

SECURITIES AND EXCHANGE COMMISSION
 WASHINGTON, D.C. 20549

FORM S-8
 REGISTRATION STATEMENT UNDER
 THE SECURITIES ACT OF 1933

A.P. Pharma, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware	94-2875566
-----	-----
(State or Other Jurisdiction of Incorporation or Organization)	(I.R.S. Employer Identification No.)

123 Saginaw Drive, Redwood City, California 94063

(Address of Principal Executive Offices)

2002 Equity Incentive Plan

1997 Employee Stock Purchase Plan

(Full Title of the Plan)

Gregory H. Turnbull
 President and Chief Executive Officer
 A.P. Pharma, Inc.
 123 Saginaw Drive
 Redwood City, California 94063

(Name and Address of Agent for Service)

(650) 366-2626

(Telephone Number, Including Area Code, of Agent for Service)

Copy to:
 Richard A. Peers, Esq.
 Heller Ehrman LLP
 275 Middlefield Road
 Menlo Park, California 94025-3506
 (650) 324-7000

CALCULATION OF REGISTRATION FEE

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Title of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price per Share (1)	Proposed Maximum Aggregate Offering Price	Amount of Registration Fee

Common Stock, par value \$0.01	550,000	\$1.18	\$649,000	\$76.39
=====				

(1) Represents 400,000 additional shares issuable upon exercise of stock options to be granted under Registrant's 2002 Equity Incentive Plan and 150,000 additional shares issuable upon exercise of purchase rights granted under the Registrant's 1997 Employee Stock Purchase Plan, including such additional number of shares as may be required by reason of the anti-dilution provisions of such plans.

(2) Estimated solely for the purpose of computing the amount of registration fee pursuant to Rule 457(c) under the Securities Act, as amended, based on the average of the high and low prices of the Registrant's Common Stock reported on the Nasdaq National Market on October 9, 2006.

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

The shares being registered herein are 400,000 additional shares of common stock authorized to be issued under the Registrant's 2002 Equity Incentive Plan and 150,000 additional shares of common stock authorized to be issued under the Registrant's 1997 Employee Stock Purchase Plan. Pursuant to Instruction E of Form S-8, the contents of the S-8 Registration Statements (File Numbers 333-35151 and 333-118546) with respect to the Registrant's 2002 Equity Incentive Plan and the contents of the S-8 Registration Statements (File Numbers 333-90428 and 333-118546) with respect to the Registrant's 1997 Employee Stock Purchase Plan are hereby incorporated by reference.

Item 3. Incorporation of Documents by Reference

The following documents filed or to be filed with the Securities and Exchange Commission (the "Commission") by the Registrant are incorporated by reference in this Registration Statement:

(a) The Registrant's Annual Report on Form 10-K for the year ended December 31, 2005;

(b) The Registrant's Quarterly Reports on Form 10-Q for the fiscal quarters ended March 31, 2006 and June 30, 2006;

(c) The Registrant's Current Reports on Forms 8-K and 8-K/A filed with the Commission on January 18, 2006, January 20, 2006, February 1, 2006, February 6, 2006, April 5, 2006, June 6, 2006, August 14, 2006, August 24, 2006, August 29, 2006, September 28, 2006, October 3, 2006 and October 10, 2006;

(d) The description of the Registrant's Common Stock contained in the registration statement on Form 8-A filed with the Commission on August 7, 1987 pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act"); and

(e) All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered hereby have been sold or which deregisters all securities then remaining unsold.

Item 8. Exhibits

4.1 2002 Equity Incentive Plan (included in the Registrant's Registration Statement on Form S-8 ("S-8"), File Number 333-90428, incorporated herein by reference)

4.2 1997 Employee Stock Purchase Plan (included in the Registrant's S-8, File Number 333-35151, incorporated herein by reference)

5.1 Opinion of Heller Ehrman LLP

23.1 Consent of Independent Registered Public Accounting Firm

23.2 Consent of Heller Ehrman LLP
(filed as part of Exhibit 5.1)

24.1 Power of Attorney (see page II-2)

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Redwood City, State of California, on this 11th day of October, 2006.

A.P. PHARMA, INC.

By: /s/ Gregory H. Turnbull

Gregory H. Turnbull
 President and Chief Executive
 Officer

POWER OF ATTORNEY

KNOW ALL MEN BY THESE PRESENTS, that each person whose signature appears below does hereby constitute and appoint Gregory H. Turnbull and Stephen C. Whiteford, or either of them, with full power of substitution, such person's true and lawful attorneys-in-fact and agents for such person in such person's name, place and stead, in any and all capacities, to sign any or all amendments (including post-effective amendments) to this Registration Statement on Form S-8 and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Commission, granting unto said attorneys-in-fact and agents full power and authority to do and perform each and every act and thing requisite and necessary to be done in and about the premises in order to effectuate the same as fully, to all intents and purposes, as he or such person might or could do in person, hereby ratifying and confirming all that said attorneys-in-fact and agents may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement on Form S-8 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Title	Date

