SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

Form S-3

REGISTRATION STATEMENT UNDER THE SECURITIES ACT OF 1933

Pharmacyclics, Inc.

(Exact name of Registrant as specified in its charter)

Delaware

(State or other jurisdiction of incorporation or organization)

94-3148201

(I.R.S. Employer Identification Number)

995 East Arques Avenue Sunnyvale, California 94085-4521 (408) 774-0330

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

Richard A. Miller, M.D.

President and Chief Executive Officer Pharmacyclics, Inc. 995 East Arques Avenue Sunnyvale, California 94085-4521 (408) 774-0330

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

Copies to:

Alan C. Mendelson, Esq. Laura I. Bushnell, Esq. Latham & Watkins LLP 140 Scott Drive Menlo Park, California 94025 (650) 328-4600

Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement is declared effective.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment
plans, please check the following box. \Box
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, other than securities offered only in connection with dividend or interest reinvestment plans, 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	ng
box and l	t the Securities Act registration statement number of the earlier effective registration statement for the same	
offering.		

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(e) under the Securities Act, check the
following box. □
If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the
following box. □

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to be Registered	Amount to be Registered (1)	Proposed Maximum Offering Price per Share (2)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee (3)
Common Stock, par value \$0.0001 per	<u> </u>			
share	1,000,000 Shares	\$3.12	\$3,120,000	\$95.78

- (1) In the event of a stock split, stock dividend, or similar transaction involving Pharmacyclics' common stock, in order to prevent dilution, the number of shares registered shall automatically be increased to cover the additional shares in accordance with Rule 416(a) under the Securities Act.
- (2) The offering price is estimated solely for the purpose of calculating the registration fee in accordance with Rule 457(c) based on the average of the high and low prices reported by the Nasdaq Global Market on June 6, 2007.
- (3) The registration fee has been calculated in accordance with Rule 457(o) under the Securities Act.

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 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.

The information in this prospectus is not complete and may be changed. The selling stockholder 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 it is not soliciting offers to buy these securities in any state where the offer or sale is not permitted.

SUBJECT TO COMPLETION, DATED JUNE 8, 2007

Up to 1,000,000 SHARES OF PHARMACYCLICS, INC.

Common Stock
This prospectus relates to the sale of up to 1,000,000 shares of our common stock by Applera Corporation. We will not receive any of the proceeds from the sale of these shares covered by this prospectus.
Our common stock is traded on the Nasdaq Global Market under the symbol "PCYC." On June 7, 007, the closing price of our common stock was \$3.09.
See "RISK FACTORS" on page 4 for information you should consider before buying these ecurities.
These securities have not been approved or disapproved by the Securities and Exchange Commission or any state securities commission, nor have these organizations determined that this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is June 8, 2007

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ABOUT PHARMACYCLICS

Pharmacyclics is a pharmaceutical company developing innovative products to treat cancer and other serious diseases. We are leveraging our small-molecule drug development expertise to build a pipeline in oncology and other diseases based on a wide range of targets, pathways and mechanisms. Our lead product, Xcytrin® (motexafin gadolinium) Injection, has completed Phase 3 clinical testing in lung cancer brain metastases. Several Phase 1 and Phase 2 clinical trials are ongoing with Xcytrin, either as a single agent or in combination with chemotherapy and/or radiation in multiple cancer types. Pharmacyclics has other product candidates in earlier-stage development for cancer and other diseases.

We were incorporated in the State of Delaware in April 1991. Our principal executive offices are located at 995 East Arques Avenue, Sunnyvale, California 94085. Our telephone number is (408) 774-0330. Our web site is http://www.pharmacyclics.com. Information contained on our web site does not constitute a part of this prospectus. Unless the context requires otherwise, whenever we refer to "Pharmacyclics," "we," "our" or "us" in this prospectus, we mean Pharmacyclics, Inc., unless the context suggests otherwise. When we refer to "you" or "yours," we mean the holders of the applicable series of securities.

PHARMACYCLICS®, the Pentadentate Logo® and Xcytrin® are registered U.S. trademarks of Pharmacyclics, Inc. Other trademarks, trade names or service marks used herein are the property of their respective owners.

