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

FORM 8-K

CURRENT REPORT
Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934

Date of Report (Date of earliest event reported) **October 19, 2009**

A.P. Pharma, Inc.

(Exact name of registrant as specified in its charter)

Delaware
(State or other jurisdiction
of incorporation)

001-33221
(Commission File Number)

94-2875566
(I.R.S. Employer
Identification No.)

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

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

N/A
(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (see General Instruction A.2. below):

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 1.01 Entry Into A Material Definitive Agreement

On October 19, 2009, A.P. Pharma, Inc. (the “Company”) entered into a Securities Purchase Agreement (the “Purchase Agreement”) with the purchasers named therein (the “Purchasers”). Pursuant to the Purchase Agreement, the Company agreed to sell up to an aggregate of 13,119,829 shares (the “Shares”) of common stock, par value \$0.01, to the Purchasers at a price of \$0.88 per share, and warrants (the “Warrants”) with an exercise price of \$0.88 per share to purchase an aggregate of 3,977,270 shares of common stock, par value \$0.01 to the Purchasers at a price equal to \$0.125 per share of common stock underlying the warrant, for aggregate proceeds of approximately \$13.1 million in two tranches (the “Offering”). The Company will sell 7,954,543 Shares and the Warrants in the first tranche and the Purchasers, under certain conditions, have the right to purchase up to 5,165,286 Shares at a price of \$0.97 per share prior to May 14, 2010. The Company expects the first tranche of the Offering to close on October 22, 2009 (the “First Closing Date”), subject to satisfaction of customary closing conditions. The Purchasers have irrevocably committed to purchase the securities, subject to satisfaction of the closing conditions.

In connection with the Purchase Agreement, the Company amended its Preferred Shareholders Rights Agreement with Computershare Trust Company N.A. dated as of December 18, 2006, as amended as of October 1, 2008, to permit Tang Capital Partners and Baker Brothers Investments, both Purchasers under the Purchase Agreement, to beneficially own up to 34% and 30% of the Company’s outstanding common stock, respectively (the “Second Amendment”).

In addition, in connection with the Purchase Agreement, on October 22, 2009, the Company entered into a Registration Rights Agreement (the “Registration Rights Agreement”) with the Purchasers. Pursuant to the Registration Rights Agreement, the Company agreed to prepare and file a registration statement with the Securities and Exchange Commission (the “SEC”) within 30 days of the First Closing Date for purposes of registering the resale of the Shares, the shares of common stock issuable upon exercise of the Warrants and any shares of common stock issued as a dividend or other distribution with respect to the Shares or shares underlying the Warrants. The Company agreed to use its best efforts to cause the registration statement to be declared effective by the SEC within 90 days after the First Closing Date (or 120 days in the event the registration statement is reviewed by the SEC). If the Company fails to meet either of these deadlines, fails to meet filing or effectiveness deadlines with respect to any additional registration statements required by the Registration Rights Agreement or fails to keep any registration statements continuously effective (with limited exceptions), the Company may be obligated to pay to the holders of the Shares and Warrants liquidated damages in the amount of 1% per month of the purchase price for the Shares and Warrants, up to a maximum cap of 8%. The Company also agreed, among other things, to indemnify the selling holders under the registration statements from certain liabilities and to pay all fees and expenses (excluding underwriting discounts and selling commissions and all legal fees of any selling holder) incident to the Company’s obligations under the Registration Rights Agreement.

The financing is exempt from registration pursuant to the exemption for transactions by an issuer not involving any public offering under Section 4(2) the Securities Act of 1933, as amended, and Regulation D under the Securities Act of 1933, as amended.

The securities sold and issued in connection with the Purchase Agreement have not been registered under the Securities Act of 1933, as amended, or any state securities laws and may not be offered or sold in the United States absent registration with the Securities and Exchange Commission or an applicable exemption from the registration requirements.

The foregoing description of the transaction is only a summary and is qualified in its entirety by reference to the Purchase Agreement, the Form of Warrant, the Registration Rights Agreement and the Second Amendment, copies of which are filed as exhibits hereto.

Item 3.02 Unregistered Sales of Equity Securities

The information called for by this item is contained in Item 1.01, which is incorporated herein by reference.

Item 8.01 Other Events

On October 20, 2009, the Company issued the press release attached hereto as Exhibit 99.1 regarding the transaction described in this report.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits. The following material is filed as an exhibit to this Current Report on Form 8-K:

- 10.1 Securities Purchase Agreement, dated as of October 19, 2009, by and among the Company and the purchasers listed therein.
- 10.2 Registration Rights Agreement, dated as of October 22, 2009, by and among the Company and the purchasers listed therein.
- 10.3 Form of Warrant to Purchase Shares of Common Stock.
- 10.4 Second Amendment to Preferred Shares Rights Agreement, dated as of October 20, 2009, by and between the Company and Computershare Trust Company N.A.
- 99.1 Press Release of A.P. Pharma, Inc. dated October 20, 2009.

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the Registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Date: October 22, 2009

A.P. Pharma, Inc.

/s/ Ronald J. Prentki

Ronald J. Prentki

President, Chief Executive Officer and Director

EXHIBIT INDEX

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A.P. PHARMA, INC.

SECURITIES PURCHASE AGREEMENT

This Securities Purchase Agreement (“Agreement”) is made as of October 19, 2009 (the “Effective Date”), by and among A.P. Pharma, Inc., a Delaware corporation (the “Company”), and each of those persons and entities, severally and not jointly, listed as a Purchaser on the Schedule of Purchasers attached as Exhibit A hereto (the “Schedule of Purchasers”). Such persons and entities are hereinafter collectively referred to herein as “Purchasers” and each individually as a “Purchaser.”

AGREEMENT

In consideration of the mutual covenants contained in this Agreement, and for other good and valuable consideration, the receipt of which is hereby acknowledged, the Company and each Purchaser (severally and not jointly) hereby agree as follows:

SECTION 1. AUTHORIZATION OF SALE OF SECURITIES.

The Company has authorized the sale and issuance of up to 13,119,829 shares of its Common Stock, par value \$0.01 per share (the “Common Stock”) and warrants in the form of Exhibit B hereto (the “Warrants”) to purchase an aggregate of 3,977,270 shares of Common Stock (each a “Warrant” and collectively the “Warrants”), on the terms and subject to the conditions set forth in this Agreement. The shares of Common Stock sold hereunder at the Closing (as defined below) shall be referred to as the “Shares.” The Shares and the Warrants are referred to collectively as the “Securities.”

SECTION 2. AGREEMENT TO SELL AND PURCHASE THE SECURITIES.

2.1 **Sale of Securities.** At the First Closing (as defined in Section 3.1), the Company will sell to each Purchaser, and each Purchaser will purchase from the Company, (a) the number of Shares set forth opposite such Purchaser’s name on the Schedule of Purchasers at a purchase price of \$0.88 per Share and (b) a Warrant to purchase the number of shares of Common Stock set forth opposite such Purchaser’s name on the Schedule of Purchasers (such shares of Common Stock, the “Underlying Shares”), which Warrant shall have an exercise price equal to \$0.88 per Underlying Share, and which Warrant shall have a purchase price equal to \$0.125 per Underlying Share. At the Second Closing (as defined in Section 3.4), each Purchaser may, in its sole discretion, purchase from the Company, and the Company shall sell to each Purchaser, the number of Shares set forth opposite such Purchaser’s name on the Schedule of Purchasers at a purchase price of \$0.968 per Share. The Shares available for purchase at the Purchasers’ option in connection with the Second Closing shall have an additional purchase price equal to \$0.125 per Share (the “Option Purchase Price”), with such Option Purchase Price to be paid at the First Closing.

2.2 **Separate Agreement.** Each Purchaser shall severally, and not jointly, be liable for only the purchase of the Securities that appear on the Schedule of Purchasers that relate to such Purchaser. The Company’s agreement with each of the Purchasers is a separate agreement, and the sale of Securities to each of the Purchasers is a separate sale. The obligations of each Purchaser hereunder are expressly not conditioned on the purchase by any or all of the other Purchasers of the Securities such other Purchasers have agreed to purchase.

SECTION 3. CLOSING AND DELIVERY.

3.1 **First Closing.** The Company shall sell and issue an aggregate of up to 7,954,543 Shares and Warrants to purchase an aggregate of 3,977,270 shares of Common Stock at the first closing (the "First Closing"). The First Closing of the purchase and sale of the Securities (which Securities are set forth in the Schedule of Purchasers) pursuant to this Agreement shall be held on October 22, 2009 at the offices of Latham & Watkins LLP, 140 Scott Drive, Menlo Park, California 94025, or on such other date and place as may be agreed to by the Company and the Purchasers (the "First Closing Date"). At or prior to the First Closing, each Purchaser shall execute any related agreements or other documents required to be executed hereunder, dated as of the First Closing Date.

3.2 **Issuance of the Securities at the First Closing.** At the First Closing, the Company shall issue to each Purchaser (a) stock certificates registered in the name of such Purchaser, or in such nominee name(s) as designated by such Purchaser, representing the number of Shares to be purchased by such Purchaser at such First Closing as set forth in the Schedule of Purchasers against payment of the purchase price for such Shares, including the Option Purchase Price whether or not the Purchasers elect to purchase additional Shares pursuant to Section 3.4 below, and (b) a Warrant registered in the name of such Purchaser, or in such nominee name(s) as designated by such Purchaser, representing the number of Underlying Shares as set forth in the Schedule of Purchasers. The name(s) in which the stock certificates and Warrants are to be issued to each Purchaser are set forth in the Investor Questionnaire and the Selling Stockholder Notice and Questionnaire in the form attached hereto as Appendix I and II (the "Investor Questionnaire" and the "Selling Stockholder Questionnaire," respectively), as completed by each Purchaser, which shall be provided to the Company no later than the First Closing Date. The stock certificates and Warrants shall be delivered to each Purchaser promptly following the First Closing Date, but in any event within ten (10) business days following the First Closing Date.

3.3 **Delivery of the Registration Rights Agreement.** At the First Closing, the Company and each Purchaser shall execute and deliver the Registration Rights Agreement in the form attached hereto as Appendix III (the "Registration Rights Agreement"), with respect to the registration of the Shares and the Underlying Shares under the Securities Act of 1933, as amended (the "Securities Act").

