

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

**FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

A.P. PHARMA, INC.
(Exact name of registrant as specified in its charter)

Delaware
(State of incorporation)

94-2875566
(I.R.S. Employer
Identification Number)

**123 Saginaw Drive
Redwood City, CA 94063
(650) 366-2626**
(Address, including zip code and telephone number, including area code, of Registrant's principal executive offices)

**John B. Whelan
Chief Executive Officer and
Chief Financial Officer
A. P. Pharma, Inc.
123 Saginaw Drive
Redwood City, California 94063
(650) 366-2626**
(Name, address, including zip code and telephone number, including area code, of agent for service)

Copies to:

**Ryan Murr, Esq.
Ropes & Gray LLP
Three Embarcadero Center, 3rd Floor
San Francisco, CA 94111
(415) 315-6300**

Approximate Date of Commencement of Proposed Sale to the Public: From time to time after this Registration Statement becomes effective, as determined by the Selling Stockholders.

If the only securities being registered on this Form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, other than securities offered only in connection with dividend or interest reinvestment plans, check the following box.

If this Form is used to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act, please check the following box and list the Securities Act Registration Statement number of the earlier effective registration statement for the same offering.

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act, check the following box and list the Securities Act Registration Statement number of the earlier effective registration statement for the same offering.

If this Form is a registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box.

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box.

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer
Non-accelerated filer (Do not check if a smaller reporting company) Smaller reporting company

CALCULATION OF REGISTRATION FEE

Title of Each Class of Securities to Be Registered	Amount to Be	Proposed Maximum	Proposed Maximum	Amount of Registration Fee (2)(3)
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	Registered (1)	Offering Price Per Share (2)	Aggregate Offering Price (2)	
Common Stock, par value \$0.01 per share	102,000,000 shares	\$0.73	\$74,460,000	\$8,533.12

- (1) Pursuant to the terms of a Registration Rights Agreement dated as of July 25, 2012 among the registrant and the purchasers identified therein, the registrant is registering for resale 102,000,000 shares of Common Stock purchased pursuant to a Securities Purchase Agreement dated as of July 25, 2012. Pursuant to Rule 416 of the Securities Act of 1933, as amended (the "Securities Act"), this Registration Statement also covers such additional securities as may become issuable to prevent dilution resulting from stock splits, stock dividends and similar events.
- (2) Estimated solely for the purposes of calculating the registration fee pursuant to Rule 457(c), calculated on the basis of the average of the high and low prices of the registrant's Common Stock quoted on the OTC Bulletin Board on August 23, 2012.
- (3) Pursuant to Rule 457(p) the registrant is offsetting a portion of the registration fee due hereunder by an amount of \$4,798.68. This amount was previously overpaid in connection with the registrant's registration statement on Form S-1 (333-174288), which was initially filed on May 18, 2011 to register the resale of 271,221,610, but went effective on July 29, 2011 with respect to only 69,600,669.

The Registrant hereby amends this Registration Statement on such date or dates as may be necessary to delay its effective date until the Registrant shall file a further amendment which specifically states that this Registration Statement shall thereafter become effective in accordance with Section 8(a) of the Securities Act of 1933, as amended, or until the Registration Statement shall become effective on such date as the Securities and Exchange Commission, acting pursuant to said Section 8(a), may determine.

[Table of Contents](#)

The information in this prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

Subject to Completion, dated August 24, 2012

PROSPECTUS

A.P. PHARMA, INC.

102,000,000 shares of Common Stock

This prospectus relates to the resale, from time to time, of an aggregate of 102,000,000 shares of our common stock, \$0.01 par value per share (the "Common Stock"), all of which are being offered by the selling security holders identified in this prospectus (collectively with any such holder's transferee, pledgee, donee or successor, the "Selling Stockholders"). The Common Stock covered by this prospectus consists of 102,000,000 shares of Common Stock (the "Shares"), which were issued in a private placement pursuant to a stock purchase agreement that closed on July 30, 2012 (the "Private Placement").

We are not selling any shares of Common Stock under this prospectus, and we will not receive any proceeds from the sale by the Selling Stockholders of the Shares covered by this prospectus. We are paying the cost of registering the Shares covered by this prospectus, as well as various related expenses. The Selling Stockholders are responsible for all selling commissions, transfer taxes and other costs related to the offer and sale of their Shares under this prospectus.

Our Common Stock is quoted on the OTC Bulletin Board under the symbol "APPA.OB". On August 23, 2012, the last reported sale price per share of our Common Stock on the OTC Bulletin Board was \$0.72. Our principal executive offices are located at 123 Saginaw Drive, Redwood City, California 94063, and our telephone number is (650) 366-2626.

Investing in our securities involves risks. You should carefully consider the Risk Factors beginning on page 2 of this prospectus before you make an investment in our securities.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.

The date of this prospectus is _____, 2012

TABLE OF CONTENTS

	<u>Page</u>
ABOUT THIS PROSPECTUS	1
NOTE REGARDING FORWARD-LOOKING STATEMENTS	1
ABOUT THE COMPANY	2
RISK FACTORS	2
USE OF PROCEEDS	2
SELLING SECURITY HOLDERS	3
PLAN OF DISTRIBUTION	6
DESCRIPTION OF SECURITIES TO BE REGISTERED	7
EXPERTS	8
LEGAL MATTERS	9
WHERE YOU CAN FIND ADDITIONAL INFORMATION	9
INFORMATION INCORPORATED BY REFERENCE	9

ABOUT THIS PROSPECTUS

You should read this prospectus, any applicable prospectus supplement and the information incorporated by reference in this prospectus before making an investment in the securities of A.P. Pharma, Inc. See “Where You Can Find Additional Information” on page 9 for more information. You should rely only on the information contained in or incorporated by reference in this prospectus or a prospectus supplement. The Company has not authorized anyone to provide you with different information. This document may be used only in jurisdictions where offers and sales of these securities are permitted. You should assume that information contained in this prospectus, or in any document incorporated by reference, is accurate only as of any date on the front cover of the applicable document. Our business, financial condition, results of operations and prospects may have changed since that date.

NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus contains forward-looking statements within the meaning of the federal securities laws. You can identify forward-looking statements by the use of the words “believe,” “expect,” “anticipate,” “intend,” “estimate,” “project,” “will,” “should,” “may,” “plan,” “intend,” “assume” and other expressions which predict or indicate future events and trends and which do not relate to historical matters. You should not rely on forward-looking statements, because they involve known and unknown risks, uncertainties and other factors, some of which are beyond the control of the Company. These risks, uncertainties and other factors may cause the actual results, performance or achievements of the Company to be materially different from the anticipated future results, performance or achievements expressed or implied by the forward-looking statements.

Factors that might cause these differences include the following:

- the progress of our research, development and clinical programs and timing of, and prospects for, regulatory approval and commercial introduction of APF530 and other future product candidates;
- estimates of the dates by which we expect to report results of our studies and the anticipated results of these studies;
- the timing of market introduction of APF530 or other future product candidates;
- our ability to market, commercialize and achieve market acceptance for APF530 or other future product candidates;
- our ability to establish collaborations for our technology, APF530 and other future product candidates;
- uncertainties associated with obtaining and enforcing patents;
- our estimates for future performance; and
- our estimates regarding our capital requirements and our needs for, and ability to obtain, additional financing.

In addition, the factors described under the section captioned “Risk Factors” in this prospectus, as may be updated from time to time by our future filings under the Securities Exchange Act of 1934, and elsewhere in the documents incorporated by reference in this prospectus, may result in these differences. You should carefully review all of these factors. These forward-looking statements were based on information, plans and estimates at the date of this prospectus, and we assume no obligation to update any forward-looking statements to reflect changes in underlying assumptions or factors, new information, future events or other changes.

ABOUT THE COMPANY

Unless the context requires otherwise, in this Prospectus, the “Company,” “A.P. Pharma,” “we,” “us” and “our” refer to A.P. Pharma, Inc.

A.P. Pharma is a specialty pharmaceutical company developing pharmaceutical products using our proprietary Biochronomer™ polymer-based drug delivery platform. This drug delivery platform is designed to improve the therapeutic profile of injectable pharmaceuticals by converting them from products that must be injected once or twice per day to products that need to be injected only once every one or two weeks.

Our lead product candidate, APF530, is being developed for the prevention of both acute- and delayed-onset chemotherapy-induced nausea and vomiting (CINV). One of the most debilitating side effects of cancer chemotherapy, CINV is a leading cause of premature discontinuation of treatment. There is only one injectable 5-HT₃ antagonist approved for the prevention of delayed-onset CINV, so this indication represents an area of particular unmet medical need. APF530 contains the 5-HT₃ antagonist granisetron formulated in the Company’s proprietary Biochronomer drug delivery system, which allows therapeutic drug levels to be maintained for five days with a single subcutaneous injection. This five-day range is designed to cover the delayed phase of CINV, whereas currently available intravenous and oral formulations of granisetron are approved only for the prevention of acute-onset CINV. Granisetron was selected for APF530 because it is widely prescribed by physicians based on a well-established record of safety and efficacy.

In May 2009, we filed a New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA) seeking approval for APF530. The FDA issued a Complete Response Letter for APF530 in March 2010. We have been working to address the issues raised by the FDA and met with the FDA in February and March 2011 to clarify the work needed to resubmit the NDA. Based on our discussions with the FDA and our assessment of the work remaining, we plan to resubmit our NDA to the FDA in September 2012.

We own worldwide rights to APF530 and are in the early stages of building the commercial infrastructure necessary to commercialize APF530 in the U.S. on our own. We are seeking corporate partners to commercialize APF530 in markets outside of the U.S.

Our Common Stock is quoted on the OTC Bulletin Board under the symbol “APPA.OB”.

Our executive offices are located at 123 Saginaw Drive, Redwood City, California 94063 and our telephone number is 650-366-2626. Additional information regarding our company, including our audited financial statements and descriptions of our business, is contained in the documents incorporated by reference in this prospectus. See “Where You Can Find Additional Information” on page 9 and “Information Incorporated by Reference” beginning on page 9.

RISK FACTORS

Investors should carefully consider the risks and uncertainties and all other information contained or incorporated by reference in this prospectus, including the risks and uncertainties discussed under “Risk Factors” in our most recent Annual Report on Form 10-K and in subsequent filings that are incorporated herein by reference. All of these “Risk Factors” are incorporated by reference herein in their entirety. These risks and uncertainties are not the only ones facing us. Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our Common Stock could decline due to any of these risks, and you may lose all or part of your investment. This prospectus and the incorporated documents also contain forward-looking statements that involve risks and uncertainties. Our actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including the risks mentioned in this prospectus.

USE OF PROCEEDS

The proceeds from the resale of the Shares under this prospectus are solely for the account of the Selling Stockholders. Accordingly, we will receive no proceeds from the sale of the Shares offered pursuant to this prospectus.

SELLING SECURITY HOLDERS

The Company has included in this prospectus 102,000,000 shares of Common Stock issued upon the closing of the Private Placement.

In connection with the Private Placement, we entered into a registration rights agreement, pursuant to which we have agreed to file a registration statement with the Securities and Exchange Commission (the “SEC”) covering the resale of the Shares. This prospectus covers only the resale of the Shares by the Selling Stockholders. The number of Shares that may be actually sold by the Selling Stockholders will be determined by such Selling Stockholders.