FORWARD-LOOKING STATEMENTS

This prospectus, any accompanying prospectus supplement and the documents they incorporate by reference contain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, or Securities Act, and Section 21E of the Securities Exchange Act of 1934, or Exchange Act. These statements relate to future events or our future financial performance. In some cases, you can identify forward-looking statements by terminology such as "anticipate," "assume," "believe," "continue," "could," "estimate," "expect," "intend," "project," "may," "might," "outlook," "plan," "possible," "potential," "predict," "project," "seek," "should," "target" or "will" or the negative of such terms or other comparable terminology. In particular, forward-looking statements may include:

- information concerning possible or assumed future results of operations, trends in financial results and business plans;
- statements about our product development schedule and results of clinical and preclinical studies;
- statements about our expectations for our new drug application for Xcytrin and any other regulatory filings, including the timing of such filings, and any review of or approvals for any of our product candidates;
- statements about expected costs and operating expenses;
- statements about our future capital requirements and the sufficiency of our cash, cash equivalents, investments and other financing proceeds to meet these requirements;

- other statements about our plans, objectives, expectations and intentions; and
- other statements that are not historical fact.

From time to time, we also may provide oral or written forward-looking statements in other materials we release to the public. Forward-looking statements are only predictions that provide our current expectations or forecasts of future events. Any or all of our forward-looking statements in this report and in any other public statements are subject to unknown risks, uncertainties and other factors that may cause our actual results, performance or achievements to be materially different from any future results, performance or achievements expressed or implied by such forward-looking statements. Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, performance or achievements. You should not place undue reliance on these forward-looking statements.

We undertake no obligation to publicly update any forward-looking statements, whether as a result of new information, future events or otherwise. You are advised, however, to consult any further disclosures we make on related subjects in our Annual Report on Form 10-K for the year ended June 30, 2006, Quarterly Reports on Form 10-Q for the quarterly periods ended September 30, 2006, December 31, 2006 and March 31, 2007, and Current Reports on Form 8-K as may be updated from time to time by future filings under the Exchange Act. These are risks that we think could cause our actual results to differ materially from expected or historical results.

Investment in our securities involves a high degree of risk. You should consider carefully the risks described above and under the caption "Risk Factors" on page 4, as well as other information in this prospectus and the prospectus supplement before purchasing any of our securities. Each of these risk factors could adversely affect our business, operating results and financial conditions, as well as adversely affect the value of an investment in our securities.

WHERE YOU CAN FIND MORE INFORMATION

Available Information

We file annual, quarterly and special reports, proxy statements and other information with the Securities and Exchange Commission, which we refer to as the Commission or the SEC. You can inspect and copy these reports, proxy statements and other information at the Commission's public reference facility at 100 F Street, N.E., Washington, D.C. 20549. Please call the Commission at 1-800-SEC-0330 for further information on the public reference facility. The Commission also maintains a web site at www.sec.gov that contains reports, proxy and information statements and other information regarding registrants such as Pharmacyclics that file electronically with the Commission.

This prospectus constitutes part of a registration statement on Form S-3 filed under the Securities Act with respect to the common stock. As permitted by the Commission's rules, this prospectus omits some of the information, exhibits and undertakings included in the registration statement. You may read and copy the information omitted from this prospectus but contained in the registration statement, as well as the periodic reports and other information we file with the Commission, at the public reference facilities maintained by the Commission in Washington, D.C.

Incorporation by Reference

The Commission allows us to "incorporate by reference" the information we file with it, which means that we can disclose important information to you by referring to those documents. The information

incorporated by reference is an important part of this prospectus, and information that we file later with the Commission will automatically update, modify and supersede this information. We incorporate by reference the following documents we have filed with the Commission pursuant to Section 13 of the Securities Exchange Act of 1934, as amended, or Exchange Act:

- Annual Report on Form 10-K for the fiscal year ended June 30, 2006;
- Quarterly Report on Form 10-Q for the quarter ended September 30, 2006, December 31, 2006 and March 31, 2007;
- Current Reports on Form 8-K filed with the Commission on July 3, 2006, July 11, 2006, August 9, 2006, August 11, 2006, August 17, 2006, August 21, 2006, October 30, 2006, November 8, 2006, November 9, 2006, November 17, 2006, November 20, 2006, December 13, 2006, December 14, 2006, December 22, 2006, February 21, 2007; April 4, 2007; April 18, 2007; April 23, 2007; May 8, 2007; June 1, 2007; June 4, 2007 and
- The description of our common stock contained in our registration statement on Form 8-A filed with the SEC on October 20, 1995, including any amendment or report filed for the purpose of updating that description.