3.4 **Second Closing.** Each Purchaser, in its sole discretion, may purchase, and the Company shall sell and issue, an aggregate of up to 5,165,286 additional Shares at a subsequent closing (the "Second Closing"). The Second Closing of the purchase and sale of the Securities (which Securities are set forth in the Schedule of Purchasers) pursuant to this Agreement shall be held on May 14, 2010, or such earlier date as the Purchasers having agreed to purchase a majority of the Shares in the Second Closing mutually agree upon (the "Second Closing Date"), at the offices of Latham & Watkins LLP, 140 Scott Drive, Menlo Park, California 94025. At the Second Closing, the Company shall issue to each Purchaser stock certificates registered in the name of such Purchaser, or in such nominee name(s) as designated by such Purchaser, representing the number of Shares to be purchased by such Purchaser at the Second Closing as set forth in the Schedule of Purchasers against payment of the purchase price for such Shares. Each Purchaser shall be entitled to purchase up to its respective Pro-Rata Share (as defined below) of the Shares in the Second Closing. In addition, any amounts not subscribed to by a Purchaser as part of its Pro-Rata Share (the "Overallotment") shall be offered to the Purchasers that purchased their respective Pro-Rata Share amounts (the "Overallotment Offering"), for (i) the amount the Purchasers participating in the Overallotment Offering desire to purchase or, (ii) in the case such Purchasers desire to purchase more than the Overallotment, their respective Pro-Rata

Overallotment (as defined below). Each Purchaser's "Pro-Rata Share" shall equal that number of shares equal to the product of (x) the aggregate number of shares of Common Stock available for sale in the Second Closing and (y) the Purchaser's percentage of the total number of shares of Common Stock purchased by it in the First Closing. A Purchaser's "Pro-Rata Overallotment" in the oversubscribed Overallotment Offering shall be equal to the product of (i) the quotient obtained by dividing (x) the total number of shares of Common Stock purchased by such Purchaser in the Second Closing, by (y) the total number of shares of Common Stock purchased by all Purchasers (including affiliates) in the Second Closing, and (ii) the amount of the Overallotment. Any Purchaser may have any portion of its Pro-Rata Share and/or its Overallotment Pro-Rata Share allocated among any number of affiliates. The First Closing and the Second Closing are each referred to herein as a "Closing." The First Closing Date and the Second Closing Date are each referred to herein as a "Closing Date."

SECTION 4. REPRESENTATIONS, WARRANTIES AND COVENANTS OF THE COMPANY.

Except as set forth in the SEC Documents (as defined in Section 4.4) and on the Schedule of Exceptions delivered to the Purchasers concurrently with the execution of this Agreement (the "Schedule of Exceptions"), the Company hereby represents and warrants as of the date hereof to, and covenants with, the Purchasers as follows:

4.1 **Organization and Standing.** The Company has been duly incorporated and is validly existing as a corporation in good standing under the laws of Delaware, has full corporate power and authority to own or lease its properties and conduct its business as presently conducted, and is duly qualified as a foreign corporation and in good standing in all jurisdictions in which the character of the property owned or leased or the nature of the business transacted by it makes qualification necessary, except where the failure to be so qualified would not have a material adverse effect on the business, properties, financial condition or results or operations of the Company (a "Company Material Adverse Effect"). The Company has no subsidiaries or equity interest in any other entity.

4.2 **Corporate Power; Authorization.** The Company has all requisite corporate power, and has taken all requisite corporate action, to execute and deliver this Agreement, the Warrant and the Registration Rights Agreement (collectively, the "Transaction Documents"), sell and issue the Securities and carry out and perform all of its obligations under the Transaction Documents. Each Transaction Document constitutes the legal, valid and binding obligation of the Company, enforceable in accordance with its terms, except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting the enforcement of creditors' rights generally, (ii) as limited by equitable principles generally, including any specific performance and (iii) with respect to the Registration Rights Agreement, as rights to indemnity or contribution may be limited by state or federal laws or public policy underlying such laws.

4.3 **Issuance and Delivery of the Securities.** The Securities have been duly authorized and, when issued and paid for in compliance with the provisions of this Agreement, will be validly issued, fully paid and nonassessable. The Underlying Shares have been duly authorized and, upon exercise of the Warrants in accordance with their terms, including payment of the exercise price therefore, will be validly issued, fully paid and nonassessable. The issuance and delivery of the Securities is not subject to preemptive, co-sale, right of first refusal or any other similar rights of the stockholders of the Company or any liens or encumbrances. Assuming the accuracy of the representations made by each Purchaser in Section 5, the offer and issuance by the Company of the Securities is exempt from registration under the Securities Act.

4.4 **SEC Documents; Financial Statements.** Since January 1, 2008, the Company has filed in a timely manner all documents that the Company was required to file with the Securities and Exchange Commission (the “Commission”) under Sections 13, 14(a) and 15(d) the Securities Exchange Act of 1934, as amended (the “Exchange Act”), except where the failure to file would not reasonably be expected to have a Company Material Adverse Effect. As of their respective filing dates (or, if amended prior to the date of this Agreement, when amended), all documents filed by the Company with the Commission (the “SEC Documents”) complied in all material respects with the requirements of the Exchange Act and the rules and regulations of the Commission promulgated thereunder. None of the SEC Documents as of their respective dates contained any untrue statement of material fact or omitted to state a material fact required to be stated therein or necessary to make the statements made therein, in light of the circumstances under which they were made, not misleading. The financial statements of the Company included in the SEC Documents (the “Financial Statements”) comply as to form in all material respects with applicable accounting requirements and with the published rules and regulations of the Commission with respect thereto. The Financial Statements have been prepared in accordance with United States generally accepted accounting principles consistently applied and fairly present the financial position of the Company at the dates thereof and the results of its operations and cash flows for the periods then ended (subject, in the case of unaudited statements, to normal, recurring adjustments).

4.5 **Capitalization.** All of the Company’s outstanding shares of capital stock have been duly authorized and validly issued and are fully paid and nonassessable, have been issued in compliance with all federal and state securities laws. The authorized capital stock of the Company consists of 100,000,000 shares of common stock and 2,500,000 shares of undesignated Preferred Stock. As of the Effective Date, there are no shares of Preferred Stock issued and outstanding and there are 31,379,640 shares of Common Stock issued and outstanding, of which no shares are owned by the Company. There are no other shares of any other class or series of capital stock of the Company issued or outstanding. The Company has no capital stock reserved for issuance, except that, as of the Effective Date, there are 1,300,198 shares of Common Stock reserved for issuance pursuant to options outstanding on such date pursuant to the Company’s 2007 Equity Incentive Plan, 288,057 shares of Common Stock reserved for issuance pursuant to options outstanding on such date pursuant to the Company’s 2002 Stock Plan, 124,080 shares of Common Stock reserved for issuance pursuant to options outstanding on such date pursuant to the Company’s 1992 Stock Plan, 1,425,000 shares of Common Stock reserved for issuance pursuant to options outstanding on such date pursuant to the Company’s NQO Stock Plan. There are 200,007 shares of Common Stock available for future issuance under the Company’s 1997 Employee Stock Purchase Plan. Except as stated above, there are no existing options, warrants, calls, subscriptions or other rights, agreements, arrangements or commitments of any character, relating to the issued or unissued capital stock of the Company, obligating the Company to issue, transfer, sell, redeem, purchase, repurchase or otherwise acquire or cause to be issued, transferred, sold, redeemed, purchased, repurchased or otherwise acquired any capital stock of, or other equity interest in, the Company or securities or rights convertible into or exchangeable for such shares or equity interests or obligations of the Company to grant, extend or enter into any such option, warrant, call, subscription or other right, agreement, arrangement or commitment. There are no agreements or arrangements under which the Company is obligated to register the sale of any of their securities under the Securities Act. The Company has made available upon request of the Purchasers, a true, correct and complete copy of the Company’s Certificate of Incorporation, as amended and as in effect on the date hereof (the “Certificate of Incorporation”), and the Company’s Bylaws, as amended and as in effect on the date hereof (the “Bylaws”).

4.6 **Litigation.** There are no legal or governmental actions, suits or other proceedings pending or, to the Company's knowledge, threatened against the Company before or by any court, regulatory body or administrative agency or any other governmental agency or body, domestic, or foreign, which actions, suits or proceedings, individually or in the aggregate, could reasonably be expected to have a Company Material Adverse Effect. The Company is not a party to or subject to the provisions of any injunction, judgment, decree or order of any court, regulatory body, administrative agency or other governmental agency or body that might have a Company Material Adverse Effect.

4.7 **Governmental Consents.** No consent, approval, order or authorization of, or registration, qualification, designation, declaration or filing with, any federal, state, or local governmental authority on the part of the Company is required in connection with the consummation of the transactions contemplated by this Agreement or the Registration Rights Agreement except for (a) the filing of a Form D with the Commission under the Securities Act and compliance with the securities and blue sky laws in the states and other jurisdictions in which shares of Common Stock are offered and/or sold, which compliance will be effected in accordance with such laws, (b) the approval by The Nasdaq Global Market (the "Principal Market") of the listing of the Shares and the Underlying Shares and (c) the filing of one or more registration statements and all amendments thereto with the Commission as contemplated by the Registration Rights Agreement.

4.8 **No Default or Consents.** Neither the execution, delivery or performance of the Transaction Documents by the Company nor the consummation of any of the transactions contemplated thereby (including, without limitation, the issuance and sale by the Company of the Securities and the Underlying Shares) will give rise to a right to terminate or accelerate the due date of any payment due under, or conflict with or result in the breach of any term or provision of, or constitute a default (or an event which with notice or lapse of time or both would constitute a default) under, or require any consent or waiver under, or result in the execution or imposition of any lien, charge or encumbrance upon any properties or assets of the Company pursuant to the terms of, any indenture, mortgage, deed of trust or other agreement or instrument to which the Company is a party or by which the Company or any of its properties or businesses is bound, or any franchise, license, permit, judgment, decree, order, statute, rule or regulation applicable to the Company or violate any provision of the Certificate of Incorporation or the Bylaws, except in each case as would not cause, either individually or in the aggregate, a Company Material Adverse Effect, and except for such consents or waivers which have already been obtained and are in full force and effect.

4.9 **No Material Adverse Change.** Since December 31, 2008, there have not been any changes in the assets, liabilities, financial condition or operations of the Company from that reflected in the Financial Statements for the year ended December 31, 2008, except changes which have not had, either individually or in the aggregate, a Company Material Adverse Effect.

4.10 **No General Solicitation.** Neither the Company, nor any of its affiliates, nor any Person acting on its or their behalf, has engaged in any form of general solicitation or general advertising (within the meaning of Regulation D promulgated under the Securities Act) in connection with the offer or sale of the Securities.

