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**UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION**  
Washington, D.C. 20549

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**FORM 8-K**

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**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 29, 2009

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**A.P. Pharma, Inc.**

(Exact name of registrant as specified in its charter)

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**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)

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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))
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**Item 1.02 Termination of Material Definitive Agreement**

On September 29, the Company sent notice to RHEI Pharmaceuticals, N.V. (“RHEI”), terminating the License Agreement (“Agreement”) dated October 1, 2006 between the Company and RHEI. RHEI owed the Company a milestone payment following the announcement of acceptance for filing of a New Drug Application for the Company’s AP530 product candidate by the U.S. Food and Drug Administration on July 20, 2009. RHEI did not make such milestone payment in the time required under the terms of the Agreement and was provided notice by the Company of RHEI’s cure period. RHEI remains in default of this payment and, as a result, the Company elected to terminate the Agreement for cause. No material termination penalties apply to the Company for the termination of the Agreement.

**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 30, 2009

A.P. Pharma, Inc.

*/s/ Ronald J. Prentki*

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Ronald J. Prentki  
President, Chief Executive Officer and Director

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