All documents filed by us with the Commission pursuant to Sections 13(a), 13(c), 14 or 15(d) of the Exchange Act after the date of this prospectus and before we stop offering the securities under this prospectus (other than current reports deemed furnished and not filed) shall also be deemed to be incorporated by reference and will automatically update information in this prospectus.

Any statements made in this prospectus or in a document incorporated or deemed to be incorporated by reference in 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 in any other subsequently filed document that is also incorporated or deemed to be incorporated by reference in 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 a copy of the information incorporated by reference into this prospectus, but not delivered herewith, at no cost, by writing or telephoning us at the following address:

Corporate Secretary Pharmacyclics, Inc. 995 East Arques Avenue Sunnyvale, California 94085-4521 (408) 774-0330

Exhibits to the filings will not be sent, however, unless those exhibits have specifically been incorporated by reference in this document.

RISK FACTORS

You should carefully consider the specific risks set forth under the caption "Risk Factors" in our most recent Annual Report on Form 10-K and under the caption "Risk Factors" under Item 1A of Part II of our Quarterly Report on Form 10-Q for the quarterly periods ended September 30, 2006, December 31, 2006 and March 31, 2007, which are incorporated by reference in this prospectus, before making an investment decision, as the same may be updated from time to time by our future filings under the Exchange Act.

USE OF PROCEEDS

We are filing this registration statement, of which this prospectus is a part, under our contractual obligation to the holder named in the section entitled "Selling Stockholder". We will not receive any of the proceeds from the resale of these shares of common stock by the selling stockholder.

DESCRIPTION OF OUR COMMON STOCK

This prospectus describes the general terms of our capital stock. For a more detailed description of these securities, you should read the applicable provisions of Delaware law and our certificate of incorporation and bylaws.

Under our Amended and Restated Certificate of Incorporation, the total number of shares of all classes of stock that we have authority to issue is 50,000,000, consisting of 1,000,000 shares of preferred stock, par value \$0.0001 per share, and 49,000,000 shares of common stock, par value \$0.0001 per share. As of June 7, 2007, there were 25,930,053 shares of common stock outstanding held of record by approximately 130 holders, and no shares of preferred stock outstanding

Subject to the prior rights of holders of all classes of stock at the time outstanding having prior rights as to dividends, the holders of common stock are entitled to receive such dividends, if any, as may from time to time be declared by our Board of Directors out of funds legally available therefor. Pursuant to our Amended and Restated Certificate of Incorporation, holders of common stock are entitled to one vote per share, and are entitled to vote upon such matters and in such manner as may be provided by law. Holders of common stock have no preemptive, conversion, redemption or sinking fund rights. Subject to the prior rights of holders of all classes of stock at the time outstanding having prior rights as to liquidation, holders of common stock, upon the liquidation, dissolution or winding up of the company, are entitled to share equally and ratably in the assets of our company. The outstanding shares of common stock are, and the shares of common stock to be offered hereby when issued will be, fully paid and nonassessable. The rights, preferences and privileges of holders of common stock are subject to any series of preferred stock which we may issue in the future.

Provisions of our amended and restated certificate of incorporation and amended and restated bylaws may discourage, delay or prevent a merger, acquisition or other change in control that stockholders may consider favorable, including transactions in which stockholders might otherwise receive a premium for their shares. In addition, these provisions may frustrate or prevent any attempt by our stockholders to replace or remove our current management by making it more difficult to replace or remove our board of directors. These provisions include:

- inability of our stockholders to call a special meeting of the stockholders;
- an advance notice requirement for stockholder proposals and nominations; and
- the authority of our board of directors to issue preferred stock with such terms as our board of directors may determine.

Transfer Agent and Registrar

Computershare Trust Company, N.A. has been appointed as the transfer agent and registrar for our common stock.

