

June 18, 2010

**Via EDGAR and by Federal Express**

Securities and Exchange Commission  
Division of Corporation Finance  
100 F Street, N.E.  
Mail Stop 3561  
Washington, D.C. 20549

**Re: Cyclacel Pharmaceuticals, Inc.  
Post-effective Amendment No. 2 to Form S-3 on Form S-1/A  
Filed on May 27, 2010, as amended on June 11, 2010 and June 18, 2010  
File Number 333-140034**

Ladies and Gentleman:

On behalf of Cyclacel Pharmaceuticals, Inc. (the “**Company**”), we hereby file with the Securities and Exchange Commission (the “**Commission**”) the Post-effective Amendment No. 2 to Form S-3 on Form S-1/A, as initially filed with the Commission on May 27, 2010, and as amended on June 11, 2010 and June 18, 2010 (the “**Amendment**”). We are also delivering five clean and marked complete courtesy copies of the Amendment to the attention of Brian Pitko, Esq. of the Commission.

Set forth below are the Company’s responses to the Commission’s comment provided by a letter (the “**Comment Letter**”) dated June 16, 2010, from Jeffrey P. Riedler, Esq., Assistant Director of the Division of Corporation Finance. The Company’s response is numbered to correspond to the comment, as set forth in the Comment Letter, which, for convenience, we have incorporated into this response letter.

**Incorporation of Documents by Reference, page 58**

1. We note that you filed a Current Report on Form 8-K on June 14, 2010. Under Item 12 of Form S-1 you must incorporate by reference all reports filed pursuant to Section 13(a) or 15(d) of the Exchange Act since the end of your fiscal year. Please revise your registration statement to incorporate by reference your Form 8-K filed June 14, 2010.

**Response:** We have amended “Incorporation of Documents by Reference” to include the foregoing Current Report on Form 8-K.

The Company acknowledges that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;
- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the Company may not assert the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please call Todd Mason at (212) 692-6731 or the undersigned at (212) 692-6774 with any comments or questions and please send a copy of any written comments to the following parties:

**Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.**  
BOSTON | WASHINGTON | NEW YORK | STAMFORD | LOS ANGELES | PALO ALTO | SAN DIEGO | LONDON

**Mintz, Levin, Cohn, Ferris, Glovsky and Popeo, P.C.**

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Very truly yours,

/s/ Joel I. Papernik

Joel I. Papernik

cc: Securities and Exchange Commission (Jeffrey P. Riedler, Esq., Assistant Director)

Cyclacel Pharmaceuticals, Inc. (Spiro Rombotis, President and Chief Executive Officer; Paul McBarron, Chief Operating Officer, Chief Financial Officer and Executive Vice President, Finance)