 and incorporated herein by reference).
23.1*	Consent of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. (included in Exhibit 5.1).
23.2*	Consent of RSM US LLP.
24.1*	Power of Attorney of the Directors and Officers of the Registrant (included in signature pages).
* Filed herewith	

MINTZ LEVIN

Chrysler Center 666 Third Avenue New York, NY 10017 212-935-3000 212-983-3115 fax www.mintz.com

Exhibit 5.1

June 29, 2017

Cyclacel Pharmaceuticals, Inc. 200 Connell Drive, Suite 1500 Berkeley Heights, NJ 07922

Ladies and Gentlemen:

We have acted as legal counsel to Cyclacel Pharmaceuticals, Inc., a Delaware corporation (the "Company"), in connection with the preparation and filing with the Securities and Exchange Commission (the "Commission") of a Registration Statement on Form S-8 (the "Registration Statement"), pursuant to which the Company is registering the issuance under the Securities Act of 1933, as amended (the "Securities Act"), of an aggregate of 600,000 shares (the "Shares") of the Company's common stock, par value \$0.001 per share (the "Common Stock"), that may be issued pursuant to the Company's 2015 Equity Incentive Plan, as amended (the "Plan"). This opinion is being rendered in connection with the filing of the Registration Statement with the Commission. All capitalized terms used herein and not otherwise defined shall have the respective meanings given to them in the Registration Statement.

In connection with this opinion, we have examined the Company's Amended and Restated Certificate of Incorporation and the Company's Amended and Restated Bylaws, each as currently in effect; such other records of the corporate proceedings of the Company as we have deemed relevant; and the Registration Statement and the exhibits thereto.

In our examination, we have assumed the genuineness of all signatures, the legal capacity of natural persons, the authenticity of all documents submitted to us as originals, the conformity to original documents of all documents submitted to us as certified or photostatic copies and the authenticity of the originals of such copies. In addition, we have assumed that the Company will receive any required consideration in accordance with the terms of the Plan.

Our opinion is limited to the General Corporation Law of the State of Delaware, and we express no opinion with respect to the laws of any other jurisdiction. No opinion is expressed herein with respect to the qualification of the Shares under the securities or blue sky laws of any state or any foreign jurisdiction.

Based upon the foregoing, we are of the opinion that the Shares, when issued and delivered in accordance with the terms of the Plan will be validly issued, fully paid and non-assessable.

Please note that we are opining only as to the matters expressly set forth herein, and no opinion should be inferred as to any other matters. This opinion is based upon currently existing statutes, rules, regulations and judicial decisions, and we disclaim any obligation to advise you of any change in any of these sources of law or subsequent legal or factual developments which might affect any matters or opinions set forth herein.

We understand that you wish to file this opinion with the Commission as an exhibit to the Registration Statement in accordance with the requirements of Item 601(b)(5) of Regulation S-K promulgated under the Securities Act, and we hereby consent thereto. In giving this consent, we do not admit that we are within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission promulgated thereunder.

Very truly yours,

/s/ Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.

MINTZ, LEVIN, COHN, FERRIS, GLOVSKY AND POPEO, P.C.

Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C. Boston | London | Los Angeles | New York | San Diego | San Francisco | Stamford | Washington

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 of Cyclacel Pharmaceuticals, Inc. of our report dated March 31, 2017 relating to the consolidated financial statements of Cyclacel Pharmaceuticals, Inc., appearing in the Annual Report on Form 10-K of Cyclacel Pharmaceuticals, Inc. for the year ended December 31, 2016.

/s/ RSM US LLP

New York, NY June 29, 2017