4.11 **Sarbanes-Oxley Act.** To the knowledge of the executive officers of the Company, the Company is in material compliance with the requirements of the Sarbanes-Oxley Act of 2002, as amended ("SOX") that are effective and applicable to the Company as of the date hereof, and the rules and regulations promulgated by the Commission thereunder that are effective and applicable to the Company as of the date hereof.

4.12 **Patents and Trademarks.** To the knowledge of the executive officers of the Company, the Company has, or has rights to use, all patents, patent applications, trademarks, trademark applications, service marks, trade names, copyrights, licenses and other similar rights that are necessary or material for use in connection with their respective businesses as described in the SEC Documents and which the failure to so have could, individually or in the aggregate, have or reasonably be expected to result in a Company Material Adverse Effect (collectively, the “Intellectual Property Rights”). The Company has not received a written notice that the Intellectual Property Rights used by the Company or any Subsidiary violates or infringes upon the rights of any Person. To the knowledge of the executive officers of the Company, all such Intellectual Property Rights are enforceable and there is no existing infringement by another Person of any of the Intellectual Property Rights.

4.13 **Listing and Maintenance Requirements.** The Company has not, in the two years preceding the date hereof, received notice from the Principal Market to the effect that the Company is not in compliance with the listing or maintenance requirements thereof. The Company is in compliance with the listing and maintenance requirements for continued listing of the Common Stock. The issuance and sale of the Securities under this Agreement does not contravene the rules and regulations of the Principal Market and no approval of the stockholders of the Company thereunder is required for the Company to issue and deliver to the Purchasers the Securities.

4.14 **Contracts.** (a) Each indenture, contract, lease, mortgage, deed of trust, note agreement, loan or other agreement or instrument of a character that is required to be described or summarized in the SEC Documents or to be filed as an exhibit to the SEC Documents under the Securities Act and the rules and regulations promulgated thereunder (collectively, the “Material Contracts”) is so described, summarized or filed.

(b) The Material Contracts to which the Company is a party have been duly and validly authorized, executed and delivered by the Company and constitute the legal, valid and binding agreements of the Company, enforceable by and against the Company in accordance with their respective terms, except as such enforceability may be limited by applicable bankruptcy, insolvency, reorganization or other similar laws relating to enforcement of creditors’ rights generally, and general equitable principles relating to the availability of remedies, except as rights to indemnity or contribution may be limited by federal or state securities laws.

4.15 **Properties and Assets.** The Company has good and marketable title to all the properties and assets described as owned by it in the Company’s consolidated financial statements, free and clear of all liens, mortgages, pledges or encumbrances of any kind except (i) those, if any, reflected in such consolidated financial statements or (ii) those that are not material in amount and do not adversely affect the use made and proposed to be made of such property by the Company. The Company holds its leased properties under valid and binding leases. The Company owns or leases all such properties as are necessary to its operations as now conducted.

4.16 **Compliance.** The Company has not been advised, nor does it have any reason to believe, that it is not conducting its business in compliance with all applicable laws, rules and regulations of the jurisdictions in which it is conducting business, including, without limitation, all applicable local, state and federal environmental laws and regulations, except where failure to be so in compliance would not have a Company Material Adverse Effect.

4.17 **Taxes.** The Company has filed on a timely basis (giving effect to extensions) all required federal, state and foreign income and franchise tax returns and has paid or accrued all taxes shown as due thereon, except where such failure to so timely file or to pay such taxes would not

reasonably result in a Company Material Adverse Effect, and the Company does not have any knowledge of a tax deficiency that has been or might be asserted or threatened against it that could have a Company Material Adverse Effect. All tax liabilities accrued through the date hereof have been adequately provided for on the books of the Company.

4.18 **Transfer Taxes.** On the applicable Closing Date, all stock transfer or other taxes (other than income taxes) that are required to be paid in connection with the sale and transfer of the Securities to be sold to the Purchasers hereunder will have been fully paid or provided for by the Company and all laws imposing such taxes will have been fully complied with.

4.19 **Investment Company.** The Company is not an “investment company” or an “affiliated person” of, or “promoter” or “principal underwriter” for an investment company, within the meaning of the Investment Company Act of 1940, as amended, and the rules and regulations of the Commission promulgated thereunder.

4.20 **Insurance.** The Company maintains insurance underwritten by insurers of recognized financial responsibility, of the types and in the amounts that the Company reasonably believes is adequate for businesses, including, but not limited to, Directors’ and Officers’ liability insurance and insurance covering all real and personal property owned or leased by the Company against theft, damage, destruction, acts of vandalism and all other risks customarily insured against, with such deductibles as are customary for companies in the same or similar business, all of which insurance is in full force and effect.

4.21 **Price of Common Stock.** The Company has not taken, and will not take, directly or indirectly, any action designed to cause or result in, or that has constituted or that might reasonably be expected to constitute, the stabilization or manipulation of the price of the shares of the Common Stock to facilitate the sale or resale of the Shares or the Underlying Shares.

4.22 **Governmental Permits, Etc.** The Company has all franchises, licenses, certificates and other authorizations from such federal, state or local government or governmental agency, department or body that are currently necessary for the operation of the business of the Company as currently conducted, except where the failure to possess currently such franchises, licenses, certificates and other authorizations is not reasonably expected to have a Company Material Adverse Effect.

4.23 **Internal Control over Financial Reporting; Sarbanes-Oxley Matters.** The Company maintains internal control over financial reporting (as such term is defined in paragraph (f) of Rule 13a-15 under the Exchange Act) as required by Rule 13a-15 under the Exchange Act. The Company is in compliance in all material respects with all applicable provisions of SOX, and the rules and regulations promulgated thereunder. To the best of the Company’s knowledge, since the end of the Company’s most recent audited fiscal year, there has been no material weakness in the design or operation of the Company’s internal control over financial reporting (whether or not remediated) which are reasonably likely to adversely affect the Company’s ability to record, process, summarize and report financial information.

4.24 **Foreign Corrupt Practices.** The Company, nor, to the knowledge of any director, officer, agent, employee or other Person acting on behalf of the Company has, in the course of its actions for, or on behalf of, the Company (i) used any corporate funds for any unlawful contribution, gift, entertainment or other unlawful expenses relating to political activity; (ii) made any direct or indirect unlawful payment to any foreign or domestic government official or employee from corporate funds; (iii) violated or is in violation of any provision of the U.S. Foreign Corrupt Practices Act of 1977, as amended; or (iv) made any unlawful bribe, rebate, payoff, influence payment, kickback or other unlawful payment to any foreign or domestic government official or employee.

4.25 **No Registration Rights.** There are no written contracts, agreements or understandings between the Company and any person granting such person the right (other than rights which have been waived in writing or otherwise satisfied) to require the Company to include any securities of the Company in any registration statement contemplated by Section 2 of the Registration Rights Agreement.

SECTION 5. REPRESENTATIONS, WARRANTIES AND COVENANTS OF THE PURCHASERS.

5.1 Each Purchaser, severally and not jointly, represents and warrants to and covenants with the Company that:

(a) Purchaser, taking into account the personnel and resources it can practically bring to bear on the purchase of the Securities contemplated hereby, is knowledgeable, sophisticated and experienced in making, and is qualified to make, decisions with respect to investments in securities presenting an investment decision like that involved in the purchase of the Securities, including investments in securities issued by the Company. Such Purchaser recognizes that investing in the Company involves substantial risks, has taken full cognizance of and understands all of the risk factors related to the acquisition of the Securities, and has requested, received, reviewed and considered all information Purchaser deems relevant (including the SEC Documents) in making an informed decision to purchase the Securities. Such Purchaser has not relied on the Company for any tax or legal advice in connection with the purchase of the Securities. In evaluating the suitability of an investment in the Company, such Purchaser has not relied upon any representations (other than the representations and warranties of the Company set forth in Section 4) or other information from the Company or any of its agents.

(b) Purchaser is acquiring the Securities pursuant to this Agreement in the ordinary course of its business and for its own account for investment only and with no present intention of distributing any of such Securities or any arrangement or understanding with any other persons regarding the distribution of such Securities, except in compliance with Section 5.1(c).

(c) Purchaser will not, directly or indirectly, offer, sell, pledge, transfer or otherwise dispose of (or solicit any offers to buy, purchase or otherwise acquire or take a pledge of) any of the securities purchased hereunder except in compliance with the Securities Act, applicable blue sky laws, and the rules and regulations promulgated thereunder.

(d) Purchaser has, in connection with its decision to purchase the Securities, relied with respect to the Company and its affairs solely upon the SEC Documents and the representations and warranties of the Company contained herein.

(e) Purchaser is an “accredited investor” within the meaning of Rule 501 of Regulation D promulgated under the Securities Act or a Qualified Institutional Buyer within the meaning of Rule 144A promulgated under the Securities Act.

(f) Purchaser has full right, power, authority and capacity to enter into this Agreement and the Registration Rights Agreement and to consummate the transactions contemplated by this Agreement and the Registration Rights Agreement and has taken all necessary action to authorize the execution, delivery and performance of this Agreement and the Registration Rights Agreement. Upon the execution and delivery of this Agreement and the Registration Rights Agreement by Purchaser, this Agreement and the Registration Rights Agreement shall each constitute a valid and

binding obligation of Purchaser, enforceable in accordance with its terms, except (i) as limited by applicable bankruptcy, insolvency, reorganization, moratorium or similar laws relating to or affecting the enforcement of creditors' rights generally, (ii) as limited by equitable principles generally, including any specific performance and (iii) with respect to the Registration Rights Agreement, as rights to indemnity or contribution may be limited by state or federal laws or public policy underlying such laws.

(g) Purchaser is not a broker or dealer registered pursuant to Section 15 of the Securities Exchange Act of 1934 (a "registered broker-dealer") and is not affiliated with a registered broker dealer. Purchaser is not party to any agreement for distribution of any of the Securities.

(h) The Purchaser shall have completed or caused to be completed and delivered to the Company at no later than the Closing Date, the Investor Questionnaire and the Selling Stockholder Questionnaire for use in preparation of the Registration Statement, and the answers to the Investor Questionnaire and the Selling Stockholder Questionnaire are true and correct in all material respects as of the date of this Agreement and will be true and correct as of the Closing Date and the effective date of the Registration Statement; provided that the Purchasers shall be entitled to update such information by providing notice thereof to the Company before the effective date of such Registration Statement.

5.2 Purchaser represents, warrants and covenants to the Company that Purchaser has not, either directly or indirectly through an affiliate, agent or representative of the Company, engaged in any transaction in the securities of the Company subsequent to June 30, 2009, except as set forth in filings made with the Commission pursuant to Section 16 of the Exchange Act. Purchaser represents and warrants to and covenants with the Company that Purchaser has not, since January 1, 2009, engaged and will not engage in any short sales of the Company's Common Stock prior to the effectiveness of the Registration Statement (either directly or indirectly through an affiliate, agent or representative).