SELLING STOCKHOLDER

The following table sets forth the name of the selling stockholder, the number of shares of common stock owned beneficially by the selling stockholder as of June 7, 2007, the number of shares which may be offered pursuant to this prospectus and the number of shares to be owned by the selling stockholder after this offering. In the aggregate, the selling stockholder may sell up to 1,000,000 shares of our common stock pursuant to this prospectus. Since the selling stockholder may offer all, some or none of its common stock, no definitive estimate as to the number of shares thereof that will be held by the selling stockholder after the offering can be provided. In addition, since the date the selling stockholder provided information regarding its ownership of the shares, it may have sold, transferred or otherwise disposed of all or a portion of its shares of common stock in transactions exempt from the registration requirements of the Securities of 1933, as amended (the "Securities Act"). Information concerning the selling stockholder may change from time to time and, when necessary, any changed information will be set forth in a prospectus supplement to this prospectus.

To our knowledge, Applera Corporation has sole voting and investment power with respect to all shares of common stock beneficially owned by it. This information is based upon information provided by the selling stockholder. On April 7, 2006, Applera Corporation and Pharmacyclics, Inc. entered into an Assignment Agreement pursuant to which Applera Corporation assigned rights to some of its drug programs to Pharmacyclics, Inc., and a Stock Purchase Agreement (the "Stock Purchase Agreement"). Applera Corporation acquired the shares which may be sold pursuant to this registration statement in June 2006 pursuant to the terms of the Stock Purchase Agreement.

Name	Total Number of Shares Held (1)	Maximum Number of Shares Available Pursuant to this Prospectus (1)	Shares Owned After Offering (2)	Percentage (3)
Applera Corporation	1,000,000	1,000,000	0	*

- (1) Based on information available as of June 7, 2007.
- (2) Assumes the sale of all shares of common stock offered by this prospectus.
- (3) Based on 25,930,053 shares of common stock outstanding as of June 7, 2007.
- * Less than 1%

PLAN OF DISTRIBUTION

We are registering a total of 1,000,000 shares of our common stock on behalf of the selling stockholder. The selling stockholder and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of the shares of common stock offered hereby in any stock exchange, market or trading facility on which the shares are traded or in private transactions. These sales may be at fixed or negotiated prices. The selling stockholder may use any one or more of the following methods when selling shares:

• sales on the Nasdaq Global Market;

- sales in the over-the-counter market;
- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;
- transactions in which broker-dealers agree with the selling stockholder to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of sale; and
- any other method permitted pursuant to applicable law.

The selling stockholder may also sell the shares directly to market makers acting as principals and/or broker-dealers acting as agents for themselves or their customers. These broker-dealers may receive compensation in the form of discounts, concessions or commissions from the selling stockholder and/or the purchasers of shares for whom the broker-dealers may act as agents or to whom they sell as principal or both, which compensation as to a particular broker-dealer might be in excess of customary commissions. Market makers and block purchasers purchasing the shares will do so for their own account and at their own risk. It is possible that the selling stockholder will attempt to sell shares of common stock in block transactions to market makers or other purchasers at a price per share which may be below the then market price. The selling stockholder cannot assure that all or any of the shares offered in this prospectus will be issued to, or sold by, the selling stockholder. The selling stockholder and any brokers, dealers or agents, upon effecting the sale of any of the shares offered in this prospectus, may be deemed "underwriters" as that term is defined under the Securities Act or the Exchange Act, or the rules and regulations under such acts.

The selling stockholder, alternatively, may sell all or any part of the shares offered in this prospectus through an underwriter. To our knowledge, the selling stockholder has not entered into any agreement with a prospective underwriter and we cannot assure you that any such agreement will be entered into. If the selling stockholder enters into this type of an agreement or agreements, the relevant details will be set forth in a supplement or revision to this prospectus.

The selling stockholder and any other persons participating in the sale or distribution of the shares will be subject to applicable provisions of the Exchange Act and the rules and regulations under such act, including, without limitation, Regulation M. These provisions may restrict certain activities of, and limit the timing of purchases and sales of any of the shares by, the selling stockholder or any other person. Furthermore, under Regulation M, persons engaged in a distribution of securities are prohibited from simultaneously engaging in market making and certain other activities with respect to the securities for a specified period of time prior to the commencement of the distributions, subject to specified exceptions or exemptions. All of these limitations may affect the marketability of the shares.

