

**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.
AMENDED AND RESTATED 2006 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
Non-accelerated filer (Do not check if smaller reporting company)

Accelerated filer
Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered(1)(2)	Proposed Maximum Offering Price Per Share (3)	Proposed Maximum Aggregate Offering Price (3)	Amount of Registration Fee(3)
Common Stock, par value \$0.001 per share	2,200,000	\$ 0.53	\$ 1,166,000	\$ 133.62
	4,800,000	\$ 0.53	\$ 2,544,000	\$ 291.54
	7,000,000		\$ 3,710,000	\$ 425.16

(1) The number of shares of common stock, par value \$0.001 per share (the "Common Stock"), stated above consists of the aggregate number of shares which may be sold (i) upon the exercise of options which have been granted and/or (ii) upon the exercise of options or issuances of stock awards which may hereafter be granted under the Cyclacel Pharmaceuticals, Inc. Amended and Restated 2006 Equity Incentive Plan (the "Plan"). The additional Common Stock is reserved for issuance under the Plan, pursuant to the Amended and Restated 2006 Equity Incentive Plan, revised May 23, 2012.

(2) In addition, pursuant to Rule 416(c) under the Securities Act of 1933, as amended (the "Securities Act"), this registration statement also covers an indeterminate amount of interests to be offered or sold pursuant to the employee benefit plan described herein.

(3) 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 as follows: (i) in the case of shares of Common Stock which may be purchased upon exercise of outstanding options, the fee is calculated on the basis of the price at which the options may be exercised; and (ii) in the case of shares of Common Stock for which options and/or stock awards have not yet been granted and the option price of which is therefore unknown, the fee is calculated on the basis of the high and low sale prices per share of the Common Stock as reported on the NASDAQ Global Market as of a date (August 20, 2012) within five business days prior to filing this Registration Statement.

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 (the "Registration Statement") for offers of Common Stock pursuant to the Cyclacel Pharmaceuticals, Inc. Amended and Restated 2006 Equity Incentive Plan (the "Plan").

This Registration Statement registers additional securities of the same class as other securities for which a registration statement on Form S-8 relating to the Plan is effective. An amendment to increase the maximum number of shares of common stock reserved for issuance under the Plan was approved at the 2008 Annual Meeting of Stockholders on May 14, 2008, as reported in the Quarterly Report on Form 10-Q, filed on August 8, 2008, and an amendment to increase the maximum number of shares of common stock reserved for issuance under the Plan was approved at the 2012 Annual Meeting of Stockholders on May 23, 2012, as reported on the Current Report on Form 8-K, filed on May 24, 2012. In accordance with General Instruction E to Form S-8, Cyclacel Pharmaceuticals, Inc. (the "Registrant") incorporates by reference the contents of the Registrant's registration statement on Form S-8, File No. 333-143786, filed with the Commission on June 15, 2007.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

Item 8. Exhibits.

A list of exhibits filed herewith or incorporated by reference is contained in the Exhibit Index, which is incorporated herein by reference.

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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 22nd day of August, 2012.

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.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ Spiro Rombotis</u> Spiro Rombotis	President and Chief Executive Officer (Principal Executive Officer)	August 22, 2012
<u>/s/ Paul McBarron</u>	Chief Operating Officer, Chief Financial Officer and Executive Vice President, Finance (Principal Financial and Accounting Officer)	August 22, 2012
<u>/s/ Dr. David U'Prichard</u> Dr. David U'Prichard	Chairman	August 22, 2012

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<u>/s/ Dr. Christopher Henney</u> Dr. Christopher Henney	Vice Chairman	August 22, 2012
<u>/s/ Dr. Nicholas Bacopoulos</u> Dr. Nicholas Bacopoulos	Director	August 22, 2012

/s/ Sir John Banham
Sir John Banham

Director

August 22, 2012

/s/ Gregory Hradsky
Gregory Hradsky

Director

August 22, 2012

/s/ Lloyd Sems
Lloyd Sems

Director

August 22, 2012

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EXHIBIT INDEX

Exhibit Number	Description
5.1	Opinion of Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.
10.1	Cyclacel Pharmaceuticals, Inc. 2006 Equity Incentive Plan (as filed as Appendix B to the Registrant's Revised Definitive Proxy Statement on Form 14A, filed with the Commission on April 9, 2007 and incorporated herein by reference).
10.2	Cyclacel Pharmaceuticals, Inc. Amended and Restated 2006 Equity Incentive Plan (as filed as Appendix A to the Registrant's Definitive Proxy Statement on Form 14A, filed with the Commission on April 2, 2008 and incorporated herein by reference).
10.3	Cyclacel Pharmaceuticals, Inc. Amended and Restated 2006 Equity Incentive Plan, revised May 23, 2012 (as filed as Exhibit 10.1 to the Registrant's Current Report on Form 8-K, filed with the Commission on May 24, 2012 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 Ernst & Young (US) LLP.
23.3	Consent of Ernst & Young (UK) LLP.
24.1	Power of Attorney of the Directors and Officers of the Registrant (included in signature pages).

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August 22, 2012

Cyclacel Pharmaceuticals, Inc.
200 Connell Drive, Suite 1500
Berkeley Heights, New Jersey 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 7,000,000 shares (the "Shares") of the Company's common stock, \$0.001 par value per share (the "Common Stock"), that may be issued pursuant to the Company's Amended and Restated 2006 Equity Incentive Plan (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 amended to date and as currently in effect; such other records of the corporate proceedings of the Company and certificates of the Company's officers 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.

Based upon the foregoing, and subject to the limitations set forth below, we are of the opinion that the Shares have been duly authorized and, when issued and delivered in accordance with the terms of the Plan, will be validly issued, fully paid and non-assessable.

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.

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 the Registration Statement (Form S-8) pertaining to the Amended and Restated 2006 Equity Incentive Plan of Cyclacel Pharmaceuticals, Inc. of our report dated March 30, 2012, with respect to the consolidated balance sheet as of December 31, 2011, and the related consolidated statements of operations, stockholders' equity and cash flows for the year then ended and the period from August 13 1996 (inception) to December 31, 2011 of Cyclacel Pharmaceuticals, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2011 filed with the Securities and Exchange Commission.

/S/ ERNST & YOUNG LLP
Metropark, New Jersey
August 22, 2012

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in the Registration Statement (Form S-8) pertaining to the Amended and Restated 2006 Equity Incentive Plan of Cyclacel Pharmaceuticals, Inc. of our report dated March 31, 2011, with respect to the consolidated balance sheet of Cyclacel Pharmaceuticals, Inc as of December 31, 2010 and the related consolidated statements of operations, stockholders' equity and cash flows for each of the two years in the period ended December 31, 2010 and the period from August 13, 1996 to December 31, 2010, which report appears in its Annual Report (Form 10-K) for the year ended December 31, 2011 filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP
London, England
August 22, 2012
