

SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, DC 20549

SCHEDULE 13D
(Rule 13d-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT
TO RULE 13d-1(a) AND AMENDMENTS THERETO FILED PURSUANT
TO RULE 13d-2(a)

(Amendment No. 2)*

A.P. Pharma, Inc.

(Name of Issuer)

Common Stock, par value \$0.01 per share

(Title of Class of Securities)

00202J203

(CUSIP number)

Leo Kirby
667 Madison Avenue, 21st Floor
New York, NY 10065
(212) 339-5633

(Name, address and telephone number of person authorized to receive notices and communications)

July 1, 2011

(Date of event which requires filing of this statement)

If the filing person has previously filed a statement on Schedule 13G to report the acquisition that is the subject of this Schedule 13D, and is filing this schedule because of Rule 13d-1(e), 13d-1(f) or 13d-1(g), check the following box .

(Continued on the following pages)

(Page 1 of 9 Pages)

*The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act.

1.	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Felix J. Baker		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*		(a) <input type="checkbox"/> (b) <input type="checkbox"/>
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS* WC		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e)		o
6.	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER: 0	
	8.	SHARED VOTING POWER: 20,526,568 (1)	
	9.	SOLE DISPOSITIVE POWER: 0	
	10.	SHARED DISPOSITIVE POWER: 20,526,568 (1)	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 20,526,568(1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES*		<input type="checkbox"/>
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 9.99%		
14.	TYPE OF REPORTING PERSON* IN		

(1) See Item 5(a) of this Amendment for a detailed explanation of the shares of beneficial ownership and percentage ownership of the Reporting Persons.

1.	NAMES OF REPORTING PERSONS I.R.S. IDENTIFICATION NOS. OF ABOVE PERSONS (ENTITIES ONLY) Julian C. Baker		
2.	CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP*		(a) <input type="checkbox"/> (b) <input type="checkbox"/>
3.	SEC USE ONLY		
4.	SOURCE OF FUNDS* WC		
5.	CHECK BOX IF DISCLOSURE OF LEGAL PROCEEDINGS IS REQUIRED PURSUANT TO ITEM 2(d) or 2(e)		<input type="checkbox"/>
6.	CITIZENSHIP OR PLACE OF ORGANIZATION United States		
NUMBER OF SHARES BENEFICIALLY OWNED BY EACH REPORTING PERSON WITH	7.	SOLE VOTING POWER: 0	
	8.	SHARED VOTING POWER: 20,526,568(1)	
	9.	SOLE DISPOSITIVE POWER: 0	
	10.	SHARED DISPOSITIVE POWER: 20,526,568(1)	
11.	AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON: 20,526,568(1)		
12.	CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (11) EXCLUDES CERTAIN SHARES*		<input type="checkbox"/>
13.	PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (11) 9.99%		
14.	TYPE OF REPORTING PERSON* IN		

(1) See Item 5(a) of this Amendment for a detailed explanation of the shares of beneficial ownership and percentage ownership of the Reporting Persons.

Explanatory Note: This Amendment No. 2 relates to and amends the Statement of Beneficial Ownership on Schedule 13D (“Schedule 13D”) of Felix J. Baker, a United State citizen, and Julian C. Baker, a United States citizen (each, a “Reporting Person” and collectively, the “Reporting Persons”), initially filed jointly by the Reporting Persons with the Securities and Exchange Commission on October 29, 2009 (the “Statement”), with respect to the Common Stock, \$0.01 par value (the “Common Stock”), of A.P. Pharma, Inc., a Delaware corporation (the “Issuer”).

Items 3, 4, 5, 6 and 7 of the Statement are hereby amended to the extent hereinafter expressly set forth. All capitalized terms used and not expressly defined herein have the respective meanings ascribed to such terms in the Statement.

ITEM 3. Source and Amount of Funds or Other Consideration.

Item 3 of the Statement is hereby amended by the addition of the following:

On June 29, 2011 Baker Bros. Investments II, L.P., Baker Brothers Life Sciences, L.P., 14159, L.P., and Tang Capital Partners, L.P. entered into an agreement with the Issuer to amend the Issuer’s Senior Secured Convertible Notes due 2021 (the “Notes”). The amendment changes the interest rate for the Notes from 20.0% per annum to 6.0% per annum effective on the date of the amendment.