The following table sets forth certain information regarding the Selling Stockholders and the shares of Common Stock beneficially owned by them, which information is available to us as of July 30, 2012. Selling Stockholders may offer Shares under this prospectus from time to time and may elect to sell none, some or all of the shares set forth next to their name. As a result, we cannot estimate the number of shares of Common Stock that a Selling Stockholder will beneficially own after termination of sales under this prospectus. In addition, a Selling Stockholder may have sold, transferred or otherwise disposed of all or a portion of that holder’s shares of Common Stock since the date on which they provided information for this table. We have not made independent inquiries about this.

Beneficial ownership is determined in accordance with the rules and regulations of the SEC and includes voting or investment power with respect to our Common Stock. Shares of our Common Stock subject to options, warrants or other convertible securities that are currently exercisable or convertible, or exercisable or convertible within sixty days of July 30, 2012, are considered outstanding and beneficially owned by the person holding the options, warrants or other convertible securities for the purpose of calculating the percentage ownership of that person, but not for the purpose of calculating the percentage ownership of any other person.

There were 302,205,555 shares of Common Stock issued and outstanding as of July 30, 2012. Shares not outstanding but deemed beneficially owned by virtue of the right of a person to acquire them as of July 30, 2012, or within sixty days of such date, are treated as outstanding only when determining the percentage owned by such individual and when determining the percentage owned by a group of which such individual is a member.

We are relying on written commitments from the Selling Stockholders to notify us of any changes in their beneficial ownership after the date they originally provided this information. See “Plan of Distribution” beginning on page 6.

<u>Selling Stockholder (1)</u>	<u>Number of Shares Beneficially Owned before Offering</u>	<u>Number of Shares Covered by this Prospectus</u>	<u>Number of Shares Beneficially Owned after Offering (2)</u>	<u>Percentage of Shares Beneficially Owned after Offering (3)</u>
Ayer Capital Partners Kestrel Fund, LP (4)	43,000	43,000	0	*
Ayer Capital Partners Master Fund, L.P. (5)	2,310,190	2,310,190	0	*
Baker Bros. Advisors, LLC and its affiliates (6)	30,670,746	9,000,000	31,669,635	9.99%
Broadfin Healthcare Master Fund, LTD (7)	9,523,810	9,523,810	0	*
Capital Ventures International (8)	631,414	631,414	0	*
Epworth—Ayer Capital (9)	123,000	123,000	0	*
Fidelity Advisor Series VII: Fidelity Advisor Biotechnology Fund (10)	949,565	949,565	0	*
Fidelity Select Portfolios: Biotechnology Portfolio (10)	14,288,530	14,288,530	0	*
Franklin Templeton Investment Funds—Franklin Biotechnology Discovery Fund (11)	10,429,705	2,857,143	7,572,562	2.5%
John Hancock Funds II—Health Sciences Fund (12)	1,163,100	1,163,100	0	*
John Hancock Variable Insurance Trust—Health Sciences Trust (12)	466,500	466,500	0	*
Standard Pacific Capital Holdings LLLP (13)	36,190,476	36,190,476	0	*
T. Rowe Price Health Sciences Fund, Inc. (12)	11,430,000	11,430,000	0	*
T. Rowe Price Health Sciences Portfolio (12)	381,000	381,000	0	*

Table of Contents

Tang Capital Partners, LP (14)	69,960,316	9,523,810	60,436,506	19.99%
TD Mutual Funds—TD Health Sciences Fund (12)	486,200	486,200	0	*
The Moses Trust (15)	1,904,762	1,904,762	0	*
VALIC Company I—Health Sciences Fund (12)	727,500	727,500	0	*

