UNITED STATES
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 17, 2010

A.P. Pharma, Inc.

(Exact name of registrant as specified in its charter)

Delaware	001-33221	94-2875566
(State or other jurisdiction of incorporation)	(Commission File Number)	(I.R.S. Employer Identification No.)

123 Saginaw Drive Redwood City CA	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)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

☐ Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)

☐ Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)

☐ Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))

☐ Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

ITEM 2.02 Results of Operations and Financial Condition

On May 17, 2010, the Company issued a press release announcing its financial results for the quarter ended March 31, 2010. A copy of this press release is furnished as Exhibit 99.1 to this Current Report on Form 8-K (the "Report"). The press release should be read in conjunction with the note regarding forward-looking statements, which is included in the text of the press release.

The information in this Item 2.02 and attached as Exhibit 99.1 to this Report will not be treated as "filed" for the purposes of Section 18 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), or otherwise subject to the liabilities of that section. This information will not be incorporated by reference into any filing under the Securities Act of 1933, as amended, or into another filing under the Exchange Act, unless that filing expressly incorporates this information by reference.

ITEM 9.01 Financial Statements and Exhibits.

(d) Exhibits

99.1 Press Release of A. P. Pharma, Inc., dated May 17, 2010

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 17, 2010

/s/ Ronald J. Prentki

Ronald J. Prentki
President, Chief Executive Officer and Director

Exhibit 99.1

A.P. Pharma Announces
First Quarter 2010 Financial Results

REDWOOD CITY, Calif. – May 17, 2010 – A.P. Pharma, Inc. (NASDAQ: APPA), a specialty pharmaceutical company, today reported financial results for its first quarter ended March 31, 2010.

"Our focus is on addressing the issues raised in the Complete Response Letter we received for APF530 in March 2010," stated Ronald Prentki, A.P. Pharma's president and chief executive officer. "We are working with the U.S. Food and Drug Administration to schedule an End of Review meeting and have been diligently preparing our reply to the Complete Response Letter."

Operational Highlights

- In March, the Company received a Complete Response Letter from the U.S. Food and Drug Administration (FDA) regarding its New Drug Application (NDA) for APF530 in the prevention of both acute and delayed onset chemotherapy-induced nausea and vomiting (CINV). The Company has been working to address issues raised in the Complete Response Letter and is working with the FDA to schedule an End of Review meeting.

- In January, an affiliate of Paul Capital Healthcare made final milestone payments totaling $2.5 million per an October 2005 agreement under which the Company sold its royalty rights to Retin-A Micro® and Carac®.

- In February, Stephen R. Davis was appointed to the Company's Board of Directors.

Results of Operations

A.P. Pharma's net loss for the first quarter of 2010 was $495,000, or $0.01 per share, compared with a net loss of $3.0 million, or $0.10 per share, for the first quarter of 2009. The improved operating results were principally due to royalty milestone payments totaling $2.5 million received in the first quarter of 2010, contract revenue from an on-going collaboration with Merial and continuing cost containment actions undertaken by the Company.

Contract revenue was $241,000 in the first quarter of 2010 compared with $8,000 for the first quarter of 2009. The increase in revenue in 2010 was primarily related to research and development work performed under an agreement with Merial entered into in September 2009 for a long-acting pain management product for companion animals.

Cash and cash equivalents as of March 31, 2010 were $7.6 million, compared with $7.6 million at December 31, 2009. As disclosed in the Company's Annual Report on Form 10-K for the year ended December 31, 2009 filed with the SEC on March 15, 2010, A.P. Pharma believed it had sufficient cash resources to fund operations through 2010. On March 19, 2010 A.P. Pharma announced the receipt of a Complete Response Letter from the FDA on the APF530 NDA. In the letter, the FDA raised questions which preclude the approval of the APF530 NDA in its current form. Responding to these issues will likely change the Company's anticipated use of cash for the remainder of 2010. The full extent of activities, costs and time required to address the FDA's questions is not currently known; however, A.P. Pharma expects to clarify the acti ons required for resubmission and approval of its NDA at the End of Review meeting. If A.P. Pharma elects to immediately undertake all the activities that may be required to address the Complete Response Letter without further direction from the FDA, the Company would need additional capital to operate beyond the third quarter 2010. Based on multiple factors, including market conditions, the Company may not be able to obtain adequate financing to support its operations.