5.3 Purchaser understands that nothing in this Agreement or any other materials presented to Purchaser in connection with the purchase and sale of the Securities constitutes legal, tax or investment advice. Purchaser has consulted such legal, tax and investment advisors as it, in its sole discretion, has deemed necessary or appropriate in connection with its purchase of the Securities.

5.4 **Legends.** It is understood that the Shares and the Underlying Shares may bear one or more legends in substantially the following form and substance:

"THE SECURITIES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY OTHER APPLICABLE SECURITIES LAWS AND HAVE BEEN ISSUED IN RELIANCE UPON AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND SUCH OTHER SECURITIES LAWS. NEITHER THIS SECURITY NOR ANY INTEREST OR PARTICIPATION HEREIN MAY BE REOFFERED, SOLD, ASSIGNED, TRANSFERRED, PLEDGED, ENCUMBERED, HYPOTHECATED OR OTHERWISE DISPOSED OF, EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO A TRANSACTION WHICH IS EXEMPT FROM, OR NOT SUBJECT TO, SUCH REGISTRATION, IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS."

It is understood that the Warrants may bear one or more legends in substantially the following form and substance:

“THE SECURITIES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE “SECURITIES ACT”), OR ANY OTHER APPLICABLE SECURITIES LAWS AND HAVE BEEN ISSUED IN RELIANCE UPON AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND SUCH OTHER SECURITIES LAWS. NEITHER THIS SECURITY NOR ANY INTEREST OR PARTICIPATION HEREIN MAY BE REOFFERED, SOLD, ASSIGNED, TRANSFERRED, PLEDGED, ENCUMBERED, HYPOTHECATED OR OTHERWISE DISPOSED OF, EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO A TRANSACTION WHICH IS EXEMPT FROM, OR NOT SUBJECT TO, SUCH REGISTRATION, IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS.”

In addition stock certificates representing the Securities or the Underlying Shares may contain:

- (a) Any legend required by the laws of the State of California, including any legend required by the California Department of Corporations.
- (b) Any legend required by the blue sky laws of any other state to the extent such laws are applicable to the sale of such Securities or Underlying Shares hereunder.
- (c) A legend regarding affiliate status, if applicable.

5.5 **Restricted Securities.** Notwithstanding any other provision of this Section 5, each Purchaser covenants that the Securities and the Underlying Shares are characterized as “restricted securities” under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such laws and applicable regulations such Securities and Underlying Shares may be disposed of only pursuant to an effective registration statement under, and in compliance with the requirements of, the Securities Act, or pursuant to an available exemption from, or in a transaction not subject to, the registration requirements of the Securities Act, and in compliance with any applicable state and federal securities laws. In connection with any transfer of the Securities or the Underlying Shares other than (i) pursuant to an effective registration statement, (ii) to the Company, (iii) pursuant to Rule 144 (*provided* that the Purchaser provides the Company with reasonable assurances (in the form of seller and broker representation letters) that the securities may be sold pursuant to such rule), or (iv) in connection with a bona fide pledge, the Company may require the transferor thereof to provide to the Company and/or the transfer agent such evidence satisfactory to counsel to the Company that such transfer does not require registration of such transferred Securities or Underlying Shares under the Securities Act. As a condition of transfer, any such transferee shall agree in writing to be bound by the terms of this Agreement and the Warrant, if applicable, and shall have the rights of a Purchaser under this Agreement and the Registration Rights Agreement applicable to the transferring Purchaser. Such Purchaser also represents that it is familiar with Rule 144 promulgated under the Securities Act, as presently in effect, and understands the resale limitations imposed thereby and by the Securities Act.

SECTION 6. CONDITIONS TO COMPANY’S OBLIGATIONS AT THE CLOSING.

The Company’s obligation to complete the sale and issuance of the Securities and deliver Securities to each Purchaser, individually, as set forth in the Schedule of Purchasers at the applicable Closing shall be subject to the following conditions to the extent not waived by the Company:

6.1 **Receipt of Payment.** The Company shall have received payment, by wire transfer of immediately available funds, in the full amount of the purchase price for the number of Securities being purchased by such Purchaser at the applicable Closing as set forth in the Schedule of Purchasers.

6.2 **Representations and Warranties.** The representations and warranties made by such Purchaser in Section 5 hereof shall be true and correct in all material respects as of, and as if made on, the date of this Agreement and as of the applicable Closing Date.

6.3 **Receipt of Executed Documents.** Such Purchaser shall have executed and delivered to the Company the Registration Rights Agreement, the Investor Questionnaire and the Selling Stockholder Questionnaire on or before the First Closing Date.

6.4 **Nasdaq Approval.** The Shares and the Underlying Shares shall have been approved for listing on the Principal Market, subject to official notice of issuance, on or before the First Closing Date.

SECTION 7. CONDITIONS TO PURCHASERS' OBLIGATIONS AT THE CLOSING.

Each Purchaser's obligation to accept delivery of the Securities and to pay for the Securities shall be subject to the following conditions to the extent not waived by such Purchaser:

7.1 **Representations and Warranties Correct.** The representations and warranties made by the Company in Section 4 hereof shall be true and correct in all material respects as of, and as if made on, the date of this Agreement and as of the applicable Closing Date.

7.2 **Receipt of Executed Registration Rights Agreement.** The Company shall have executed and delivered to the Purchasers the Registration Rights Agreement on or before the First Closing Date.

7.3 **Legal Opinion.** The Purchasers shall have received an opinion of Latham & Watkins LLP, special counsel to the Company, substantially in the form set forth in Appendix IV hereto and dated as of the First Closing Date.

7.4 **Consents and Waivers.** The Company shall have obtained any and all consents and waivers necessary or appropriate for consummation of the transactions contemplated by this Agreement on or before the First Closing Date.

7.5 **Certificate.** Each Purchaser shall have received a certificate signed by the Chief Executive Officer and the Chief Financial or Accounting Officer to the effect that the representations and warranties of the Company in Section 4 hereof are true and correct in all material respects as of, and as if made on, the date of this Agreement and as of the applicable Closing Date and that the Company has satisfied in all material respects all of the conditions set forth in this Section 7.

7.6 **Good Standing.** The Company is validly existing as a corporation in good standing under the laws of Delaware as of the applicable Closing Date.

7.7 **Nasdaq Approval.** The Shares and the Underlying Shares shall have been approved for listing on the Principal Market, subject to official notice of issuance, on or before the First Closing Date.

7.8 **Insurance.** On or before the First Closing Date, the Company shall have obtained from a financially sound and reputable insurer, and shall thereafter maintain, director and officer liability insurance with coverage of at least \$10 million.

7.9 **Amendment of Preferred Shares Rights Agreement.** The Company shall have amended that certain Preferred Shares Rights Agreement dated as of December 18, 2006 and amended on October 1, 2008 (the "Rights Agreement"), in which an "Acquiring Person" (as defined in the Rights Agreement) may not beneficially own (as determined pursuant to the terms of the Rights Agreement) more than 20% of the Company's outstanding Common Stock, (i) to allow Tang Capital or its affiliates or associates to beneficially own up to 34% of the Company's outstanding Common Stock and (ii) to allow Baker Brothers Investments or its affiliates or associates ("Baker") to beneficially own up to 30% of the Company's outstanding Common Stock.

7.10 **Board Observer.** The Company shall have taken all action to authorize Baker to appoint a board observer (the "Baker Observer") with the rights set forth in Section 8.3 of this Agreement. The Baker Observer and the Company shall have executed an observer rights agreement in the form substantially attached hereto as Appendix V.

SECTION 8. POST-CLOSING COVENANTS.

8.1 **Restrictions on Strategic Decisions Involving APF530.** The Company agrees for a period of sixty (60) days following the First Closing Date not to, without the consent of a majority of the Purchasers and Baker, make any material strategic decisions involving its APF530 product candidate, provided that the Company shall be entitled to make decisions involving APF530 to the extent necessary to respond to or comply with any applicable laws and regulations, including any procedures, rules and regulations set forth by the U.S. Food and Drug Administration so long as the Company provides prior written notice of any such decisions to the Purchasers.

8.2 **Baker Director Designee.** It is the intention of the parties that Baker shall have the right to designate a representative (the "Baker Director Designee") to the board of directors of the Company as soon as practicable after the First Closing and no later than December 31, 2009. The Company shall cause the Baker Director Designee to be promptly appointed or elected to the board of directors of the Company including, if necessary, by amending its Bylaws to increase the number of authorized directors to enable the Baker

Director Designee to be elected or appointed by the board of directors of the Company to the vacant seat created thereby. The Baker Director Designee shall meet the independent director qualification standards under applicable rules of the SEC and the Principal Market and such Baker Director Designee shall be acceptable to the majority of board of directors of the Company, with such acceptance not to be unreasonably withheld. Following the appointment of the Baker Director Designee pursuant to this Section 8.2, the Company's board of directors shall consist of (a) the chairman of the board of directors, initially Paul Goddard, Ph.D., (b) one (1) member of the Company's senior management, initially Ronald Prentki, (c) one (1) designee of Tang Capital Management, LLC ("Tang Capital"), initially Kevin C. Tang, (d) three (3) incumbent members of the board of directors, initially Toby Rosenblatt, Gregory Turnbull and Robert Zerbe, M.D. and (e) the Baker Director Designee.

8.3 Observer Rights. The parties to this Agreement agree that Baker shall have the right to designate one observer (the "Baker Observer"), who shall have the right to attend all regular, special and telephonic meetings of the board of directors of the Company, and to receive materials sent to the members of the board of directors in their capacity as such, until May 14, 2010 (the "Observer Period"), unless Baker notifies the Company in writing that it wishes to suspend such observer rights. The Company agrees to give the Baker Observer, during the Observer Period, notice of such meetings, by telecopy or by such other means as such notices are delivered to the members of the Company's board of directors, at the same time notice is provided or delivered to the board of directors.