- (1) If required, post-effective amendments to the registration statement will be filed to disclose any material changes to the plan of distribution from the description contained in the final prospectus.
- (2) This number assumes the sale of all shares of Common Stock offered by this prospectus.
- (3) This percentage is based upon 302,205,555 shares of Common Stock outstanding.
- (4) Jay Venkatesan, a natural person, is the Managing Member of Ayer Capital Partners Kestrel Fund, LP. The address for Ayer Capital Partners Kestrel Fund, LP is c/o Ayer Capital Management, LP, 230 California Street, Suite 600, San Francisco, CA 94111. Mr. Venkatesan has voting and dispositive power over these shares. Mr. Venkatesan disclaims beneficial ownership of all shares beneficially owned, except to the extent of his pecuniary interests therein.
- (5) Jay Venkatesan, a natural person, is the Managing Member of Ayer Capital Partners Master Fund, L.P. The address for Ayer Capital Partners Master Fund, L.P. is c/o Ayer Capital Management, LP, 230 California Street, Suite 600, San Francisco, CA 94111. Mr. Venkatesan has voting and dispositive power over these shares. Mr. Venkatesan disclaims beneficial ownership of all shares beneficially owned, except to the extent of his pecuniary interests therein.
- (6) The number of shares beneficially owned before the offering includes 23,353,705 shares of Common Stock directly owned by Baker Brothers Life Sciences, L.P. (“Life Sciences”), a limited partnership the sole general partner of which is Baker Brothers Life Sciences Capital, L.P., a limited partnership the sole general partner of which is Baker Brothers Life Sciences Capital (GP), LLC, 1,964,951 shares of Common Stock directly owned by 667, L.P. (“667”), a limited partnership the sole general partner of which is Baker Biotech Capital, L.P., a limited partnership the sole general partner of which is Baker Biotech Capital (GP), LLC, 537,195 shares of Common Stock directly owned by 14159, L.P. (“14159”), a limited partnership the sole general partner of which is 14159 Capital, L.P., a limited partnership the sole general partner of which is 14159 Capital (GP), LLC and 5,967 shares of Common Stock owned by Baker/Tisch Investments, L.P. (“Baker/Tisch,” and together with Life Sciences, 667 and 14159, the “Baker Entities”), a limited partnership the sole general partner of which is Baker Tisch Capital, L.P., a limited partnership the sole general partner of which is Baker Tisch Capital (GP), LLC. Of the 9,000,000 shares of Common Stock covered by this prospectus, 8,267,137 shares were directly owned before the offering by Life Sciences, 532,259 shares were directly owned before the offering by 667 and 200,604 shares were directly owned before the offering by 14159. In addition, Baker Bros. Advisors, LLC beneficially owns, subject to the 9.99% limitation discussed below, up to 4,808,928 shares of Common Stock that may be acquired upon the exercise of warrants and the conversion of notes before the offering and up to 14,807,817 shares of Common Stock that may be acquired upon the exercise of warrants and the conversion of notes after the offering (assuming the Baker Entities sell all shares registered in this offering). The warrants and notes have a limit on the ability of the holder to exercise or convert, to the extent that the holder would beneficially own greater than 9.99% of the Company’s Common Stock following the exercise or conversion, provided that the holder has the ability to increase or decrease this limitation on exercise or conversion upon providing the Company with 61 days’ prior written notice. Julian C. Baker and Felix J. Baker are the controlling members of the general partners of the general partners of the Baker Entities. Baker Bros. Advisors, LLC (the “Adviser”) serves as the Investment Adviser to each of the Baker Entities. Pursuant to amended and restated management agreements between the Adviser, each of the Baker Entities and the general partners of the Baker Entities, the Adviser has complete and unlimited discretion and authority with respect to the Baker Entities investments and voting power over investments. Julian C. Baker and Felix J. Baker are the principals of the Adviser and each may be deemed to control the Adviser and to indirectly beneficially own the shares beneficially owned by it. Julian C. Baker and Felix J. Baker disclaim beneficial ownership of the securities directly owned by the Baker Entities, and this disclosure shall not be deemed to be an admission that Julian C. Baker and/or Felix J. Baker are the beneficial owners of such securities for purposes of Section 13(d) or any other purpose. The address for Baker Bros. Advisors, LLC and its affiliates is 667 Madison Avenue, 21st Floor, New York, NY 10065.
- (7) Broadfin Capital, LLC serves as investment adviser to Broadfin Healthcare Master Fund, LTD with the power to direct investments and/or sole power to vote the shares owned by Broadfin Healthcare Master Fund, LTD. Kevin Kotler, a natural person, is the Managing Member of Broadfin Capital, LLC. Mr. Kotler has voting and dispositive power over the shares held by Broadfin Healthcare Master Fund, LTD. Mr. Kotler disclaims beneficial ownership of all shares beneficially owned, except to the extent of his pecuniary interests in such shares. The address for Broadfin Capital, LLC is 237 Park Avenue, Suite 900, New York, NY 10017.
- (8) Heights Capital Management, Inc., the authorized agent of Capital Ventures International (“CVI”), has discretionary authority to vote and dispose of the shares held by CVI and may be deemed to be the beneficial owner of these shares. Martin Kobinger, in his capacity as Investment Manager of Heights Capital Management, Inc., may also be deemed have investment discretion and voting power over the shares held by CVI. Mr. Kobinger disclaims any such beneficial ownership of the shares. The address for CVI; c/o Heights Capital Management, Inc., its authorized agent is 101 California Street, Suite 3250, San Francisco, CA 94111.