The selling stockholder also may sell all or a portion of its shares in open market transactions in reliance upon Rule 144 under the Securities Act, provided it meets the criteria and conforms to the requirements of Rule 144.

The selling stockholder will pay any underwriting discounts and commission and expenses incurred by the selling stockholder for brokerage, accounting, tax or legal services or any other expenses incurred by the selling stockholder in connection with sales of our common stock under this prospectus. We will bear all other costs, fees and expenses incurred in effecting the registration of the shares covered by this prospectus, including, but not limited to, all registration and filing fees and fees and expenses of our counsel and our accountants.

LEGAL MATTERS

Latham & Watkins LLP, Menlo Park, California, will issue an opinion about certain legal matters with respect to the securities.

EXPERTS

The financial statements and management's assessment of the effectiveness of internal control over financial reporting (which is included in Management's Report on Internal Control over Financial Reporting) incorporated in this Prospectus by reference to the Annual Report on Form 10-K for the year ended June 30, 2006, have been so incorporated in reliance on the report of PricewaterhouseCoopers LLP, an independent registered public accounting firm, given on the authority of said firm as experts in auditing and accounting.

DISCLOSURE OF COMMISSION POSITION ON INDEMNIFICATION FOR SECURITIES ACT LIABILITIES

Under Section 145 of the Delaware General Corporation Law, the Registrant has broad powers to indemnify its directors and officers against liabilities they may incur in such capacities, including liabilities under the Securities Act of 1933, as amended (the "1933 Act"). The Registrant's Bylaws (the "Bylaws") provide that the Registrant shall indemnify its directors and officers if such officer or director acted (i) in good faith, (ii) in a manner reasonably believed to be in or not opposed to the best interests of the Registrant, and (iii) with respect to any criminal action or proceeding, had no reasonable cause to believe such conduct was unlawful. The Registrant believes that indemnification under its Bylaws covers at least negligence and gross negligence, and requires the Registrant to advance litigation expenses in the case of stockholder derivative actions or other actions, against an undertaking by the directors and officers to repay such advances if it is ultimately determined that the director is not entitled to indemnification. The Bylaws further provide that rights conferred under such Bylaws shall not be deemed to be exclusive of any other right such persons may have or acquire under any agreement, vote of stockholders or disinterested directors, or otherwise.

In addition, the Registrant's Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation") provides that, pursuant to Delaware law, none of its directors shall be liable for monetary damages for breach of his or her fiduciary duty of care to the Registrant and its stockholders. This provision in the Certificate of Incorporation does not eliminate the duty of care, and in appropriate circumstances equitable remedies such as injunctive or other forms of non-monetary relief will remain available under Delaware law. In addition, each director will continue to be subject to liability for breach of the director's duty of loyalty to the Registrant for acts or omissions not in good faith or involving intentional misconduct, for knowing violations of law, for actions leading to improper personal benefit to the director, and for payment of dividends or approval of stock repurchases or redemptions that are

unlawful under Delaware law. The provision also does not affect a director's responsibilities under any other law, such as the federal securities laws or state or federal environmental laws. The Certificate of Incorporation further provides that the Registrant shall indemnify its directors and officers to the fullest extent permitted by law and requires the Registrant to advance litigation expenses in the case of stockholder derivative actions or other actions, against an undertaking by the director to repay such advances if it is ultimately determined that the director is not entitled to indemnification. The Certificate of Incorporation also provides that rights conferred under such Certificate of Incorporation shall not be deemed to be exclusive of any other right such persons may have or acquire under any statute, the Certificate of Incorporation, the Bylaws, agreement, vote of stockholders or disinterested directors, or otherwise.

The Registrant has obtained liability insurance policies for the officers and directors that, subject to certain limitations, terms and conditions, will insure them against losses arising from wrongful acts (as defined by the policy) in their capacity as directors or officers.