Baker Brothers Life Sciences, L.P., 14159, L.P. and Tang Capital Partners, L.P. (“the Purchasers”) entered into a Purchase Agreement on June 29, 2011 (the “June SPA”) to purchase Common Stock and warrants (the “Warrants”) of the Issuer. Baker Brothers Life Sciences, L.P. and 14159, L.P. purchased 9,820,000 and 180,000 units, respectively, at \$0.15 per unit. Each unit consists of one share of Common Stock and one Warrant to purchase 0.5 shares of Common Stock of the Issuer. The Warrant exercise price is \$0.18 per share commencing on the date of issuance and expiring on the fifth anniversary of the date of issuance. The source of funds for the purchase of the units by Baker Brothers Life Sciences, L.P. and 14159, L.P. was available cash resources.

The description of the June SPA is qualified in its entirety by reference to Exhibit 2 hereof, which is incorporated by reference herein.

ITEM 4. Purpose of Transactions.

The Warrants issued under the June SPA are convertible into shares of the Common Stock at an exercise price of \$0.18 per share. There is no right to convert the Warrants to the extent that after giving effect to such conversion the holder (together with such holder’s affiliates) would beneficially own in excess the “Maximum Percentage”, which is currently 9.99%, of the number of shares of Common Stock of the Issuer outstanding immediately after giving effect to such conversion. Each holder of the Notes can increase or decrease the Maximum Percentage for such holder’s Notes by written notice to the Issuer, provided that such increase or decrease will not be effective until 61 days after delivery of the notice.

The descriptions of the June SPA and the Notes as set forth in this Amendment No. 2 to Schedule 13D are qualified in their entirety by reference to Exhibits 2 and 3, respectively, which are incorporated by reference herein.

ITEM 5. Interest in Securities of the Issuer.

Item 5 of the Statement is hereby amended and restated in its entirety as follows:

(a) and (b) Set forth below is the aggregate number of shares of the Common Stock held by Baker/Tisch Investments, L.P., 667, L.P., Baker Brothers Life Sciences, L.P. and 14159, L.P., and beneficially owned by the Reporting Persons, including shares that maybe acquired upon the exercise of Warrants and the conversion of Notes, as of the date hereof by each of the following, together with the percentage of outstanding shares of the Common Stock that such number represents based upon 39,968,304 shares of Common Stock outstanding as of April 29, 2011, as reported by the Issuer on its Quarterly Report on Form 10-Q, as filed with the Securities and Exchange Commission on May 16, 2011, plus 160,000,006 shares of Common Stock issued under the June SPA. Such percentage figures are calculated on the basis that outstanding derivative securities for the Common Stock are not deemed converted or exercised in shares of the Common Stock.

Holder	Shares of Common Stock	Percentage of Class Outstanding
Baker/ Tisch Investments, L.P.	5,967	0.00%
667, L.P.	1,796,644	0.90%
Baker Brothers Life Sciences, L.P.	20,526,568	9.99%
14159, L.P.	876,209	0.44%

The Reporting Persons may be deemed beneficial owners of a combined total of 20,526,568 shares of Common Stock, representing 9.99% of total outstanding Common Stock.

The Warrants and Notes are only exercisable to the extent that the holders thereof and their affiliates would beneficially own, for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended, no more than 9.99% of the outstanding shares of Common Stock of the Issuer after exercise. As a result of this restriction, the number of shares that may be issued on exercise of the Warrants by the above holders may change depending upon changes in the outstanding shares. The number of shares issuable upon exercise of the Warrants held by any Reporting Person affiliate will also depend upon the extent to which the Warrants held by other affiliates have theretofore been exercised.