Table of Contents

- (9) Jay Venkatesan, a natural person, is the Managing Member of Epworth—Ayer Capital. The address for Epworth—Ayer Capital is c/o Ayer Capital Management, LP, 230 California Street, Suite 600, San Francisco, CA 94111. Mr. Venkatesan has voting and dispositive power over these shares. Mr. Venkatesan disclaims beneficial ownership of all shares beneficially owned, except to the extent of his pecuniary interests therein.
- (10) Fidelity Management & Research Company (“Fidelity”), 82 Devonshire Street, Boston, Massachusetts 02109, a wholly-owned subsidiary of FMR LLC and an investment adviser registered under Section 203 of the Investment Advisers Act of 1940, is the beneficial owner of 15,238,095 shares of the Company as a result of acting as investment adviser to various investment companies registered under Section 8 of the Investment Company Act of 1940. Edward C. Johnson 3d and FMR LLC, through its control of Fidelity, and the funds each has sole power to dispose of the 15,238,095 shares owned by the Funds.
- Members of the family of Edward C. Johnson 3d, Chairman of FMR LLC, are the predominant owners, directly or through trusts, of Series B voting common shares of FMR LLC, representing 49% of the voting power of FMR LLC. The Johnson family group and all other Series B shareholders have entered into a shareholders’ voting agreement under which all Series B voting common shares will be voted in accordance with the majority vote of Series B voting common shares. Accordingly, through their ownership of voting common shares and the execution of the shareholders’ voting agreement, members of the Johnson family may be deemed, under the Investment Company Act of 1940, to form a controlling group with respect to FMR LLC.
- Neither FMR LLC nor Edward C. Johnson 3d, Chairman of FMR LLC, has the sole power to vote or direct the voting of the shares owned directly by the Fidelity Funds, which power resides with the Funds’ Boards of Trustees. Fidelity carries out the voting of the shares under written guidelines established by the Funds’ Boards of Trustees.
- (11) FTIF—Franklin Biotechnology Discovery Fund beneficially owns 6,906,807 shares of Common Stock and Warrants to purchase 3,522,898 shares of Common Stock. Evan McCulloch is a natural person who makes voting and investment decisions with respect to the shares beneficially owned by FTIF—Franklin Biotechnology Discovery Fund. The address for FTIF—Franklin Biotechnology Discovery Fund is 1 Franklin Parkway, Building 920, San Mateo, CA 94403.
- (12) T. Rowe Price Associates, Inc. serves as investment adviser with power to direct investments and/or sole power to vote the shares owned by the funds and accounts in the table above marked with footnote “12”, as well as shares owned by certain other individual and institutional investors. For purposes of reporting requirements under the Exchange Act, T. Rowe Price Associates may be deemed to be the beneficial owner of all of the shares owned by the funds and accounts in the table above marked with footnote “12”. However, T. Rowe Price Associates expressly disclaims that it is, in fact, the beneficial owner of such securities. T. Rowe Price Associates is the wholly-owned subsidiary of T. Rowe Price Group, Inc., which is a publicly traded financial services holding company. The address for T. Rowe Price Associates, Inc. is 100 E. Pratt Street, Baltimore, MD 21202.
- (13) Andrew Midler, a natural person, is the General Partner of Standard Pacific Capital Holdings LLLP. The address for Standard Pacific Capital Holdings LLLP is c/o Savitr Capital, 1 Market Plaza, Steuart Street Tower, Suite 1400, San Francisco, CA 94105. Mr. Midler has voting and dispositive power over these shares. Mr. Midler disclaims beneficial ownership of all shares beneficially owned, except to the extent of his pecuniary interests therein.
- (14) Tang Capital Management, LLC is the general partner of Tang Capital Partners, LP. Kevin C. Tang, a natural person, is the Managing Director of Tang Capital Management, LLC and is a member of the Company’s Board of Directors. The address for Tang Capital Partners, LP is 4747 Executive Drive, Suite 510, San Diego, CA 92121. Mr. Tang shares voting and dispositive power over these shares with Tang Capital Management, LLC and Tang Capital Partners, LP. Mr. Tang disclaims beneficial ownership of all shares beneficially owned, except to the extent of his pecuniary interests therein. Based on information set forth in a Schedule 13D/A, filed with the SEC on July 30, 2012 by Tang Capital Partners, LP and its affiliates (“Tang Capital”), reporting beneficial ownership of Tang Capital Partners, LP of 69,960,316 and Kevin C. Tang of 71,579,785. Tang Capital Partners, LP shares voting and dispositive powers over such shares with Tang Capital Management, LLC and Kevin C. Tang. Tang Capital retains 139,000 shares of Common Stock in a securities margin brokerage account. Beneficial ownership for Tang Capital excludes shares of Common Stock that may be acquired upon the exercise of warrants and shares that are potentially issuable upon conversion of the principal amount of the Company’s Senior Secured Convertible Notes due 2021 (the “Notes”). The warrants and the Notes have a limit on the ability of the holder to exercise or convert, to the extent that the holder would beneficially own greater than 9.99% of the Company’s Common Stock following such exercise or conversion, provided that the holder has the ability to increase or decrease this limitation on exercise or conversion upon providing the Company with 61 days’ prior written notice.
- (15) Andrew Midler, a natural person, is the Trustee of The Moses Trust. The address for The Moses Trust is c/o Savitr Capital, 1 Market Plaza, Steuart Street Tower, Suite 1400, San Francisco, CA 94105. Mr. Midler has voting and dispositive power over these shares. Mr. Midler disclaims beneficial ownership of all shares beneficially owned, except to the extent of his pecuniary interests therein.

PLAN OF DISTRIBUTION

We are registering the Shares covered by this prospectus on behalf of the Selling Stockholders. All costs, expenses and fees connected with the registration of these Shares will be borne by us. Any brokerage commissions and similar expenses connected with selling the Shares will be borne by the Selling Stockholders. The Selling Stockholders may offer and sell the Shares covered by this prospectus from time to time in one or more transactions. The term "Selling Stockholders" includes pledgees, donees, transferees and other successors-in-interest who may acquire Shares through a pledge, gift, partnership distribution or other non-sale related transfer from the Selling Stockholders and who agree to be bound by the terms of the Registration Rights Agreement among the Company and the investors listed therein dated July 25, 2012. The Selling Stockholders will act independently of the Company in making decisions with respect to the timing, manner and size of each sale and they may sell Shares on one or more exchanges, in the over-the-counter market or in privately negotiated transactions at prevailing market prices at the time of sale, at fixed prices, at varying prices determined at the time of the sale or at negotiated prices. These transactions include:

- ordinary brokerage transactions and transactions in which the broker solicits purchasers;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its own account pursuant to this prospectus;
- exchange or over-the-counter distributions in accordance with the rules of the exchange or other market;
- block trades in which the broker-dealer attempts to sell the Shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- a combination of any such method of sale; and
- any other method permitted pursuant to applicable law.

In connection with distributions of the Shares or otherwise, the Selling Stockholders may:

- sell the Shares short and redeliver the Shares to close out short positions; provided that such short positions were entered into in compliance with applicable securities laws;
- enter into option or other transactions with broker-dealers or other financial institutions which require the delivery to them of Shares covered by this prospectus, which they may in turn resell; and
- pledge Shares to broker-dealers or other financial institutions, which, upon a default, they may in turn resell.

The Selling Stockholders may also sell any Shares under Rule 144, rather than with this prospectus if the sale meets the requirements of that rule.

In effecting sales, the Selling Stockholders may engage broker-dealers or agents, who may in turn arrange for other broker-dealers to participate. Broker-dealers or agents may receive commissions, discounts or concessions from the Selling Stockholders and/or from the purchasers of Shares for whom the broker-dealers may act as agents or to whom they sell as principal, or both. The compensation to a particular broker-dealer may be in excess of customary commissions.

The Selling Stockholders, any broker-dealers or agents and any participating broker-dealers that act in connection with the sale of the Shares covered by this prospectus may be "underwriters" under the Securities Act with respect to those Shares and will be subject to the prospectus delivery requirements of the Securities Act, unless exempted therefrom. Any profit that the Selling Stockholders realize, and any compensation that any broker-dealer or agent may receive in connection with any sale, including any profit realized on resale of Shares acquired as principal, may constitute underwriting discounts and commissions. If the Selling Stockholders are deemed to be underwriters, the Selling Stockholders may be subject to certain liabilities under statutes including, but not limited to, Section 11, 12 and 17 of the Securities Act and Section 10(b) and Rule 10b-5 under the Exchange Act.