8.4 Second Baker Director Designee. In the event Baker purchases no less than all of the Shares allocated to it as set forth on Exhibit A attached hereto in such Second Closing, Baker shall have the right to designate an additional representative (the "Second Baker Director Designee") to the board of directors of the Company concurrently with the Second Closing. The Company shall cause the Second Baker Director Designee to be promptly appointed or elected to the board of directors of the Company including, if necessary, by securing the resignation of an incumbent director as necessary to enable the Second Baker Director Designee to be elected or appointed by the board of directors of the Company to the vacant seat created thereby. The Second Baker Director Designee shall be acceptable to the majority of the board of directors of the Company, with such acceptance not to be unreasonably withheld. The Company acknowledges that the majority of the board of directors deem Felix Baker and Kelvin Neu to be acceptable appointees to be the Second Baker Director Designee. Following the appointment of the Baker Director Designee pursuant to this Section 8.4, the Company's board of directors shall consist of (a) the chairman of the board of directors, initially Paul Goddard, Ph.D., (b) one (1) member of the Company's senior management, initially Ronald Prentki, (c) one (1) designee of Tang Capital, initially Kevin C. Tang, (d) two (2) incumbent members of the board of directors, (e) the Baker Director Designee and (f) the Second Baker Director Designee.

8.5 Removal of Legends.

The legend set forth in Section 5.4 shall be removed and the Company shall issue a certificate without such legend or any other legend to the holder of the applicable Shares or Underlying Shares upon which it is stamped or issue to such holder by electronic delivery at the applicable balance account at the Depository Trust Company ("DTC"), if (i) such Shares or Underlying Shares are registered for resale (provided that the Purchaser agrees to only sell such Shares or Underlying Shares when, and as permitted, by the effective registration statement permitting such resale), (ii) such Shares or Underlying Shares are sold or transferred pursuant to Rule 144 (if the transferor is not an affiliate of the Company), or (iii) such Shares or Underlying Shares are eligible for sale under Rule 144 following the expiration of the one-year holding requirement under subparagraphs (b)(1)(i) and (d) thereof (if the transferor is not an affiliate of the Company). Any fees (with respect to the transfer agent, Company counsel or otherwise) associated with the removal of such legend shall be borne by the Company. Following the date on which the initial Registration Statement required by Section 2 of the Registration Rights Agreement applicable to such Purchaser is first declared effective by the SEC, or at such earlier time as a legend is no longer required for certain Shares or Underlying Shares, the Company will no later than three (3) trading days following the delivery by a Purchaser to the Company or the transfer agent (with notice to the Company) of (i) a legended certificate representing such Shares or Underlying Shares (endorsed or with stock powers attached, signatures guaranteed, and otherwise in form necessary to affect the reissuance and/or transfer) or (ii) an Exercise Notice in the manner stated in the Warrants to effect the exercise of such Warrant in accordance with its terms, deliver or cause to be delivered to such Purchaser or the transferee of such Purchaser, as applicable, a certificate representing such Shares or Underlying Shares that is free from all restrictive and other legends. Certificates for Shares or Underlying Shares subject to legend removal hereunder may be transmitted by the transfer agent to the Purchasers by crediting the account of the Purchaser's prime broker with DTC.

SECTION 9. BROKER'S FEE.

The Company and each Purchaser (severally and not jointly) hereby represent that there are no brokers or finders entitled to compensation in connection with the sale of the Securities, and shall indemnify each other for any such fees for which they are responsible.

SECTION 10. INDEMNIFICATION.

10.1 Indemnification by the Company. The Company agrees to indemnify and hold harmless each of the Purchasers and each Person, if any, who controls any Purchaser within the meaning of the Securities Act (each, an "Indemnified Party"), against any losses, claims, damages, liabilities or expenses, joint or several, to which such Indemnified Party may become subject under the Securities Act, the Exchange Act, or any other federal or state statutory law or regulation, or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of the Company), insofar as such losses, claims, damages, liabilities or expenses (or actions in respect thereof as contemplated below) arise out of or are based in whole or in part on any inaccuracy in the representations and warranties of the Company contained in this Agreement or any failure of the Company to perform its obligations hereunder, and will reimburse each Indemnified Party for any legal and other expenses reasonably incurred as such expenses are reasonably incurred by such Indemnified Party in connection with investigating, defending, settling, compromising or

paying any such loss, claim, damage, liability, expense or action; provided, however, that the Company will not be liable in any such case to the extent that any such loss, claim, damage, liability or expense arises out of or is based upon (i) the failure of such Indemnified Party to comply with the covenants and agreements contained in Section 6 above respecting sale of the Securities (including the Warrant Shares), or (ii) the inaccuracy of any representations made by such Indemnified Party herein.

10.2 **Indemnification by Investors.** Each Purchaser shall severally, and not jointly, indemnify and hold harmless the other Purchasers and the Company, each of its directors, and each Person, if any, who controls the Company within the meaning of the Securities Act, against any losses, claims, damages, liabilities or expenses to which the Company, each of its directors or each of its controlling Persons may become subject, under the Securities Act, the Exchange Act, or any other federal or state statutory law or regulation, or at common law or otherwise (including in settlement of any litigation, if such settlement is effected with the written consent of such Purchaser) insofar as such losses, claims, damages, liabilities or expenses (or actions in respect thereof as contemplated below) arise out of or are based upon (i) any failure by such Purchaser to comply with the covenants and agreements contained in Section 5.1 and 5.2 above respecting the sale of the Securities (including the Warrant Shares) or (ii) the inaccuracy of any representation made by such Purchaser herein, in each case to the extent, and will reimburse the Company, each of its directors, and each of its controlling Persons for any legal and other expense reasonably incurred, as such expenses are reasonably incurred by the Company, each of its directors, and each of its controlling Persons in connection with investigating, defending, settling, compromising or paying any such loss, claim, damage, liability, expense or action. No Purchaser shall be liable for the indemnification obligations of any other Purchaser.

SECTION 11. ACCESS TO INFORMATION.

From the date hereof until the Closing, the Company will make reasonably available to the Purchasers' representatives, consultants and their respective counsels for inspection, such information and documents as the Purchasers reasonably request, and will make available at reasonable times and to a reasonable extent officers and employees of the Company to discuss the business and affairs of the Company.

SECTION 12. USE OF PURCHASERS' NAMES.

Except as otherwise required by applicable law or regulation, the Company shall not use the Purchasers' names or the name of any of their affiliates in any advertisement, announcement, press release or other similar public communication unless it has received the prior written consent of the applicable Purchaser for the specific use contemplated which consent shall not be unreasonably withheld.

SECTION 13. NOTICES.

All notices, requests, consents and other communications hereunder shall be in writing, shall be sent by confirmed facsimile or electronic mail, or mailed by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, and shall be deemed given when so sent in the case of facsimile or electronic mail transmission, or when so received in the case of mail or courier, and addressed as follows:

(a) if to the Company, to:

A.P. Pharma, Inc.
123 Saginaw Drive
Redwood City, California 94063
Attention: Chief Financial Officer
Facsimile: (650) 365-6490
E-Mail: jwhelan@appharma.com

with a copy to:

Latham & Watkins LLP
140 Scott Drive
Menlo Park, California 94025
Attention: Alan C. Mendelson
Facsimile: (650) 463-4693
E-Mail: alan.mendelson@lw.com

or to such other person at such other place as the Company shall designate to the Purchasers in writing; and

(b) if to the Purchasers, at the address as set forth at the end of this Agreement, or at such other address or addresses as may have been furnished to the Company in writing.

SECTION 14. MISCELLANEOUS.

14.1 **Waivers and Amendments.** Neither this Agreement nor any provision hereof may be changed, waived, discharged, terminated, modified or amended except upon the written consent of the Company and holders of at least a majority of the Securities.

14.2 **Headings.** The headings of the various sections of this Agreement have been inserted for convenience of reference only and shall not be deemed to be part of this Agreement.

14.3 **Severability.** In case any provision contained in this Agreement should be invalid, illegal or unenforceable in any respect, the validity, legality and enforceability of the remaining provisions contained herein shall not in any way be affected or impaired thereby.

14.4 **Governing Law.** This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York.

14.5 **Counterparts.** This Agreement may be executed in two or more counterparts, each of which shall constitute an original, but all of which, when taken together, shall constitute but one instrument, and shall become effective when one or more counterparts have been signed by each party hereto and delivered to the other parties.

14.6 **Successors and Assigns.** Except as otherwise expressly provided herein, the provisions hereof shall inure to the benefit of, and be binding upon, the successors, assigns, heirs, executors and administrators of the parties hereto.

14.7 **Entire Agreement.** This Agreement and other documents delivered pursuant hereto, including the exhibit and the Schedule of Exceptions, constitute the full and entire understanding and agreement between the parties with regard to the subjects hereof and thereof.

14.8 **Payment of Fees and Expenses.**

(a) On the First Closing Date, the Company shall reimburse Baker for all expenses Baker has incurred as of such date in connection with this Agreement and the transactions contemplated hereby, including consulting, accounting and reasonable legal fees.

(b) The Company shall promptly reimburse Baker for all expenses Baker incurs after the First Closing Date in connection with any amendment or waiver or, or enforcement of this Agreement, the Warrants or the Registration Rights Agreement, including consulting, accounting and reasonable legal fees, *provided that* the expenses to be reimbursed by the Company pursuant to Sections 14(a) and 14(b) shall not exceed \$50,000 in the aggregate.

(c) Subject to the provisions of Section 14.8(a) and (b) above, the Company and the Purchasers shall bear its own expenses and legal fees incurred on its behalf with respect to this Agreement and the transactions contemplated hereby, except that the expenses incurred in connection with the Registration Rights Agreement shall be borne by the Company as set forth therein. If any action at law or in equity is necessary to enforce or interpret the terms of this Agreement, the prevailing party shall be entitled to reasonable attorney's fees, costs and necessary disbursements in addition to any other relief to which such party may be entitled.

[signature pages follow]

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

A.P. PHARMA, INC.

By: /s/ Ronald J. Prentki
Name: Ronald J. Prentki
Title: President & CEO

SIGNATURE PAGE TO SECURITIES PURCHASE AGREEMENT

PURCHASERS:

| | |
|--|--|
| 667, L.P. /s/ Felix Baker By: Baker Biotech Capital, L.P. (general partner) By: Baker Biotech Capital (GP), LLC (general partner) By: Felix Baker, Ph.D., Managing Member | 667, L.P. /s/ Felix Baker By: Baker Biotech Capital, L.P. (general partner) By: Baker Biotech Capital (GP), LLC (general partner) By: Felix Baker, Ph.D., Managing Member |
|--|--|

| | |
|---|--|
| BAKER BROTHERS LIFE SCIENCES, L.P. 14159, L.P. /s/ Felix Baker By: Baker Biotech Capital, L.P. (general partner) By: Baker Biotech Capital (GP), LLC (general partner) By: Felix Baker, Ph.D., Managing Member | 14159, L.P. /s/ Felix Baker By: Baker Biotech Capital, L.P. (general partner) By: Baker Biotech Capital (GP), LLC (general partner) By: Felix Baker, Ph.D., Managing Member |
|---|--|

PURCHASERS:

TANG CAPITAL PARTNERS, L.P.

