SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of
the Securities Exchange Act of 1934

Date of Report (Date of Earliest Event Reported): May 10, 2005

A.P. PHARMA, INC.
(Exact name of Registrant as specified in its charter)

DELAWARE	1-16109	94-2875566
(State or other jurisdiction of incorporation)	(Commission File Number)	(IRS Employer Identification No.)

123 SAGINAW DRIVE, REDWOOD CITY, CALIFORNIA 94063
(Address of principal executive offices) (Zip code)

Registrant's telephone number, including area code:
(650) 366-2626

N/A
(Former Name or Former Address, if Changed Since Last Report)

INFORMATION TO BE INCLUDED IN THE REPORT

ITEM 2.02 Results of Operations and Financial Conditions

On May 10, 2005, the Registrant issued a press release announcing its financial results for the fiscal quarter ended March 31, 2005. The press release is attached hereto as Exhibit 99.1 and incorporated herein by reference.

ITEM 9.01 Financial Statements and Exhibits.

(c) Exhibits

99.1 Press release dated May 10, 2005.

SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

A.P. PHARMA, INC.

Date: May 10, 2005

By: /S/ Michael O'Connell
Michael P. J. O'Connell,
President and Chief
Executive Officer

EXHIBIT INDEX

99.1 Press release dated May 10,2005.

(continued from previous page)

Exhibit 99.1

A.P. Pharma Logo

News Release

A.P. PHARMA REPORTS 2005 FIRST QUARTER RESULTS
- - Cancer Patients Enrolled in Phase 2 Clinical Program for APF530 -

REDWOOD CITY, Calif. (May 10, 2005) - A.P. Pharma, Inc. (NASDAQ NM: APPA), a specialty pharmaceutical company, today reported financial results for the three months ended March 31, 2005.

Recent and Financial Highlights
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* APF530 Phase 2 clinical trial program underway for the prevention of acute and delayed chemotherapy-induced nausea and vomiting.
o Primary endpoints are pharmacokinetics, safety and tolerability.
o Protocol approved and U.S. sites are in various stages of initiation.
o Several patients have already been screened and entered into the study.
* Total royalties for the first quarter increased 11%, compared with the prior year's first quarter.
o Royalties from sales of Carac(TM) increased 18%.
o Royalties from sales of Retin-A Micro(R) increased 7%.
* Cash, cash equivalents and short-term investments were $11.8 million as of March 31, 2005.

Financial Results
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A.P. Pharma reported an 11% increase in royalties for the first quarter of 2005 to $1,282,000, compared with $1,154,000 for the first quarter of 2004. First quarter royalties on sales of Carac and Retin-A Micro grew by 18% and 7%, respectively. Contract revenues totaled $78,000, compared with $26,000 for the first quarter of 2004. Total revenues for the first quarter of 2005 increased $180,000 or 15% to $1,360,000, compared with $1,180,000 for the first quarter of 2004.

Research and development expense decreased by $1,191,000 or 40% to $1,822,000 for the first quarter of 2005, compared with the prior year first quarter. The 2004 first quarter included expenditures related to the Phase 2 clinical trials for APF112 for the treatment of post-surgical pain, as well as extensive preclinical studies for APF530. No expenses for APF112 were incurred in the first quarter of 2005.

General and administrative expense increased by $103,000 or 14% to $849,000 for the first quarter of 2005, compared with the prior year first quarter, due primarily to increased legal and consulting fees.

The loss from continuing operations in the first quarter of 2005 was $1,250,000, compared with a loss from continuing operations in the first quarter of 2004 of $2,550,000. The net loss for the first quarter of 2005 was $1,256,000, or $0.05 per share, compared with a net loss for the first quarter of 2004 of $2,599,000, or $0.13 per share.

Cash, cash equivalents and marketable securities were $11,780,000 as of March 31, 2005.

Clinical Update
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APF530 is in development for the prevention of both acute and delayed chemotherapy-induced nausea and vomiting (CINV), using a single subcutaneous injection 30 minutes prior to the initiation of chemotherapy. In April 2005, we announced initiation of the APF530 Phase 2 clinical trial program. Patients have now been screened and enrolled into the study and dosing is underway.