[Table of Contents](#)

The securities laws of some states may require the Selling Stockholders to sell the Shares in those states only through registered or licensed brokers or dealers. These laws may also require that we register or qualify the Shares for sale in those states unless an exemption from registration and qualification is available and the Selling Stockholders and we comply with that exemption. In addition, the anti-manipulation rules of Regulation M under the Exchange Act may apply to sales of Shares in the market and to the activities of the Selling Stockholders and their affiliates. Regulation M may restrict the ability of any person engaged in the distribution of the Shares to engage in market-making activities with respect to the Shares. All of the foregoing may affect the marketability of the Shares and the ability of any person to engage in market-making activities with respect to the Shares.

We have agreed to indemnify the Selling Stockholders against liabilities, including liabilities under the Securities Act, the Exchange Act and state securities laws, relating to the registration of the Shares offered by this prospectus.

DESCRIPTION OF SECURITIES TO BE REGISTERED

As of the date of this prospectus, our authorized capital stock consists of 1,500,000,000 shares of Common Stock, \$0.01 par value per share, and 2,500,000 shares of Preferred Stock, \$0.01 par value per share.

Common Stock

The holders of Common Stock have one vote for each share on all matters submitted to a vote of the stockholders. Subject to preferences that may be applicable to any outstanding preferred stock, holders of Common Stock will receive ratably any dividends declared by the Board of Directors out of funds legally available for payment of dividends. In the event of a liquidation, dissolution or winding up of the company, holders of Common Stock will share ratably in all assets remaining after payment of liabilities and the liquidation preference of any outstanding preferred stock. Holders of Common Stock have no preemptive rights, no right to convert their Common Stock into any other securities, and no right to vote cumulatively for the election of directors. The outstanding shares of Common Stock are fully paid and non-assessable.

We have not paid cash dividends on our Common Stock and do not plan to pay any such dividends in the foreseeable future.

Certificate of Incorporation

Under our Certificate of Incorporation, as amended, our Board of Directors, without further action by our stockholders, currently has the authority to issue up to 2,500,000 shares of preferred stock and to fix the rights (including voting rights), preferences and privileges of these "blank check" preferred shares. Such preferred stock may have rights, including economic rights, senior to our Common Stock. As a result, the issuance of the preferred stock could have a material adverse effect on the price of our Common Stock and could make it more difficult for a third party to acquire a majority of our outstanding Common Stock.

Delaware Anti-Takeover Law and Charter and Bylaw Provisions

Certificate of Incorporation and Bylaws

Some provisions of Delaware law and our Certificate of Incorporation and Bylaws contain provisions that could make the following transactions more difficult:

- acquisition of us by means of a tender offer;
- acquisition of us by means of a proxy contest or otherwise; or
- removal of our incumbent officers and directors.

The provisions, summarized below, are intended to discourage coercive takeover practices and inadequate takeover bids and to promote stability in our management. These provisions are also designed to encourage persons seeking to acquire control of us to first negotiate with our Board of Directors.

[Table of Contents](#)

Undesignated Preferred Stock

The ability to authorize undesignated preferred stock makes it possible for our Board of Directors to issue one or more series of preferred stock with voting or other rights or preferences that could impede the success of any attempt to change control of us. These and other provisions may have the effect of deferring hostile takeovers or delaying changes in control or management of our company.

Delaware Anti-Takeover Statute

We are subject to Section 203 of the General Corporation Law of the State of Delaware. This law prohibits a publicly held Delaware corporation from engaging in any business combination with any interested stockholder for a period of three years following the date that the stockholder became an interested stockholder unless:

- prior to the date of the transaction, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned by persons who are directors and also officers and by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or
- on or subsequent to the date of the transaction, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least two-thirds of the outstanding voting stock which is not owned by the interested stockholder.

Section 203 defines “business combination” to include:

- any merger or consolidation involving the corporation and the interested stockholder;
- any sale, transfer, pledge or other disposition of 10% or more of our assets involving the interested stockholder;
- in general, any transaction that results in the issuance or transfer by us of any of our stock to the interested stockholder; or
- the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

In general, Section 203 defines an “interested stockholder” as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with or controlling or controlled by the entity or person.

Transfer Agent and Registrar

The transfer agent and registrar for our Common Stock is Computershare Trust Company N.A.

Quotation

Our Common Stock is quoted on the OTC Bulletin Board under the symbol “APPA.OB”.

EXPERTS

OUM & Co. LLP, an independent registered public accounting firm, has audited our financial statements included in our Annual Report on Form 10-K for the year ended December 31, 2011, as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on OUM & Co. LLP’s report, given on their authority as experts in accounting and auditing.

LEGAL MATTERS

Certain legal matters relating to the validity of the Shares offered by this prospectus will be passed upon for us by Ropes & Gray LLP, San Francisco, California.

WHERE YOU CAN FIND ADDITIONAL INFORMATION

The Company files annual, quarterly and special reports, proxy statements and other information with the SEC. You may read and copy any document filed by the Company at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. The Company's filings with the SEC are also available to the public at the SEC's Internet web site at <http://www.sec.gov>. You may also read and copy this information at the Financial Industry Regulatory Authority, 1735 K Street, N.W., Washington, D.C. 20006.

Statements contained in this prospectus as to the contents of any contract or other document are not necessarily complete, and in each instance we refer you to the copy of the contract or document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference.