/s/ Kevin Tang

Name: Kevin Tang

Title: Managing Director

SIGNATURE PAGE TO SECURITIES PURCHASE AGREEMENT

PURCHASERS:

BOXER CAPITAL, LLC

/s/ Chris Fuglesang

Name: Chris Fuglesang

Title: Member

SIGNATURE PAGE TO SECURITIES PURCHASE AGREEMENT

PURCHASERS:

DEERFIELD SPECIAL SITUATIONS FUNDS INTERNATIONAL, LTD.

/s/ Darren Levine

Name: Darren Levine

Title: CFO

DEERFIELD SPECIAL SITUATIONS FUNDS, LP

/s/ Darren Levine

Name: Darren Levine

Title: CFO

SIGNATURE PAGE TO SECURITIES PURCHASE AGREEMENT

**EXHIBIT A
SCHEDULE OF PURCHASERS**

FIRST CLOSING

| Name and Address | Number of Shares | Aggregate Purchase Price of Shares | Number of Warrants | Aggregate Purchase Price of Warrants | Aggregate Option Purchase Price |
|---|------------------|------------------------------------|--------------------|--------------------------------------|---------------------------------|
| 667, L.P. 667 Madison Ave 21 st Floor New York, NY 10065 Attention: Leo Kirby | 403,025 | \$354,662.00 | 201,512 | \$25,189.00 | \$32,713.00 |
| 667, L.P. 667 Madison Ave 21 st Floor New York, NY 10065 Attention: Leo Kirby | 324,880 | \$285,894.40 | 162,440 | \$20,305.00 | \$26,370.13 |
| Baker Brothers Life Sciences, L.P. 667 Madison Ave 21 st Floor New York, NY 10065 Attention: Leo Kirby | 3,160,131 | \$2,780,915.28 | 1,580,066 | \$197,508.25 | \$256,504.13 |
| 14159, L.P. 667 Madison Ave 21 st Floor New York, NY 10065 Attention: Leo Kirby | 89,236 | \$78,527.68 | 44,618 | \$5,577.25 | \$7,243.25 |
| Tang Capital Partners, LP 4401 Eastgate Mall San Diego, CA 92121 Attention: Kevin Tang | 2,443,181 | \$2,149,999.28 | 1,221,590 | \$152,698.75 | \$198,310.13 |
| Boxer Capital, LLC 445 Marine View Ave, Suite 100 Del Mar, CA 92014 Attention: Christopher Fuglesang | 1,022,727 | \$899,999.76 | 511,363 | \$63,920.38 | \$83,013.50 |
| Deerfield Special Situations Fund International, Ltd. 780 3 rd Ave. 37 th Floor New York, NY 10017 Attention: Darren Levine | 326,250 | \$287,100.00 | 163,124 | \$20,390.50 | \$26,481.25 |
| Deerfield Special Situations Fund, LP 780 3 rd Ave 37 th Floor New York, NY 10017 Attention: Darren Levine | 185,113 | \$162,899.44 | 92,557 | \$11,569.63 | \$15,025.38 |

SECOND CLOSING

| Name and Address | Number of Shares | Aggregate Purchase Price of Shares |
|---|------------------|------------------------------------|
| 667, L.P. 667 Madison Ave 21 st Floor New York, NY 10065 Attention: Leo Kirby | 261,704 | \$253,329.47 |
| 667, L.P. 667 Madison Ave 21 st Floor New York, NY 10065 Attention: Leo Kirby | 210,960 | \$204,210.25 |
| Baker Brothers Life Sciences, L.P. 667 Madison Ave 21 st Floor New York, NY 10065 Attention: Leo Kirby | 2,052,033 | \$1,986,367.94 |
| 14159, L.P. 667 Madison Ave 21 st Floor New York, NY 10065 Attention: Leo Kirby | 57,946 | \$56,091.73 |
| Tang Capital Partners, LP 4401 Eastgate Mall San Diego, CA 92121 Attention: Kevin Tang | 1,586,481 | \$1,535,713.61 |
| Boxer Capital, LLC 445 Marine View Ave, Suite 100 Del Mar, CA 92014 Attention: Christopher Fuglesang | 664,108 | \$642,856.54 |
| Deerfield Special Situations Fund International, Ltd. 780 3 rd Ave. 37 th Floor New York, NY 10017 Attention: Darren Levine | 211,850 | \$205,070.80 |
| Deerfield Special Situations Fund, LP 780 3 rd Ave 37 th Floor New York, NY 10017 Attention: Darren Levine | 120,203 | \$116,356.50 |

REGISTRATION RIGHTS AGREEMENT

This Registration Rights Agreement (this “Agreement”) is made and entered into as of October 22, 2009, by and among A.P. Pharma, Inc., a Delaware corporation (the “Company”), and the investors signatory hereto (each a “Purchaser” and collectively, the “Purchasers”).

This Agreement is made pursuant to the Securities Purchase Agreement, dated as of October 19, 2009, among the Company and the Purchasers (the “Purchase Agreement”).

NOW, THEREFORE, IN CONSIDERATION of the mutual covenants contained in this Agreement, and for other good and valuable consideration the receipt and adequacy of which are hereby acknowledged, the Company and the Purchasers agree as follows:

1. Definitions. Capitalized terms used and not otherwise defined herein that are defined in the Purchase Agreement shall have the meanings given such terms in the Purchase Agreement. As used in this Agreement, the following terms shall have the respective meanings set forth in this Section 1:

“Advice” shall have the meaning set forth in Section 7(c).

“Closing” shall have the meaning set forth in the Purchase Agreement.

“Common Stock” means the common stock of the Company, par value \$0.01 per share, and any securities into which such common stock may hereafter be reclassified.

“Commission” means the Securities and Exchange Commission.

“Effective Date” means the date that the Registration Statement filed pursuant to Section 2(a) is first declared effective by the Commission.

“Effectiveness Date” means: (a) with respect to the Initial Registration, the 90th calendar day following the Closing (or the 120th calendar day following the Closing in the event the initial Registration Statement is reviewed by the Commission), (b) with respect to registration of the Registrable Securities issued in the Second Closing, the 90th calendar day following the Second Closing (or the 120th calendar day following such Closing, in the event the Registration Statement is reviewed by the Commission) (c) with respect to any additional Registration Statements that may be required pursuant to Section 2 hereof, the 90th calendar day following the date on which the Company first knows, or reasonably should have known, that such additional Registration Statement is required under such Section (or the 120th calendar day following the Closing in the event such Registration Statement is reviewed by the Commission); *provided, however*, that if the Company is notified by the Commission that a Registration Statement will not be reviewed or is no longer subject to further review and comments, the Effectiveness Date as to such Registration Statement shall be the 5th Trading Day following the date on which the Company is so notified if such date precedes the dates otherwise required above; *provided, further*, that if the Effectiveness Date falls on a Saturday, Sunday or other day that the Commission is closed for business, the Effectiveness Date shall be extended to the next business day on which the Commission is open for business.

“Effectiveness Period” shall have the meaning set forth in Section 2(a).

“Event” shall have the meaning set forth in Section 2(c).

“Event Date” shall have the meaning set forth in Section 2(c).

“Exchange Act” means the Securities Exchange Act of 1934, as amended.

“Filing Date” means: (a) with respect to the Initial Registration Statement required to be filed to cover the resale by the Holders of the Registrable Securities, the 30th calendar day following the Closing, (b) with respect to the Registration Statement required to be filed to cover the resale by the Holders of the Registrable Securities issued in the Second Closing, the 30th calendar day following the Second Closing and (c) with respect to any additional Registration Statements that may be required pursuant to Section 2 hereof, the 30th calendar day following the date on which the Company first knows, or reasonably should have known, that such additional Registration Statement is required under such Section.

“Holder” or “Holders” means the holder or holders, as the case may be, from time to time of Registrable Securities.

“Indemnified Party” shall have the meaning set forth in Section 6(c).

“Indemnifying Party” shall have the meaning set forth in Section 6(c).

“Initial Registration Statement” means the initial Registration Statement required to be filed to cover the resale by the Holders of the Registrable Securities pursuant to Section 2(a).

“Losses” shall have the meaning set forth in Section 6(a).

“Person” means an individual or corporation, partnership, trust, incorporated or unincorporated association, joint venture, limited liability company, joint stock company, government (or an agency or subdivision thereof) or other entity of any kind.

“Proceeding” means an action, claim, suit, investigation or proceeding (including, without limitation, an investigation or partial proceeding, such as a deposition), whether commenced or threatened.

“Prospectus” means the prospectus included in a Registration Statement (including, without limitation, a prospectus that includes any information previously omitted from a prospectus filed as part of an effective registration statement in reliance upon Rule 430A or Rule 430B promulgated under the Securities Act), as amended or supplemented by any prospectus supplement, with respect to the terms of the offering of any portion of the Registrable Securities covered by a Registration Statement, and all other amendments and supplements to the Prospectus, including post-effective amendments, and all material incorporated by reference or deemed to be incorporated by reference in such Prospectus.

“Reduction Securities” shall have the meaning set forth in Section 2(b).

“Registrable Securities” means (i) the Shares issued pursuant to the Purchase Agreement, (ii) the Underlying Shares issuable upon exercise of the Warrants issued pursuant to the Purchase Agreement and (iii) any other shares of Common Stock issued as (or issuable upon conversion or exercise of any warrant, right or other security which is issued as) a dividend or other distribution with respect to, in exchange for or in replacement of the Shares or the Underlying Shares.

“Registration Statement” means each of the following: (i) an initial registration statement which is required to register the resale of the Registrable Securities, and (ii) each additional registration statement, if any, contemplated by Section 2, and including, in each case, the Prospectus, amendments and supplements to each such registration statement or Prospectus, including pre- and post-effective amendments, all exhibits thereto, and all material incorporated by reference or deemed to be incorporated by reference in such registration statement.

“Rule 144” means Rule 144 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

“Rule 415” means Rule 415 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

“Rule 424” means Rule 424 promulgated by the Commission pursuant to the Securities Act, as such Rule may be amended from time to time, or any similar rule or regulation hereafter adopted by the Commission having substantially the same effect as such Rule.

“Securities Act” means the Securities Act of 1933, as amended.

“Shares” shall have the meaning set forth in the Purchase Agreement.

“Trading Day” means any day on which the Common Stock is traded on the Principal Market (as defined in the Purchase Agreement), or, if the Principal Market is not the principal trading market for the Common Stock, then on the principal securities exchange or securities market on which the Common Stock is then traded.

