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) September 11, 2009

A.P. Pharma, Inc.

(Exact name of registrant as specified in its charter)

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

123 Saginaw Drive Redwood City, CA 94063 (Address of principal executive offices)

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

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 1.01 Entry into Material Definitive Agreement

On September 15, 2009 A.P. Pharma, Inc. (the "Company") issued a press release announcing that on September 11, 2009, it had entered into a Development and License Agreement (the "License Agreement") with Merial Limited, a company limited by shares registered in England and Wales ("Merial"), effective as of September 4, 2009 (the "Commencement Date"). Under the License Agreement, the Company has granted to Merial a worldwide, exclusive license to a long-acting pain management product containing an undisclosed analgesic, for use in treating companion animals (cats and dogs). Pursuant to terms of the License Agreement, the Company will receive an upfront payment, certain development funding and potential future milestone payments and certain royalties following commercialization of a licensed product. The term of the license under the License Agreement will continue until the date of expiration of the last patent covered by the license.

Pursuant to the terms of the License Agreement, Merial may terminate the License Agreement for any reason with 90 days' prior written notice to the Company, and once a license product has been commercially sold, Merial may terminate the License Agreement for any reason with six months' prior written notice to the Company; provided, however, that Merial is prohibited from terminating the License Agreement within the first six months of the Commencement Date. In addition, Merial may terminate the License Agreement immediately in the event the Company materially breaches certain of its obligations under the License Agreement and such breach remains uncured for a period of 60 days after receipt of notice from Merial, or if the Company becomes insolvent.

The Company may terminate the License Agreement (i) upon 60 days' prior written notice to Merial if Merial has not filed an administrative New Animal Drug Application ("NADA") with the U.S. Food and Drug Administration ("FDA") for a licensed product within a certain period after the Commencement Date or has not commercialized a licensed product within a certain period after receiving approval of the administrative NADA and assignment of a NADA number from the FDA, (ii) if Merial materially breaches certain of its obligations under the License Agreement and such breach remains uncured for a period of 60 days after receipt of notice from the Company or (iii) if Merial becomes insolvent.

In the event of a change of control of a party, the other party may terminate the License Agreement within three months after receiving a notice of change of control by giving at least 12 months' written notice to the other party.

Upon termination of the License Agreement, among other things, Merial must pay to the Company all royalties and license fees due and owing up to the termination date. In addition, if a licensed product has been launched by Merial prior to termination for any reason except for termination for cause by Merial and Merial seeks to license its rights in the licensed product to another party, the Company is entitled to a first right of negotiation to acquire such license.

The foregoing description of the License Agreement is qualified in its entirety by reference to the full License Agreement, which will be filed as an exhibit to the Company's Quarterly Report on Form 10-Q for the quarter ending September 30, 2009. The Company intends to submit a FOIA Confidential Treatment Request to the Securities and Exchange Commission pursuant to Rule 24b-2 under the Securities Exchange Act of 1934, as amended, requesting that it be permitted to redact certain portions of the License Agreement. The omitted material will be included in the request for confidential treatment.

A copy of the press release dated September 15, 2009 is attached hereto as Exhibit 99.1 and incorporated herein by reference.

Item 9.01 **Financial Statements and Exhibits**

(d) Exhibits 99.1 P Press Release of A.P. Pharma, Inc. dated September 15, 2009

SIGNATURES

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.

Date: September 18, 2009

A.P. Pharma, Inc.

/s/ Ronald J. Prentki

Ronald J. Prentki President, Chief Executive Officer and Director



A.P. Pharma and Merial Enter into Worldwide Agreement

- Merial to develop pain management product using A.P. Pharma's Biochronomer™ polymer technology -

Redwood City, CA – September 15, 2009 – A.P. Pharma (Nasdaq: APPA), a specialty pharmaceutical company, today announced that it has entered into a license and development agreement with Merial, a world leading animal health company, for a long-acting pain management product. The product, which contains an undisclosed analgesic, uses A.P. Pharma's Biochronomer[™] technology to provide sustained drug levels and pain relief over several days following a single administration. The product is currently undergoing animal efficacy studies.

The license agreement announced today follows a successful research collaboration between the companies. Under the terms of the new agreement, A.P. Pharma grants Merial a worldwide, exclusive license to the product for use in treating companion animals (cats and dogs). A.P. Pharma will receive an undisclosed upfront payment, development funding and potential future milestones that are in addition to royalties following commercialization.

"A.P. Pharma's collaboration with Merial allows us to work with one of the world's leading animal health companies as we seek to expand the application of our Biochronomer technology into the field of veterinary medicine," said Ronald Prentki, A.P. Pharma's President and CEO. "We are hopeful that, through our efforts with Merial, we will not only provide veterinarians with an important new approach to managing pain in companion animals, but also that this effort will prove to be synergistic with our other pain management programs for humans."

"A.P. Pharma's Biochronomer technology provides us with an exciting opportunity to develop a new therapy for treating pain in companion animals," said Peter Selover, Merial's Vice President of Business Development. "We have high expectations for the application of this pain management product and look forward to our continued efforts with the A.P. Pharma team as we develop this program forward to commercialization."

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 candidate, APF530, for the prevention of CINV. The NDA for APF530 was submitted in May 2009 and accepted for review in July 2009, at which time the FDA set a Prescription Drug User Fee Act (PDUFA) date of March 18, 2010. 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. For further information, visit the Company's web site at www.appharma.com.

A.P. Pharma's 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 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.

Contacts

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and

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