In addition, the Registrant has entered into agreements to indemnify its directors and certain of its officers in addition to the indemnification provided for in the Certificate of Incorporation and Bylaws. These agreements, among other things, indemnify the Registrant's directors and certain of its officers for certain expenses (including attorneys fees), judgments, fines and settlement amounts incurred by such person in any action or proceeding, including any action by or in the right of the Registrant, on account of services as a director or officer of the Registrant or as a director or officer of any subsidiary of the Registrant, or as a director or officer of any other company or enterprise that the person provides services to at the request of the Registrant.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers or persons controlling the registrant pursuant to the foregoing provisions, the registrant has been informed 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.

PART II

INFORMATION NOT REQUIRED IN PROSPECTUS

Item 14. Other Expenses of Issuance and Distribution

The expenses to be paid by us in connection with the distribution of the securities being registered are as set forth in the following table. All amounts shown are estimates except for the Securities and Exchange Commission registration fee.

Securities and Exchange Commission Registration Fee	\$ 95
Legal Fees and Expenses	\$ 15,000
Accounting Fees and Expenses	\$ 3,000
Miscellaneous	\$ 1,000
Total	\$ 19,095

Item 15. Indemnification of Directors and Officers

Under Section 145 of the Delaware General Corporation Law, the Registrant has broad powers to indemnify its directors and officers against liabilities they may incur in such capacities, including liabilities under the Securities Act of 1933, as amended (the "1933 Act"). The Registrant's Bylaws (the "Bylaws") provide that the Registrant shall indemnify its directors and officers if such officer or director acted (i) in good faith, (ii) in a manner reasonably believed to be in or not opposed to the best interests of the Registrant, and (iii) with respect to any criminal action or proceeding, had no reasonable cause to believe such conduct was unlawful. The Registrant believes that indemnification under its Bylaws covers at least negligence and gross negligence, and requires the Registrant to advance litigation expenses in the case of stockholder derivative actions or other actions, against an undertaking by the directors and officers to repay such advances if it is ultimately determined that the director is not entitled to indemnification. The Bylaws further provide that rights conferred under such Bylaws shall not be deemed to be exclusive of any other right such persons may have or acquire under any agreement, vote of stockholders or disinterested directors, or otherwise.

In addition, the Registrant's Amended and Restated Certificate of Incorporation (the "Certificate of Incorporation") provides that, pursuant to Delaware law, none of its directors shall be liable for monetary damages for breach of his or her fiduciary duty of care to the Registrant and its stockholders. This provision in the Certificate of Incorporation does not eliminate the duty of care, and in appropriate circumstances equitable remedies such as injunctive or other forms of non-monetary relief will remain available under Delaware law. In addition, each director will continue to be subject to liability for breach of the director's duty of loyalty to the Registrant for acts or omissions not in good faith or involving intentional misconduct, for knowing violations of law, for actions leading to improper personal benefit to the director, and for payment of dividends or approval of stock repurchases or redemptions that are unlawful under Delaware law. The provision also does not affect a director's responsibilities under any other law, such as the federal securities laws or state or federal environmental laws. The Certificate of Incorporation further provides that the Registrant shall indemnify its directors and officers to the fullest extent permitted by law and requires the Registrant to advance litigation expenses in the case of stockholder derivative actions or other actions, against an undertaking by the director to repay such advances if it is ultimately determined that the director is not entitled to indemnification. The Certificate of Incorporation also provides that rights conferred under such Certificate of Incorporation shall not be deemed to be exclusive of any other right such persons may have or acquire under any statute, the Certificate of Incorporation, the Bylaws, agreement, vote of stockholders or disinterested directors, or otherwise.

The Registrant has obtained liability insurance policies for the officers and directors that, subject to certain limitations, terms and conditions, will insure them against losses arising from wrongful acts (as defined by the policy) in their capacity as directors or officers.

In addition, the Registrant has entered into agreements to indemnify its directors and certain of its officers in addition to the indemnification provided for in the Certificate of Incorporation and Bylaws. These agreements, among other things, indemnify the Registrant's directors and certain of its officers for certain expenses (including attorneys fees), judgments, fines and settlement amounts incurred by such person in any action or proceeding, including any action by or in the right of the Registrant, on account of services as a director or officer of the Registrant or as a director or officer of any subsidiary of the Registrant, or as a director or officer of any other company or enterprise that the person provides services to at the request of the Registrant.