About APF530

A.P. Pharma's lead product, APF530, prevents both acute and delayed onset of CINV. APF530 contains the 5-HT3 antagonist, granisetron, formulated in the Company's proprietary Biochronomer™ drug delivery system, which allows therapeutic drug levels to be maintained for five days with a single subcutaneous injection. Intravenous and oral formulations containing granisetron are approved for the prevention of acute onset CINV, but not for delayed onset CINV. Granisetron was selected because it is widely prescribed by physicians based on a well-established record of safety and efficacy.

About A.P. Pharma

A.P. Pharma is a specialty pharmaceutical company developing products using its proprietary Biochronomer™ polymer-based drug delivery technology. The Company's primary focus is on its lead product, APF530, for the prevention of chemotherapy-induced nausea and vomiting (CINV). A.P. Pharma received a Complete Response Letter on the APF530 NDA in March 2010 and is in the process of preparing a resubmission responsive to the deficiencies listed in the Complete Response Letter. The Company has additional clinical and preclinical stage programs in the area of pain management, all of which utilize its bioerodible injectable and implantable delivery systems. Further work on these programs has been deferred while the Company focuses on obtaining regulatory approval for APF530. For further information, visit the Company's web site at www.appharma.com.

(financial tables follow)

A.P. Pharma, Inc.
Condensed Statements of Operations
(in thousands, except per share amounts)
(unaudited)

	Three Months Ended March 31,	
	2010	**2009**
Contract revenue	$ 241	$ 8
Operating expenses:		
Research and development	2,331	2,050
General and administrative	781	927
Total operating expenses	3,112	2,977
Operating loss	(2,871)	(2,969)
Gain on sale of royalty interest	2,500	-
Interest income, net	-	9
Loss from continuing operations	(371)	(2,960)
Loss from discontinued operations	(124)	-
Net loss	$ (495)	$ (2,960)
Basic and diluted net loss per share:		
Loss from continuing operations	$ (0.01)	$ (0.10)
Net loss	$ (0.01)	$ (0.10)
Weighted-average common shares outstanding—basic and diluted	39,420	30,868

A.P. Pharma, Inc.
Condensed Balance Sheets
(in thousands)
(unaudited)

	March 31, 2010	December 31, 2009
Assets		
Current assets:		
Cash and cash equivalents	$ 7,562	$ 7,593
Accounts receivable	224	171
Prepaid expenses and other current assets	436	549
Total current assets	8,222	8,313
Property and equipment, net	455	510
Other long-term assets	128	128
Total assets	$ 8,805	$ 8,951
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 241	$ 162
Accrued expenses	949	1,080
Deferred revenue	115	92
Accrued disposition costs	677	553
Total current liabilities	1,982	1,887
Deferred revenue	228	268
Total liabilities	2,210	2,155
Stockholders' equity:		
Common stock	395	394
Additional paid-in capital	147,774	147,481
Accumulated deficit	(141,574)	(141,079)
Total stockholders' equity	6,595	6,796
Total liabilities and stockholders' equity	$ 8,805	$ 8,951

Forward-looking Statements

This news release contains "forward-looking statements" as defined by the Private Securities Litigation Reform Act of 1995. These forward-looking statements involve risks and uncertainties, including uncertainties associated with capital resources and liquidity, timely development and regulatory approval of product candidates, satisfactory completion of clinical studies, establishment of new corporate alliances, progress in research and development programs, launch and acceptance of new products and other risks and uncertainties identified in the Company's filings with the Securities and Exchange Commission. We caution investors that forward-looking statements reflect our analysis only on their stated date. We do not intend to update them except as required by law.

Contacts

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and

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