



News Release

A.P. PHARMA REPORTS RESULTS FOR THE FIRST QUARTER 2008

APF530 PHASE 3 TRIAL CLOSE TO COMPLETION

REDWOOD CITY, Calif. (May 15, 2008) – A.P. Pharma, Inc. (NASDAQ: APPA), a specialty pharmaceutical company, today reported financial results for its first quarter ended March 31, 2008.

Highlights

Operational:

- APF530 (Prevention of CINV)
 - o Patient enrollment almost complete
 - o Announcement of trial results targeted for Q3 2008
 - o NDA submission planned for late 2008
- APF112 (Post-surgical pain relief)
 - o Preclinical work completed
 - o Initiation of Phase 2b trial will be delayed into Q3 2008 due to manufacturing issue
 - o Expect resolution of manufacturing issue within weeks
- APF580 (Intense pain relief)
 - o IND submission shortly
 - o Plan initiation of Phase 1 trial in Q2 2008
- CEO Succession Program
 - o Active discussions underway with prospective candidates

Financial:

- Cash, cash equivalents and marketable securities \$27.8 million as of March 31, 2008
- Sufficient capital to complete APF530 clinical trial and initiate new clinical programs

Results of Operations

Our net loss for the first quarter was \$6.8 million, or \$0.22 per share, compared with a \$6.0 million net loss, or \$0.94 per share (computed on a much smaller outstanding share base), for the first quarter of 2007. Our increased net loss for the first quarter of 2008, as compared to the same period in 2007, was principally due to increased research and development costs, resulting from increased expenditures on APF580, our undisclosed opiate product candidate for pain, additional personnel and related costs to support our expanded activities, including the higher activity level of our Phase 3 trial for APF530, and to a lesser extent, increased expenditures on our post-operative pain product, APF112.

Contract revenue related to the ongoing development program utilizing our proprietary Biochronomer™ technology with a major animal healthcare company was \$133 thousand in the first quarter of 2008 and \$0 for the comparable period in 2007.

About APF530

Our lead product candidate using our proprietary Biochronomer technology is APF530, which contains granisetron, a drug approved for the prevention of chemotherapy-induced nausea and vomiting (CINV). We selected granisetron because it is a potent drug that blocks a specific receptor found in the gut that is responsible for triggering CINV. Additionally, the applicable granisetron U.S. patent expired on December 29, 2007. APF530 is designed to provide at least five days prevention of CINV. In September 2005, we completed a Phase 2 human clinical trial of APF530 that achieved all of its primary and secondary endpoints. In May 2006, we initiated our pivotal Phase 3 clinical trial of APF530. We believe that this clinical trial will lead to regulatory approval of APF530 for the prevention of acute and delayed onset CINV for patients undergoing both moderately and highly emetogenic, or vomit-inducing, chemotherapy.

Our pivotal Phase 3 clinical trial is a multi-center, randomized, observer-blind, actively-controlled, double-dummy, parallel group study that will compare the efficacy of APF530 with Aloxi®. The trial will include approximately 1,350 patients, stratified in two groups, one receiving moderately and the other receiving highly emetogenic chemotherapeutic agents. In each group, the patients are randomized to receive in the first chemotherapy treatment cycle either APF530 high dose (10 mg), APF530 low dose (5 mg) or the currently approved dose of Aloxi. In subsequent treatment cycles (up to three additional cycles), the patients are re-randomized to either of the two APF530 doses.

About APF112

APF112 utilizes our Biochronomer delivery technology to target post-surgical pain relief. The product is designed to provide up to 36 hours of localized pain relief by delivering mepivacaine directly to the surgical site. Mepivacaine is a well-known, short-acting local anesthetic with an excellent safety profile. APF112 is designed to prolong the anesthetic effect of mepivacaine, thereby minimizing or eliminating the use of opiates.