“Transaction Documents” shall have the meaning set forth in the Purchase Agreement.

“Underlying Shares” shall have the meaning set forth in the Purchase Agreement.

“Warrants” shall have the meaning set forth in the Purchase Agreement.

2. Registration.

(a) On or prior to each Filing Date, the Company shall prepare and file with the Commission a Registration Statement covering the resale of all Registrable Securities not already covered by an existing and effective Registration Statement (except as provided in Section 2(b) and Section 2(d)) for an offering to be made on a continuous basis pursuant to Rule 415. The Registration Statement shall be on Form S-3 (except if the Company is not then eligible to register for resale the Registrable Securities on Form S-3, in which case such registration shall be on another appropriate form for such purpose) and shall contain (except if otherwise required pursuant to written comments received from the Commission upon a review of such Registration Statement) the “Plan of Distribution” in substantially the form attached hereto as Annex A. The Company shall use its best efforts to cause each Registration Statement to be declared effective under the Securities Act as soon as possible but, in any event, no later than the Effectiveness Date for such Registration Statement, and shall use its best efforts to keep the Registration Statement continuously effective under the Securities Act until the date on which all Registrable Securities under such Registration are available for sale under Rule 144(b) (or any successor provision thereto) without volume limitation (the “Effectiveness Period”). It is agreed and understood that the Company shall, from time to time, be obligated to file one or more additional Registration Statements to cover any Registrable Securities which are not registered for resale pursuant to a pre-existing Registration Statement.

(b) Notwithstanding anything contained herein to the contrary, including the fact that such Registrable Securities may be registered pursuant to the Registration Statement referred to in Section 2(d) below, in the event that the Commission limits the amount of Registrable Securities that may be included and sold by Holders in any Registration Statement, including the Initial Registration Statement, pursuant to Rule 415 or any other basis, the Company may reduce the number of Registrable Securities included in such Registration Statement on behalf of the Holders (in case of an exclusion as to a portion of such Registrable Securities, such portion shall be allocated pro rata among such Holders first in proportion to the respective numbers of Registrable Securities represented by Shares requested to be registered by each such Holder over the total amount of Registrable Securities represented by Shares, and second in proportion to the respective numbers of Registrable Securities represented by Underlying Shares requested to be registered by each such Holder over the total amount of Registrable Securities represented by Underlying Shares) (such Registrable Securities, the “Reduction Securities”). In such event the Company shall give the Holders prompt notice of the number of such Reduction Securities and the Company will not be liable for any liquidated damages under Section 2(c), or otherwise under this Agreement, in connection with the Reduction Securities. The Company shall use its best efforts at the first opportunity that is permitted by the Commission to register for resale the Reduction Securities. Such new Registration Statement shall be on Form S-3 (except if the Company is not then eligible to register for resale the Reduction Securities on Form S-3, in which case such registration shall be on another appropriate form for such purpose) and shall contain (except if otherwise required pursuant to written comments received from the Commission upon a review of such Registration Statement) the “Plan of Distribution” in substantially the form attached hereto as Annex A. The Company shall use its best efforts to cause each such Registration Statement to be declared effective under the Securities Act as soon as possible but, in any event, no later than the Effectiveness Date for such Registration Statement, and shall use its best efforts to keep such Registration Statement continuously effective under the Securities Act during the entire Effectiveness Period.

(c) If: (i) a Registration Statement is not filed on or prior to its Filing Date, (ii) a Registration Statement is not declared effective by the Commission on or prior to its required Effectiveness Date, or (iii) after its Effective Date, such Registration Statement ceases for any reason (including without limitation by reason of a stop order or the Company's failure to update the Registration Statement) to be effective and available to the Holders as to all Registrable Securities to which it is required to cover at any time prior to the expiration of its Effectiveness Period for an aggregate of more than 30 consecutive Trading Days or an aggregate of 60 Trading Days (which need not be consecutive) in any given 360-day period, (any such failure or breach being referred to as an "Event," and for purposes of clauses (i) or (ii) the date on which such Event occurs, and for purposes of clause (iii) the date on which such 30 consecutive or 60 Trading Day-period (as applicable) is exceeded, being referred to as the "Event Date"), then, in addition to any other rights available to the Holders, on each monthly anniversary of each such Event Date thereof (if the applicable Event shall not have been cured by such date) until the applicable Event is cured, the Company shall pay each Holder an amount in cash, as partial liquidated damages and not as a penalty, equal to 1% of the aggregate purchase price paid by such Holder pursuant to the Purchase Agreement for its Registrable Securities then held; provided, that all periods shall be tolled, with respect to a Holder, by the number of Trading Days during which such Holder fails to provide the Company with information regarding such Holder which was reasonably requested by the Company in order to effect the registration of such Holder's Registrable Securities pursuant to Section 7(e) hereof. It shall be a condition precedent to the obligations of the Company to pay any liquidated damages pursuant to this Section 2 with respect to the Registrable Securities of any Holder that such Holder shall furnish to the Company such information regarding itself and the Registrable Securities held by it. The partial liquidated damages pursuant to the terms hereof shall apply on a pro rata basis for any portion of a month prior to the cure of an Event. Notwithstanding the foregoing, the maximum payment to a Holder associated with all Events in the aggregate shall not exceed (i) in any 30-day period following an Event Date, an aggregate of 1% of the aggregate purchase price paid by such Holder pursuant to the Purchase Agreement for its Registrable Securities then held and (ii) 8% of the aggregate purchase price paid by such Holder pursuant to the Purchase Agreement for its Registrable Securities then held.

3. Registration Procedures

In connection with the Company's registration obligations hereunder, the Company shall:

(a) Not less than five Trading Days prior to the filing of a Registration Statement or any related Prospectus or any amendment or supplement thereto, the Company shall furnish to the Holders copies of all such documents proposed to be filed (other than those incorporated by reference). Notwithstanding the foregoing, the Company shall not be required to furnish to the Holders any prospectus supplement being prepared and filed solely to name new or additional selling securityholders unless such Holders are named in such prospectus supplement. In addition, in the event that any Registration Statement is on Form S-1 (or other form which does not permit incorporation by reference), the Company shall not be required to furnish to the Holders any prospectus supplement containing information included in a report or proxy statement filed under the Exchange Act that would be incorporated by reference in such Registration Statement if such Registration Statement were on Form S-3 (or other form which permits incorporation by reference). The Company shall duly consider any comments made by Holders and received by the Company not later than two Trading Days prior to the filing of the Registration Statement, but shall not be required to accept any such comments to which it reasonably objects in good faith.

(b) (i) Prepare and file with the Commission such amendments, including post-effective amendments and supplements, to each Registration Statement and the Prospectus used in connection therewith as may be necessary to keep such Registration Statement continuously effective as to the applicable Registrable Securities for its Effectiveness Period and prepare and file with the Commission such additional Registration Statements in order to register for resale under the Securities Act all of the Registrable Securities; (ii) cause the related Prospectus to be amended or supplemented by any required Prospectus supplement, and as so supplemented or amended to be filed pursuant to Rule 424; (iii) respond as promptly as reasonably possible to any comments received from the Commission with respect to each Registration Statement or any amendment thereto and, as promptly as reasonably possible provide the Holders true and complete copies of all correspondence from and to the Commission relating to such Registration Statement that pertains to the Holders as Selling Stockholders but not any comments that would result in the disclosure to the Holders of material and non-public information concerning the Company; and (iv) comply in all material respects with the provisions of the Securities Act and the Exchange Act with respect to the Registration Statements and the disposition of all Registrable Securities covered by each Registration Statement.

(c) Notify the Holders as promptly as reasonably possible (and, in the case of (i)(A) below, not less than three Trading Days prior to such filing) and (if requested by any such Person) confirm such notice in writing no later than one Trading Day following the day: (i)(A) when a Prospectus or any prospectus supplement (but only to the extent notice is required under Section 3(a) above) or post-effective amendment to a Registration Statement is proposed to be filed; (B) when the Commission notifies the Company whether there will be a “review” of such Registration Statement and whenever the Commission comments in writing on such Registration Statement (in which case the Company shall provide true and complete copies thereof and all written responses thereto to each of the Holders that pertain to the Holders as a Selling Stockholder or to the Plan of Distribution, but not information which the Company believes would constitute material and non-public information); and (C) with respect to each Registration Statement or any post-effective amendment, when the same has been declared effective; (ii) of any request by the Commission or any other Federal or state governmental authority for amendments or supplements to a Registration Statement or Prospectus or for additional information that pertains to the Holders as Selling Stockholders or the Plan of Distribution; (iii) of the issuance by the Commission of any stop order suspending the effectiveness of a Registration Statement covering any or all of the Registrable Securities or the initiation of any Proceedings for that purpose; (iv) of the receipt by the Company of any notification with respect to the suspension of the qualification or exemption from qualification of any of the Registrable Securities for sale in any jurisdiction, or the initiation or threatening of any Proceeding for such purpose; (v) of the occurrence of any event or passage of time that makes the financial statements included or incorporated by reference in a Registration Statement ineligible for inclusion or incorporation by reference therein or any statement made in such Registration Statement or Prospectus or any document incorporated or deemed to be incorporated therein by reference untrue in any material respect or that requires any revisions to such Registration Statement, Prospectus or other documents so that, in the case of such Registration Statement or the Prospectus, as the case may be, it will not contain any untrue statement of a material fact or omit to state any material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading; and (vi) of the occurrence or existence of any pending corporate development with respect to the Company that the Company believes may be material and that, in the determination of the Company, makes it not in the best interest of the Company to allow continued availability of a Registration Statement or Prospectus; provided, that any and all of such information shall remain confidential to each Holder until such information otherwise becomes public, unless disclosure by a Holder is required by law; provided, further, that notwithstanding each Holder’s agreement to keep such information confidential, each such Holder makes no acknowledgement that any such information is material, non-public information.

(d) Use its best efforts to avoid the issuance of, or, if issued, obtain the withdrawal of (i) any order suspending the effectiveness of a Registration Statement, or (ii) any suspension of the qualification (or exemption from qualification) of any of the Registrable Securities for sale in any jurisdiction, at the earliest practicable moment.

(e) Furnish to each Holder, without charge, at least one conformed copy of each Registration Statement and each amendment thereto and all exhibits to the extent reasonably requested by such Person (including those previously furnished or incorporated by reference) promptly after the filing of such documents with the Commission; provided, that the Company shall have no obligation to provide any document pursuant to this clause that is available on the EDGAR system.

