

Contacts: **Leiv Lea**
Pharmacyclics, Inc.
(408) 774-0330
Carolyn Wang
WeissComm Partners
(415) 946-1065

Pharmacyclics Reports Multiple Presentations at AACR on its HDAC and Selective HDAC Inhibitors

SAN DIEGO and SUNNYVALE, Calif., April 15, 2008 -- Pharmacyclics, Inc.

(Nasdaq: PCYC) today announced preclinical data from four presentations at the Annual Meeting of the American Association for Cancer Research (AACR) being held this week in San Diego, CA. Results from multiple preclinical studies on the company's novel, histone deacetylase (HDAC) inhibitor and HDAC-8 selective inhibitor were presented.

“These presentations demonstrate the breadth of our research and development programs, and highlight our strong collaborations with academic leaders,” said Richard A. Miller, M.D., president and CEO of Pharmacyclics. “Our lead HDAC inhibitor, PCI-24781, is now in Phase 1 clinical trials in patients with advanced solid tumors, and we anticipate initiating a Phase 1/2 study in lymphoma in the second quarter of calendar 2008; both studies will incorporate the use of biomarkers to predict tumor sensitivity to drug treatment.”

Three studies were presented on Pharmacyclics' lead HDAC inhibitor, PCI-24781. PCI-24781 has been shown to inhibit all forms of HDAC enzymes to target a broad range of cancer types, including colon, breast, lung, prostate, and ovarian cancers, as well as glioma.

- In laboratory studies conducted in collaboration with scientists at the University of Texas M.D. Anderson Cancer Center, PCI-24781 demonstrated inhibition of NFkB, a transcription factor known to drive tumor growth.
- In a separate study also conducted in collaboration with M.D. Anderson, researchers found that PCI-24781 was active in transgenic animal models of gallbladder cancer and other solid tumors. Treatment of animals with resistant

gallbladder tumors that overexpress the protein ErbB2, or Her2, with PCI-24781 led to control of tumors in 80 percent of the animals, with most achieving partial response.

- Pharmacyclics researchers also presented a study identifying biomarkers that may be useful in predicting the tumor sensitivity to treatment with PCI-24781.

“These studies demonstrate that PCI-24781 may have a role in the treatment of cancers associated with overexpression of ErbB2 or HER2,” said Joseph J. Buggy, Ph.D., vice president of research for Pharmacyclics. “We look forward to results from our ongoing Phase 1 study of this promising compound.”

An additional study was presented on Pharmacyclics’ PCI-34051, a novel, selective inhibitor of HDAC-8, a protein involved in T-cell leukemia that is also critical in immune function. In previous studies, PCI-34051 was shown to exhibit a greater than 200-fold selectivity to HDAC-8 compared with other HDAC enzymes. The compound selectively induced apoptosis, or cell death, in human T-cell lymphomas and leukemias in vitro. PCI-34051 exhibits anti-inflammatory properties, such as blocking secretion of cytokines from activated monocytes and other inflammatory cells, and has been shown to prevent hypersensitivity in animal models.

“We believe that PCI-34051 is a truly selective HDAC-8 inhibitor,” said Sriram Balasubramanian, Ph.D., director of translational research for Pharmacyclics. “This study further demonstrates that blocking HDAC-8 has anti-inflammatory effects that may be useful for treatment of certain lymphomas and immune-mediated diseases.”

About HDAC Inhibitors

Histone deacetylases are a family of related enzymes important in managing a multitude of cellular functions. HDAC inhibitors are a new class of drugs that modulate transcriptional activity in cells and may block angiogenesis and cell cycling, key components of tumor proliferation. HDAC inhibitors also appear to promote apoptosis (cell death) in tumor cells. Scientists have been searching for more selective inhibitors, which may offer the potential for treating a variety of diseases including cancer and

inflammatory disorders while improving safety.

About Pharmacyclics

Pharmacyclics is a pharmaceutical company developing innovative products to treat cancer and immune mediated diseases. The company is leveraging its small-molecule drug development expertise to build a pipeline in oncology and other diseases based on a wide range of targets, pathways and mechanisms. More information about the company, its technology, and products can be found at <http://www.pharmacyclics.com>.

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NOTE: Other than statements of historical fact, the statements made in this press release about plans for initiating a Phase 1/2 study for PCI-24781 and other future plans for our clinical trials, progress of and reports of results from preclinical and clinical studies, clinical development plans and product development and corporate partnering activities are forward-looking statements, as defined in the Private Securities Litigation Reform Act of 1995. The words "project," "believe," "will," "may," "continue," "plan," "expect," "intend," "anticipate," variations of such words, and similar expressions also identify forward-looking statements, but their absence does not mean that the statement is not forward-looking. The forward-looking statements are not guarantees of future performance and are subject to risks and uncertainties that may cause actual results to differ materially from those in the forward-looking statements. Factors that could affect actual results include risks associated with unexpected delays in clinical trials and preclinical studies and the timing for making related regulatory filings; the fact that data from preclinical studies and Phase 1 or Phase 2 clinical trials may not necessarily be indicative of future clinical trial results; our ability to estimate accurately the amount of cash to be used to fund operations over the next 12 months, our ability to obtain future financing and fund the product development of our pipeline; the initiation, timing, design, enrollment and cost of clinical trials and preclinical studies; our ability to establish successful partnerships and collaborations with third parties; the regulatory approval process in the United States and other countries; and our future capital requirements. For further information about these risks and other factors that may affect the actual results achieved by Pharmacyclics, please see the company's reports as filed with the U.S. Securities and Exchange Commission from time to time, including but not limited to its annual report on Form 10-K for the period ended June 30, 2007 and its subsequently filed quarterly reports on Form 10-Q. Forward-looking statements contained in this announcement are made as of this date, and we undertake no obligation to publicly update any forward-looking statement, whether as a result of new information, future events or otherwise.

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