We have been completing additional preclinical work in early 2008 on a revised protocol from that which was utilized in our 2004 Phase 2 trial. The previous Phase 2 trial indicated excellent safety and tolerability, but did not produce a significant difference between APF112 and the standard of care, wherein the latter showed significantly lower pain scores than exhibited in previously published studies. Our plans to initiate a Phase 2b clinical trial of APF112 in the second quarter of 2008 utilizing this revised protocol have been delayed due to a manufacturing issue encountered while producing materials for this trial at our contract manufacturer. We determined that some batches of our polymer, AP135, contained an extraneous material not present in previous lots of AP135. We believe we have identified the source of this extraneous substance, and expect to conclude corrective actions and reinitiate production of APF112 trial materials in the near future. As a result of this issue, however, initiation of the APF Phase 2b trial will be deferred into the third quarter of 2008.

There should be no impact of this manufacturing issue on the APF530 Phase 3 clinical trial and its timelines, or on the plans for APF580 as mentioned below.

About APF580

APF580 incorporates an opiate into our Biochronomer technology, and is designed to provide analgesia lasting up to seven days by a single injection. It is targeted for situations where the intensity and duration of pain require use of a presently undisclosed opiate rather than a local anesthetic. APF580 may find use in acute and chronic pain settings, improve patient compliance and reduce the risk of drug abuse.

Animal studies with APF580 are currently being conducted, and data from those studies are being supplemented with additional preclinical data from an ongoing research and development agreement with a major animal health company, which is evaluating APF580 for use in cats and dogs. We plan to initiate a Phase 1 clinical trial of APF580 in the second quarter of 2008, and to initiate a Phase 2 clinical trial in the fourth quarter of 2008.

Conference call

Management will host an investment-community conference call today beginning at 11:00 a.m. Eastern time (8:00 a.m. Pacific time) to discuss the financial results, to provide a business update 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 47516329. The call will also be broadcast live on A.P. Pharma's website, www.appharma.com. A replay will be available for 30 days.

About A.P. Pharma

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, anti-inflammation and DNA/RNAI applications. For further information visit the Company's web site at www.appharma.com.

Forward-looking Statements

This news release contains "forward-looking statements" as defined by the Private Securities Reform Act of 1995. These forward-looking statements involve risks and uncertainties, including uncertainties associated with timely development, approval, launch and acceptance of new products, satisfactory completion of clinical studies, establishment of new corporate alliances, progress in research and development programs 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.

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(Financial tables follow)

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

	Three Months Ended March 31	
	2008	2007
Contract revenue	\$133	\$0
Operating expenses:		
Research and development	6,140	4,987
General and administrative	1,080	1,118
Total operating expenses	<u>7,220</u>	<u>6,105</u>
Operating loss	(7,087)	(6,105)
Interest income, net	280	148
Other income, net	3	0
Loss from continuing operations	(6,804)	(5,957)
Loss from discontinued operations	(40)	(8)
Loss before income taxes	(6,844)	(5,965)
Tax provision	0	(36)
Net loss	<u>\$ (6,844)</u>	<u>\$ (6,001)</u>
Basic and diluted net loss per common share:		
Loss from continuing operations	<u>(\$0.22)</u>	<u>(\$0.94)</u>
Net loss	<u>(\$0.22)</u>	<u>(\$0.95)</u>
Shares used to compute basic and diluted loss per share	<u>30,773</u>	<u>6,331</u>

AP PHARMA, INC.
Balance Sheet Highlights
(in thousands)

	March 31, 2008 (Unaudited)	December 31, 2007 (1)
Assets		
Cash, cash equivalents and marketable securities	\$27,834	\$35,062
Accounts receivable, net	133	152
Other current assets	419	582
Total current assets	28,386	35,796
Property and equipment, net	1,212	1,079
Other non-current assets	75	75
Total assets	\$29,673	\$36,950
Liabilities and stockholders' equity		
Total liabilities	\$6,725	\$7,476
Stockholders' equity	22,948	29,474
Total liabilities and stockholders' equity	\$29,673	\$36,950

(1) Derived from our audited financial statements for the year ended December 31, 2007 included in the Company's 2007 Annual Report on Form 10-K filed with the Securities and Exchange Commission.