/S/ Gregory H. Turnbull ----- Gregory H. Turnbull	President, Chief Executive Officer, and Director (Principal Executive Officer)	October 11, 2006 -----
/S/ Stephen C. Whiteford ----- Stephen C. Whiteford	Vice President, Finance and Chief Financial Officer (Principal Financial and Accounting Officer)	October 11, 2006 -----
/S/ Paul Goddard ----- Paul Goddard	Chairman of the Board of Directors	October 11, 2006 -----
/S/ Peter Riepenhausen ----- Peter Riepenhausen	Director	October 11, 2006 -----
/S/ Toby Rosenblatt ----- Toby Rosenblatt	Director	October 11, 2006 -----
/s/ Arthur Taylor ----- Arthur Taylor	Director	October 11, 2006 -----
/S/ Dennis Winger ----- Dennis Winger	Director	October 11, 2006 -----
/S/ Robert Zerbe ----- Robert Zerbe	Director	October 11, 2006 -----

INDEX TO EXHIBITS

Item No.	Description of Item

- 4.1 2002 Equity Incentive Plan (included in the Registrant's S-8, File Number 333-90428, incorporated herein by reference)
- 4.2 1997 Employee Stock Purchase Plan (included in the Registrant's S-8, File Number 333-35151, incorporated herein by reference)
- 5.1 Opinion of Heller Ehrman LLP
- 23.1 Consent of Ernst & Young LLP
- 23.2 Consent of Heller Ehrman LLP
(filed as part of Exhibit 5.1)
- 24.1 Power of Attorney (see page II-2)

October 11, 2006

Main (650) 324-7000
Fax (650) 324-0638

A.P. Pharma, Inc.
123 Saginaw Drive
Redwood City, California 94063

RE: Registration Statement on Form S-8

Ladies and Gentlemen:

This opinion is furnished to A.P. Pharma, Inc. (the "Company") in connection with the filing of a Registration Statement on Form S-8 (the "Registration Statement") with the Securities and Exchange Commission for the purpose of registering under the Securities Act of 1933, as amended, an aggregate of 550,000 shares of common stock, par value \$0.01 (the "Shares"). Of the Shares, 400,000 are issuable under the Company's 2002 Equity Incentive Plan (the "Equity Plan") and 150,000 are issuable under the Company's 1997 Employee Stock Purchase Plan (the "Stock Plan", and together with the Equity Plan, the "Plans").

We have based our opinion upon our review of the following records, documents, instruments and certificates:

- (a) The Amended and Restated Certificate of Incorporation of the Company, as amended to date (the "Certificate"), certified by the Delaware Secretary of State as of August 8, 2005, and certified to us by an officer of the Company as being complete and in full force and effect as of the date of this opinion;
- (b) The Bylaws of the Company (the "Bylaws") certified to us by an officer of the Company as being complete and in full force and effect as of the date of this opinion;
- (c) Records certified to us by an officer of the Company as constituting all records of proceedings and of actions of the Board of Directors and stockholders relating to the adoption of the Plans and the reservation of the Shares for issuance pursuant to the Plans;
- (d) The Plans; and
- (e) Information provided by the Company's transfer agent as to the number of shares of Common Stock outstanding as of October 9, 2006.

In connection with this opinion, we have, with your consent, assumed the authenticity of all records, documents and instruments submitted to us as originals, the genuineness of all signatures, the legal capacity of natural persons and the authenticity and conformity to the originals of all records, documents and instruments submitted to us as copies.

This opinion is limited to the federal laws of the United States of America and the Delaware General Corporation Law, and we disclaim any opinion as to the laws of any other jurisdiction. We further disclaim any opinion as to any other statute, rule, regulation, ordinance, order or other promulgation of any regional or local governmental body or as to any related judicial or administrative opinion.

Our opinion is qualified to the extent that in the event of a stock split, share dividend or other reclassification of the Common Stock effected subsequent to the date hereof, the number of shares of Common Stock issuable under the Plans may be adjusted automatically, as set forth in the terms of the Plans, such that the number of such shares, as so adjusted, may exceed the number of Company's remaining authorized, but unissued shares of Common Stock following such adjustment.

Based upon the foregoing and our examination of such questions of law as we have deemed necessary or appropriate for the purpose of this opinion, and subject to the assumptions and qualifications expressed herein, it is our opinion that upon payment of the purchase price for the Shares and issuance and delivery of the Shares pursuant to the terms of the Plans, the Shares will be validly issued, fully paid and non-assessable.

We hereby consent to the filing of this opinion as an exhibit to, and to the use of this opinion in connection with, the Registration Statement.

Very truly yours,

/s/ Heller Ehrman LLP

Heller Ehrman LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We consent to the incorporation by reference in this Registration Statement on Form S-8 pertaining to the 2002 Equity Incentive Plan and 1997 Employee Stock Purchase Plan of A.P. Pharma, Inc. of our report dated February 24, 2006, with respect to the financial statements and schedule of A.P. Pharma, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 2005, filed with the Securities and Exchange Commission.

/S/ Ernst & Young LLP

Ernst & Young LLP

Palo Alto, California
October 10, 2006