APF530 contains the anti-nausea drug granisetron formulated with the Company's proprietary Biochronomer(TM) bioerodible drug delivery system. A single administration of APF530 is designed to provide therapeutic plasma levels of the drug for four to five days in order to prevent CINV during this period. In Phase 1 studies with healthy human subjects, we evaluated four dose formulations of APF530. The

pharmacokinetics demonstrated a linear dose-proportional increase in plasma levels of granisetron, and meaningful plasma levels were observed over a five-day period at the higher doses. We believe these results are particularly important based on published data that suggest plasma levels of granisetron can potentially predict therapeutic response in patients for both acute and delayed CINV.

The protocol design for the Phase 2 study is an open label, ascending dose trial in patients undergoing moderately emetogenic chemotherapy for cancer who will receive APF530 containing one of three doses of granisetron. The primary endpoints are pharmacokinetics, safety and tolerability. Preliminary efficacy endpoints will also be measured. The trial is a multi-center study that will be conducted at various U.S. and international clinical sites and will include at least 30 patients.

Conference Call Information
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Management will be hosting an investment community conference call beginning at 11:00 a.m. Eastern Time (8:00 a.m. Pacific Time) today to discuss this announcement and to answer questions.

To participate in the live call by telephone, please dial (888) 803-8275 from the U.S. or (706) 634-1287 from outside the U.S. A telephone replay will be available for 48 hours by dialing (800) 642-1687 from the U.S. or (706) 645-9291 from outside the U.S., and entering reservation number 5959618.

Individuals interested in listening to the conference call via the Internet may do so by visiting www.appharma.com. A replay will be available on the Company's Web site for 30 days.

About A.P. Pharma
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A.P. Pharma is a specialty pharmaceutical company focused on the development of ethical (prescription) pharmaceuticals utilizing its proprietary polymer-based drug delivery systems. The Company's primary focus is the development and commercialization of its bioerodible injectable and implantable systems under the trade name Biochronomer. Initial target areas of application for the Company's drug delivery technology include anti-nausea, pain management, inflammation and ophthalmic applications. The Company's product development programs are funded by the sale of common stock in June 2004, royalties from topical products currently marketed by pharmaceutical partners, proceeds from the divestitures of its cosmeceutical and analytical standards product lines and by fees it receives from collaborative partners. For further information visit the Company's Web site at www.appharma.com.

Forward-looking Statements
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Except for historical information, this news release contains certain forward-looking statements that involve risks and uncertainties including, among others, uncertainty associated with timely development, approval, launch and acceptance of new products, establishment of new corporate alliances and progress in research and development programs. Other risks and uncertainties associated with the Company's business and prospects are identified in the Company's filings with the Securities and Exchange Commission. The Company does not undertake to revise these forward-looking statements to reflect events or circumstances occurring in the future.

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(Financial tables follow)

A.P. PHARMA, INC.
Income Statement Highlights
(in thousands, except per share data)
(Unaudited)

	Three Months Ended	
	March 31, 2005	March 31, 2004
Royalties	$ 1,282	$ 1,154
Contract Revenues	78	26
Total Revenues	1,360	1,180
Operating Expenses:		
Research & Development	1,822	3,013
General & Administrative	849	746
Total Operating Expenses	2,671	3,759
Operating Loss	(1,311)	(2,579)
Interest and Other, Net	61	29
Loss from Continuing Operations	(1,250)	(2,550)
Loss from Discontinued Operations	(18)	(50)
Gain on Disposition of Discontinued Operations	12	1
Net Income (Loss)	$(1,256)	$(2,599)
Basic and Diluted Earnings (Loss) Per Share:		
Loss from Continuing Operations	$ (0.05)	$ (0.12)
Net Income (Loss)	$ (0.05)	$ (0.13)
Shares used in Calculating Earnings (Loss) Per Share:		
Basic	25,046	20,653
Diluted	25,046	20,653

A.P. PHARMA, INC.
Balance Sheet Highlights
(in thousands)

	March 31, 2005	December 31, 2004
	(Unaudited)	
Assets		
Cash, Cash Equivalents and Marketable Securities	$11,780	$13,596
Accounts Receivable, Net	1,435	1,506
Other Current Assets	308	394
Total Current Assets	13,523	15,496
Property, Plant & Equipment, Net	1,167	1,235
Other Non-Current Assets	209	283
Total Assets	$14,899	$17,014
Liabilities and Stockholders' Equity		

Current Liabilities	$ 1,956	$ 2,860
Stockholders' Equity	12,943	14,154
Total Liabilities and Stockholders' Equity	$14,899	$17,014