

September 22, 2009

Pharmacyclics, Inc.
995 East Arques Avenue
Sunnyvale, California 94085-4521

Re: Pharmacyclics, Inc.
 Registration Statement on Form S-8

Ladies and Gentlemen:

We have acted as counsel to Pharmacyclics, Inc., a Delaware corporation (the "Company"), in connection with its Registration Statement on Form S-8 (the "Registration Statement"), being filed with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act"). The Registration Statement relates to the registration of an aggregate of 3,300,000 shares (the "Shares") of the common stock, \$0.0001 par value per share (the "Common Stock"), of the Company issuable pursuant to the terms and in the manner set forth in the Company's 2004 Equity Incentive Award Plan and Employee Stock Purchase Plan (collectively, the "Plans"). On December 12, 2008, the stockholders of the Company recently approved amendments to the Plans to increase the number of shares of Common Stock authorized for issuance under the 2004 Equity Incentive Plan from 1,600,000 to 4,600,000 and under the Employee Stock Purchase Plan from 700,000 to 1,000,000. Registration Statements on Form S-8 (Registration Nos. 333-140480, 333-103113, 333-72020, 333-52881 and 33-98514) were filed with the Commission, registering the offer and sale of the initial 700,000 shares of Common Stock authorized for issuance under the Employee Stock Purchase Plan. Registration Statements on Form S-8 (Registration Nos. 333-131739 and 333-122035) were filed with Commission, registering the offer and sale of the initial 1,600,000 shares of Common Stock authorized for issuance under the 2004 Equity Incentive Award Plan.

We advise you that in connection with the foregoing, we have examined (i) originals or copies certified or otherwise identified to our satisfaction of the Certificate of Incorporation and By-laws of the Company, each as amended to date, (ii) minutes of meetings of the Board of Directors and stockholders of the Company, (iii) the Plans and (iv) such other documents, instruments and certificates of officers and representatives of the Company and public officials, and we have made such examination of law, as we have deemed appropriate as the basis for the opinion hereinafter expressed. In making such examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity to original documents of documents submitted to us as certified or photostatic copies. As to any facts material to this opinion that we did not independently establish or verify, we have relied upon oral or written statements and representations of officers and other representatives of the Company and others.

September 22, 2009

Page 2

Based upon the foregoing, we are of the opinion that the Shares, when issued and paid for in accordance with the terms and conditions set forth in the respective Plans, will be legally issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement and to the reference to this Firm under the caption "Legal Matters" in the prospectus constituting a part of the Registration Statement. In giving such consent, we do not thereby concede that our Firm is within the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission.

Very truly yours,

/s/ OLSHAN GRUNDMAN FROME ROSENZWEIG & WOLOSKY LLP

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