INFORMATION INCORPORATED BY REFERENCE

The SEC allows the Company to "incorporate by reference" the information that is filed by the Company with the SEC, which means that the Company can disclose important information to you by referring you to those documents. The documents incorporated by reference are:

1. The Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2011, filed with the SEC on March 26, 2012;
2. The Company's Quarterly Reports on Form 10-Q for the first fiscal quarter ended March 31, 2012, filed with the SEC on May 10, 2012 and the second fiscal quarter ended June 30, 2012, filed with the SEC on August 9, 2012;
3. The Company's Current Reports on Form 8-K, filed with the SEC on March 26, 2012, March 26, 2012, March 26, 2012, May 30, 2012, June 4, 2012, June 22, 2012, July 3, 2012, July 12, 2012, July 25, 2012 and July 31, 2012;
4. The Company's Definitive Proxy Statement on Schedule 14-A, filed with the SEC on April 24, 2012;
5. The description of the Company'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 Exchange Act of 1934, as amended (the "Exchange Act"), including any amendment or report filed for the purpose of updating that description; and
6. All documents filed by the Company pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, after the date of the original Registration Statement and prior to effectiveness of the registration statement of which this prospectus is a part, provided that all documents "furnished" by the Company to the SEC and not "filed" are not deemed incorporated by reference herein.

Nothing in this prospectus shall be deemed to incorporate information furnished but not filed with the SEC pursuant to Item 2.02 or 7.01 of Form 8-K.

The Company will provide, without charge, to each person, including any beneficial owner, to whom a copy of this prospectus is delivered, upon such person's written or oral request, a copy of any and all of the information incorporated by reference in this prospectus, other than exhibits to such documents, unless such exhibits are specifically incorporated by reference into the information that this prospectus incorporates. Requests should be directed to the Secretary at A.P. Pharma, Inc., 123 Saginaw Drive, Redwood City, California 94063, telephone number (650) 366-2626. You may also find these documents in the "Investor Relations" section of our website, www.appharma.com. The information on our website is not incorporated into this prospectus.

102,000,000 SHARES OF COMMON STOCK

A.P. PHARMA, INC.

PROSPECTUS

, 2012

PART II**INFORMATION NOT REQUIRED IN PROSPECTUS****Item 14. Other Expenses of Issuance and Distribution. (1)**

The following are the estimated expenses of the distribution of the Shares registered hereunder on Form S-3:

Registration Fee—Securities and Exchange Commission	\$ 8,533.12
Accountants Fees and Expenses	\$ 10,000
Legal Fees and Expenses	\$ 10,000
Miscellaneous	\$ 10,000
Total	<u>\$38,533.12</u>

(1) The amounts set forth above, except for the SEC Registration Fee, are estimated.

Item 15. Indemnification of Directors and Officers.

The Registrant has the power to indemnify its officers and directors against liability for certain acts pursuant to Section 145 of the General Corporation Law of the State of Delaware. Section B of Article VI of the Registrant’s Certificate of Incorporation provides:

“(1) Right to Indemnification. Each person who was or is made a party or is threatened to be made a party to or is involved in any action, suit or proceeding, whether civil, criminal, administrative or investigative (hereinafter a “proceeding”), by reason of the fact that he or she, or a person of whom he or she is the legal representative, is or was a director or officer, of the Corporation or is or was serving at the request of the Corporation, as a director, officer, employee or agent of another corporation or of a partnership, joint venture, trust or other enterprise, including service with respect to employee benefit plans, whether the basis of such proceeding is alleged action in an official capacity as a director, officer, employee or agent or in any other capacity while serving as a director, officer, employee or agent, shall be indemnified and held harmless by the Corporation to the fullest extent authorized by the General Corporation Law of the State of Delaware, as the same exists or may hereafter be amended (but, in the case of any such amendment, only to the extent that such amendment permits the Corporation to provide broader indemnification rights than said law permitted the Corporation to provide prior to such amendment), against all expense, liability and loss (including attorneys’ fees, judgments, fines, ERISA excise taxes or penalties and amounts paid or to be paid in settlement) reasonably incurred or suffered by such person in connection therewith and such indemnification shall continue as to a person who has ceased to be a director, officer, employee or agent and shall inure to the benefit of his or her heirs, executors and administrators; provided, however, that, the Corporation shall indemnify any such person seeking indemnification in connection with a proceeding (or part thereof) initiated by such person only if such proceeding (or part thereof) was authorized by the board of directors of the Corporation. The right to indemnification conferred in this Section B shall be a contract right and shall include the right to be paid by the Corporation the expenses incurred in defending any such proceeding in advance of its final disposition; provided, however, that, if the General Corporation Law of the State of Delaware requires, the payment of such expenses incurred by a director or officer in his or her capacity as a director or officer (and not in any other capacity in which service was or is rendered by such person while a director or officer, including, without limitation, service to an employee benefit plan) in advance of the final disposition of a proceeding, shall be made only upon delivery to the Corporation of an undertaking, by or on behalf of such director or officer, to repay all amounts so advanced if it shall ultimately be determined that such director or officer is not entitled to be indemnified under this Section or otherwise. The Corporation may, by action of its Board of Directors, provide indemnification to employees and agents of the Corporation with the same scope and effect as the foregoing indemnification of directors and officers.

(2) Non-Exclusivity of Rights. The right to indemnification and the payment of expenses incurred in defending a proceeding in advance of its final disposition conferred in this Section B shall not be exclusive of any other rights which any person may have or hereafter acquire under any statute, provisions of this Certificate of Incorporation, Bylaw, agreement, vote of stockholders or disinterested directors or otherwise.

(3) Insurance. The Corporation may maintain insurance, at its expense, to protect itself and any director, officer, employee or agent of the Corporation or another corporation, partnership, joint venture, trust or other enterprise against any such expense, liability or loss, whether or not the Corporation would have the power to indemnify such person against such expense, liability or loss under Delaware General Corporation Law.”

Table of Contents

The Registrant has obtained a liability insurance policy for the officers and directors that, subject to certain limitations, terms and conditions, will insure them against losses arising from wrongful acts (as defined by the policy) in their capacity as directors and officers.