On June 30, 2011, Baker Bros. Investments II, L.P. transferred to Baker Brothers Life Sciences, LP 1,786 common shares, \$300 principal amount of Notes (which Notes may be converted into Common Stock at a conversion rate of 25,000 shares per \$1,000 principal amount of Notes, for an aggregate of 7,500 shares of Common Stock), and \$600 principal Purchase Rights to purchase Notes (which Notes may be converted into Common Stock at a conversion rate of 25,000 shares per \$1,000 principal amount of Notes, for an aggregate of 15,000 shares of Common Stock). The general partner of Baker Bros. Investments II, L.P. is Baker Bros. Capital, L.P and its general partner is Baker Bros. Capital, GP, LLC. The general partner of Baker Brothers Life Sciences, L.P. is Baker Brothers Life Sciences Capital, L.P. and its general partner is Baker Brothers Life Sciences Capital (GP), LLC. Julian and Felix Baker are the managing members of both Baker Bros. Capital (GP), LLC and Baker Brothers Life Sciences Capital (GP), LLC, and their respective pecuniary interests (if any) remain unchanged as a result of this transfer.

Following the purchases pursuant to the June SPA described above, the Reporting Persons may be deemed beneficial owners of Common Stock and Warrants in the amounts listed as follows, which amounts also are included in the aggregate amounts shown in the table above:

Holder	Common Shares acquired under June SPA	Warrants acquired under June SPA
Baker Brothers Life Sciences, L.P.	9,820,00	4,910,000
14159, L.P.	180,000	90,000

The number of shares of Common Stock that may be acquired by Baker Brothers Life Sciences, L.P. or 14159, L.P. upon any exercise of the Warrants is limited to the extent necessary to ensure that, following such exercise, the total number of shares of Common Stock then beneficially owned by the Reporting Persons does not exceed 9.99% of the total number of then issued and outstanding shares of Common Stock (including for such purpose the shares of Common Stock issuable upon such exercise) (the "Limitation on Exercise"). The Limitation on Exercise remains in effect with respect to the Warrants held by Baker Brothers Life Sciences, L.P. and 14159, L.P., and no shares are currently issuable upon exercise of the Warrants held by Baker Brothers Life Sciences, L.P. and 14159, L.P.

By virtue of their ownership of entities that have the power to control the investment decisions of the limited partnerships listed in the tables above, Julian C. Baker and Felix J. Baker may each be deemed to be beneficial owners of shares owned by the entities listed above and may be deemed to have shared power to vote or direct the vote of and shared power to dispose or direct the disposition of such securities.

(c) Except as described in this Schedule, including Item 3 hereof, none of the Reporting Persons has effected any transaction in the securities of the Issuer in the past 60 days.

(d) No person other than the Reporting Persons has the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of the securities to which this Schedule relates.

(e) Not applicable.

ITEM 6. Contracts, Arrangements, Understandings or Relationships with Respect to Securities of the Issuer.

The information contained in Items 3, 4 and 5 of this Amendment No. 1 is incorporated herein by reference.

ITEM 7. Materials to be Filed as Exhibits.

- Exhibit 1: Joint Filing Agreement as required by Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, dated May 3, 2011, by and between Julian C. Baker and Felix J. Baker
- Exhibit 2: Securities Purchase Agreement dated June 29, 2011 by and among A.P. Pharma, Inc. and the purchasers listed on Schedule I thereto. (Incorporated by reference to Exhibit 10.1 of the Issuer's Current Report on Form 8-K (File No. 001-33221), filed with the Commission on June 30, 2011.)
- Exhibit 3: Amendment to Senior Secured Convertible Notes due 2021 issued by A.P. Pharma, Inc. (Incorporated by reference to Exhibit 10.2 of the Issuer's Current Report on Form 8-K (File No. 001-33221), filed with the Commission on June 30, 2011.)
-

SIGNATURES

After reasonable inquiry and to the best of my knowledge and belief, each of the undersigned hereby certifies that the information set forth in this statement is true, complete and correct.

EXECUTED as a sealed instrument this 6th day of July, 2011.

By: /s/ Julian C. Baker
Julian C. Baker

By: /s/ Felix J. Baker
Felix J. Baker

JOINT FILING AGREEMENT

Pursuant to Rule 13d-1(k)(1) under the Securities Exchange Act of 1934, as amended, the undersigned hereby agree that only one statement containing the information required by Schedule 13D need be filed with respect to the ownership by each of the undersigned of the shares of Common Stock of A.P. Pharma, Inc.

This Agreement may be executed in any number of counterparts, each of which shall be deemed an original.

EXECUTED as of this 6th day of July, 2011.

By: /s/ Julian C. Baker
Julian C. Baker

By: /s/ Felix J. Baker
Felix J. Baker