Item 16. Exhibits

See Exhibit Index

Item 17. Undertakings

- (a) We hereby undertake:
- (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;
 - (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

(A) paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the Registration Statement is on Form S-8 and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic 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; and

- (B) paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the Registration Statement is on Form S-3 or Form F-3, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic 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, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the Registration Statement.
- (2) That, for the purpose of determining any liability under the Securities Act, 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) We hereby undertake that, for purposes of determining any liability under the Securities Act, each filing of our annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Exchange Act) that is incorporated by reference in the 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 may be permitted to directors, officers and controlling persons of Pharmacyclics pursuant to the provisions described in this registration statement above, or otherwise, we have 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 us of expenses incurred or paid by a director, officer or controlling person of us in the successful defense of any action, suit or proceeding) is asserted against us by such director, officer or controlling person in connection with the securities being registered, we 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.
- (d) The undersigned registrant hereby undertakes to deliver or cause to be delivered with the prospectus, to each person to whom the prospectus is sent or given, the latest annual report to security holders that is incorporated by reference in the prospectus and furnished pursuant to and meeting the requirements of Rule 14a-3 or Rule 14c-3 under the Securities Exchange Act of 1934; and, where interim financial information required to be presented by Article 3 of Regulation S-X are not set forth in the prospectus, to deliver, or cause to be delivered to each person to whom the prospectus is sent or given, the latest quarterly report that is specifically incorporated by reference in the prospectus to provide such interim financial information.

SIGNATURES

Pursuant to the requirements of the Securities Act, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Sunnyvale, State of California, on June 8, 2007.

PHARMACYCLICS, INC.

By /s/ RICHARD A. MILLER, M.D.
Richard A. Miller, M.D.
President and Chief Executive Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each person whose signature appears below does hereby constitute and appoint jointly and severally, Richard A. Miller and Leiv Lea, or either of them, with full power of substitution and full power to act without the other, his or her true and lawful attorney-in-fact and agent to act for him or her in his or her name, place and stead, in any and all capacities, to sign a registration statement on Form S-3 and any or all amendments thereto (including without limitation any post-effective amendments thereto), and any registration statement for the same offering that is to be effective under Rule 462(b) of the Securities Act, and to file each of the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorneys-in-fact and agents, and each of them, full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises in order to effectuate the same as fully, to all intents and purposes, as they, he or she might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents, or any of them, may lawfully do or cause to be done by virtue hereof.

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

Signature	Title	Date
/s/ RICHARD A. MILLER, M.D. Richard A. Miller, M.D.	President and Chief Executive Officer and Director (Principal Executive Officer)	June 8, 2007
/s/ LEIV LEA Leiv Lea	Vice President, Finance and Administration and Chief Financial Officer and Secretary (Principal Financial and Accounting Officer)	June 8, 2007
/s/ MILES R. GILBURNE	Director	June 8, 2007
Miles R. Gilburne		
/s/ JAMES L. KNIGHTON James L. Knighton	Director	June 8, 2007
James L. Kingmon		
/s/ RICHARD M. LEVY, PH.D.	Director	June 8, 2007
Richard M. Levy, Ph.D.		

Signature	 Title	Date
/s/ WILLIAM R. RO William R. Rohr	 Director	June 8, 2007
/s/ CHRISTINE A. WHI	 Director	June 8, 2007

EXHIBIT INDEX

Exhibit	
Number	Description
4.1*	Stock Purchase Agreement By and Between Pharmacyclics, Inc. and Applera Corporation dated April
	7, 2006 (Incorporated by reference to Exhibit 4.3 to the Quarterly Report on Form 10-Q for the quarter
	ended March 31, 2006).
5.1	Opinion of Latham & Watkins LLP.
23.1	Consent of PricewaterhouseCoopers LLP, independent registered public accounting firm.
23.2	Consent of Latham & Watkins LLP (included in Exhibit 5.1).
24.1	Power of Attorney (included on the signature page hereto).

^{*} Confidential treatment has been requested as to certain portions of this agreement.