In addition, the Registrant has entered into agreements to indemnify its directors and certain officers in addition to the indemnification provided for in the Certificate of Incorporation and Bylaws. These agreements, among other things, indemnify the Registrant's directors and certain of its officers for certain expenses (including attorneys fees), judgments, fines and settlement amounts incurred by such person in any action or proceeding, including any action by or in the right of the Registrant, on account of services as a director or officer of the Registrant or as a director or officer, of any subsidiary of the Registrant, or as a director or officer of any other company or enterprise that the person provides services to at the request of the Registrant.

Item 16. Exhibit Index.

<u>Exhibit No.</u>	<u>Description</u>
4.1	Copy of Specimen Common Stock Certificate (1)
5.1	Opinion of Ropes & Gray LLP **
10.1	Securities Purchase Agreement, dated July 25, 2012, among the Registrant and the purchasers named therein (2)
10.2	Registration Rights Agreement, dated July 25, 2012, among the Registrant and the purchasers named therein (3)
23.1	Consent of OUM & Co. LLP, the Registrant's independent registered public accounting firm **
23.2	Consent of Ropes & Gray LLP (included in legal opinion filed as Exhibit 5.1)
24.1	Power of Attorney (included on signature page)

** Filed herewith.

- (1) Filed as Exhibit 4.1 to Registrant's Registration Statement of Form S-3 (Registration No. 333-162968) filed November 6, 2009, and incorporated herein by reference.
- (2) Filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K filed July 25, 2012, and incorporated herein by reference.
- (3) Filed as Exhibit 10.2 to Registrant's Current Report on Form 8-K filed July 25, 2012, and incorporated herein by reference.

Item 17. Undertakings.

Item 512(a) of Regulation S-K. The undersigned Registrant hereby undertakes:

- (1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:
 - (i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;
 - (ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

Table of Contents

- (iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

Provided, however, that:

Paragraphs (a)(1)(i), (a)(1)(ii) and (a)(1)(iii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in reports filed with or furnished to the Commission by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the registration statement.

- (2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.
- (3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.
- (4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:
 - (A) Each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in this registration statement; and
 - (B) Each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by Section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof. *Provided, however,* that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of this Registration Statement or made in any such document immediately prior to such effective date.
- (5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities:

The undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser:

 - (i) Any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424;
 - (ii) Any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant;

Table of Contents

- (iii) The portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned registrant; and
- (iv) Any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

Item 512(b) of Regulation S-K. . The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial *bona fide* offering thereof.

Item 512(h) of Regulation S-K. Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act, and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, as amended, the Company certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 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 August 24, 2012.

A.P. Pharma, Inc.

By: /s/ John B. Whelan
John B. Whelan
President, Chief Executive Officer and
Chief Financial Officer

POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS that each individual whose signature appears below constitutes and appoints John B. Whelan as his true and lawful attorney-in-fact and agent, with full power of substitution, for him and in his name, place and stead, in any and all capacities, to sign this registration statement and any and all amendments thereto, including post-effective amendments, and to file the same, with all exhibits thereto, any related registration filed pursuant to Rule 462(b) under the Securities Act of 1933, as amended, and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent, 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, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all the said attorney-in-fact and agent or his substitute or substitutes, may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, as amended, this registration statement on Form S-3 has been signed by the following persons in the capacities and on the dates indicated.

Signature	Office(s)	Date
<u>/s/ John B. Whelan</u> John B. Whelan	President, Chief Executive Officer and Chief Financial Officer, Director (Principal Executive Officer and Principal Financial and Accounting Officer)	August 24, 2012
<u>/s/ Kevin C. Tang</u> Kevin C. Tang	Chairman	August 24, 2012
<u>/s/ Barry Quart</u> Barry Quart	Director	August 24, 2012
<u>/s/ Stephen Davis</u> Stephen Davis	Director	August 24, 2012
<u>/s/ Robert Rosen</u> Robert Rosen	Director	August 24, 2012

EXHIBIT INDEX

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- (2) Filed as Exhibit 10.1 to Registrant's Current Report on Form 8-K filed July 25, 2012, and incorporated herein by reference.
- (3) Filed as Exhibit 10.2 to Registrant's Current Report on Form 8-K filed July 25, 2012, and incorporated herein by reference.

August 24, 2012

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

Ladies and Gentlemen:

We have acted as counsel to A.P. Pharma, Inc., a Delaware corporation (the "Company") in connection with the Registration Statement on Form S-3 (the "Registration Statement"), filed by the Company with the Securities and Exchange Commission (the "Commission") under the Securities Act of 1933, as amended (the "Securities Act") for the registration of 102,000,000 shares of the common stock, par value \$0.01 per share, of the Company (the "Securities").

In connection with this opinion letter, we have examined such certificates, documents and records and have made such investigation of fact and such examination of law as we have deemed appropriate in order to enable us to render the opinions set forth herein. In conducting such investigation, we have relied, without independent verification, upon certificates of officers of the Company, public officials and other appropriate persons.

The opinions expressed below are limited to the Delaware General Corporation Law.

Based upon and subject to the foregoing, we are of the opinion that the Securities have been duly authorized and are validly issued, fully paid and non-assessable.

We hereby consent to your filing this opinion as an exhibit to the Registration Statement and to the use of our name therein and in the related prospectus under the caption "Legal Matters." In giving such consent, we do not thereby admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Commission thereunder.

Very truly yours,

/s/ Ropes & Gray LLP

Ropes & Gray LLP

CONSENT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

We hereby consent to the incorporation by reference in the Prospectus constituting a part of this Registration Statement on Form S-3 of our report dated March 23, 2012, relating to the financial statements and schedule of A.P. Pharma, Inc. included in the Company's Annual Report on Form 10-K for the year ended December 31, 2011.

We also consent to the reference to our Firm under the caption "Experts" in the Prospectus.

/s/ OUM & CO. LLP

San Francisco, California
August 23, 2012