(f) Promptly deliver to each Holder, without charge, as many copies of each Prospectus or Prospectuses (including each form of prospectus) and each amendment or supplement thereto as such Persons may reasonably request. Subject to Section 6(d) hereof, the Company hereby consents to the use of such Prospectus and each amendment or supplement thereto by each of the selling Holders in connection with the offering and sale of the Registrable Securities covered by such Prospectus and any amendment or supplement thereto.

(g) Prior to any public offering of Registrable Securities, use its best efforts to register or qualify or cooperate with the selling Holders in connection with the registration or qualification (or exemption from such registration or qualification) of such Registrable Securities for offer and sale under the securities or Blue Sky laws of those jurisdictions within the United States as any Holder reasonably requests in writing to keep each such registration or qualification (or exemption therefrom) effective during the Effectiveness Period and to do any and all other acts or things necessary or advisable to enable the disposition in such jurisdictions of the Registrable Securities covered by the Registration Statements; provided, that the Company shall not be required to qualify generally to do business in any jurisdiction where it is not then so qualified or subject the Company to any material tax in any such jurisdiction where it is not then so subject.

(h) Cooperate with the Holders to facilitate the timely preparation and delivery of certificates representing Registrable Securities to be delivered to a transferee pursuant to the Registration Statements, which certificates shall be free, to the extent permitted by the Purchase Agreement, of all restrictive legends, and to enable such Registrable Securities to be in such denominations and registered in such names as any such Holders may request.

(i) Upon the occurrence of any event contemplated by Section 3(c)(v), as promptly as reasonably possible, prepare a supplement or amendment, including a post-effective amendment, to the affected Registration Statements or a supplement to the related Prospectus or any document incorporated or deemed to be incorporated therein by reference, and file any other required document so that, as thereafter delivered, no Registration Statement nor any Prospectus will contain an untrue statement of a material fact or omit to state a material fact required to be stated therein or necessary to make the statements therein, in light of the circumstances under which they were made, not misleading.

(j) The Company may require each selling Holder to furnish to the Company a certified statement as to the number of shares of Common Stock beneficially owned by such Holder and any Affiliate thereof, and, if required by the Commission, the natural persons thereof that have voting and dispositive control over the shares.

4. Holder's Obligations. Each Holder agrees, by acquisition of the Registrable Securities, that no Holder shall be entitled to sell any of such Registrable Securities pursuant to a Registration Statement or to receive a Prospectus relating thereto, unless such Holder has furnished the Company with such information set forth in the Investor Questionnaire and Selling Stockholder Questionnaire pursuant to the Purchase Agreement. Any sale of any Registrable Securities by any Holder shall constitute a representation and warranty by such Holder that the information relating to such Holder is as set forth in the Prospectus delivered by such Holder in connection with such disposition, that such Prospectus does not as of the time of such sale contain any untrue statement of a material fact relating to or provided by such Holder and that such Prospectus does not as of the time of such sale omit to state any material fact relating to or provided by such Holder necessary to make the statements in such Prospectus, in the light of the circumstances under which they were made, not misleading.

5. Registration Expenses. All fees and expenses incident to the Company's performance of or compliance with its obligations under this Agreement (excluding any underwriting discounts and selling commissions and all legal fees and expenses of legal counsel for any Holder) shall be borne by the Company whether or not any Registrable Securities are sold pursuant to a Registration Statement. The fees and expenses referred to in the foregoing sentence shall include, without limitation, (i) all registration and filing fees (including, without limitation, fees and expenses (A) with respect to filings required to be made with the Principal Market on which the Common Stock is then listed for trading, and (B) in compliance with applicable state securities or Blue Sky laws), (ii) printing expenses (including, without limitation, expenses of printing certificates for Registrable Securities and of printing prospectuses if the printing of prospectuses is reasonably requested by the holders of a majority of the Registrable Securities included in the Registration Statement), (iii) messenger, telephone and delivery expenses, (iv) reasonable fees and disbursements of counsel for the Company, (v) Securities Act liability insurance, if the Company so desires such insurance, and (vi) reasonable fees and expenses of all other Persons retained by the Company in connection with the consummation of the transactions contemplated by this Agreement. In addition, the Company shall be responsible for all of its internal expenses incurred in connection with the consummation of the transactions contemplated by this Agreement (including, without limitation, all salaries and expenses of its officers and employees performing legal or accounting duties), the expense of any annual audit and the fees and expenses incurred in connection with the listing of the Registrable Securities on any securities exchange as required hereunder. In no event shall the Company be responsible for any broker or similar commissions of any Holder or, except to the extent provided for in the Transaction Documents, any legal fees or other costs of the Holders.

6. Indemnification.

(a) Indemnification by the Company. The Company shall, notwithstanding any termination of this Agreement, indemnify and hold harmless each Holder, the officers, directors, agents, partners, members, stockholders and employees of each Holder, each Person who controls any such Holder (within the meaning of Section 15 of the Securities Act or Section 20 of the Exchange Act) and the officers, directors, agents, partners, members, stockholders and employees of each such controlling Person, to the fullest extent permitted by applicable law, from and against any and all losses, claims, damages, liabilities, costs (including, without limitation, reasonable costs of preparation and reasonable attorneys' fees) and expenses (collectively, "Losses"), as incurred, arising out of or relating to any untrue or alleged untrue statement of a material fact contained in any Registration Statement, any Prospectus or any form of prospectus or in any amendment or supplement thereto (it being understood

that the Holder has approved Annex A hereto for this purpose), or arising out of or relating to any omission or alleged omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus or form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading, except to the extent, but only to the extent, that (1) such untrue statements, alleged untrue statements, omissions or alleged omissions are based solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such Holder or such Holder's proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in the Registration Statement, such Prospectus or such form of Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (2) in the case of an occurrence of an event of the type specified in Section 3(c)(ii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated or defective and prior to the receipt by such Holder of an Advice (as defined below) or an amended or supplemented Prospectus, but only if and to the extent that following the receipt of the Advice or the amended or supplemented Prospectus the misstatement or omission giving rise to such Loss would have been

corrected. The Company shall notify the Holders promptly of the institution, threat or assertion of any Proceeding of which the Company is aware in connection with the transactions contemplated by this Agreement.

(b) Indemnification by Holders. Each Holder shall, notwithstanding any termination of this Agreement, severally and not jointly, indemnify and hold harmless the Company, its directors, officers, agents and employees, each Person who controls the Company (within the meaning of Section 15 of the Securities Act and Section 20 of the Exchange Act), and the directors, officers, agents, partners, members, stockholders or employees of such controlling Persons, to the fullest extent permitted by applicable law, from and against all Losses, as incurred, arising solely out of or based solely upon: (x) for so long as the Company is not a “Seasoned Issuer” and the prospectus delivery requirements of the Securities Act apply to sales by such Holder, such Holder’s failure to comply with the prospectus delivery requirements of the Securities Act or (y) any untrue statement of a material fact contained in any Registration Statement, any Prospectus, or any form of prospectus, or in any amendment or supplement thereto, or arising solely out of or based solely upon any omission of a material fact required to be stated therein or necessary to make the statements therein (in the case of any Prospectus, or any form of prospectus or supplement thereto, in light of the circumstances under which they were made) not misleading to the extent, but only to the extent that, (1) such untrue statements or omissions are based solely upon information regarding such Holder furnished in writing to the Company by such Holder expressly for use therein, or to the extent that such information relates to such Holder or such Holder’s proposed method of distribution of Registrable Securities and was reviewed and expressly approved in writing by such Holder expressly for use in the Registration Statement, such Prospectus or such form of Prospectus or in any amendment or supplement thereto (it being understood that the Holder has approved Annex A hereto for this purpose) or (2) in the case of an occurrence of an event of the type specified in Section 3(c)(ii)-(v), the use by such Holder of an outdated or defective Prospectus after the Company has notified such Holder in writing that the Prospectus is outdated or defective and prior to the receipt by such Holder of an Advice or an amended or supplemented Prospectus, but only if and to the extent that following the receipt of the Advice or the amended or supplemented Prospectus the misstatement or omission giving rise to such Loss would have been corrected. In no event shall the liability of any selling Holder hereunder be greater in amount than the dollar amount of the net proceeds received by such Holder upon the sale of the Registrable Securities giving rise to such indemnification obligation.

(c) Conduct of Indemnification Proceedings. If any Proceeding shall be brought or asserted against any Person entitled to indemnity hereunder (an "Indemnified Party"), such Indemnified Party shall promptly notify the Person from whom indemnity is sought (the "Indemnifying Party") in writing, and the Indemnifying Party shall have the right to assume the defense thereof, including the employment of counsel reasonably satisfactory to the Indemnified Party and the payment of all reasonable fees and expenses incurred in connection with defense thereof; provided, that the failure of any Indemnified Party to give such notice shall not relieve the Indemnifying Party of its obligations or liabilities pursuant to this Agreement, except (and only) to the extent that it shall be finally determined by a court of competent jurisdiction (which determination is not subject to appeal or further review) that such failure shall have proximately and materially adversely prejudiced the Indemnifying Party.

An Indemnified Party shall have the right to employ separate counsel in any such Proceeding and to participate in the defense thereof, but the fees and expenses of such counsel shall be at the expense of such Indemnified Party or Parties unless: (1) the Indemnifying Party has agreed in writing to pay such fees and expenses; (2) the Indemnifying Party shall have failed promptly to assume the defense of such Proceeding and to employ counsel reasonably satisfactory to such Indemnified Party in any such Proceeding; or (3) the named parties to any such Proceeding (including any impleaded parties) include both such Indemnified Party and the Indemnifying Party, and such Indemnified Party shall have been advised by counsel that a conflict of interest is likely to exist if the same counsel were to represent such Indemnified Party and the Indemnifying Party (in which case, if such Indemnified Party notifies the Indemnifying Party in writing that it elects to employ separate counsel at the expense of the Indemnifying Party, the Indemnifying Party shall not have the right to assume the defense thereof and such counsel shall be at the expense of the Indemnifying Party); provided, that the Indemnifying Party shall not be liable for the fees and expenses of more than one separate firm of attorneys at any time for all Indemnified Parties pursuant to this Section 6(c). The Indemnifying Party shall not be liable for any settlement of any such Proceeding effected without its written consent, which consent shall not be unreasonably withheld, delayed or conditioned. No Indemnifying Party shall, without the prior written consent of the Indemnified Party, effect any settlement of any pending Proceeding in respect of which any Indemnified Party is a party, unless such settlement includes an unconditional release of such Indemnified Party from all liability on claims that are the subject matter of such Proceeding.

All fees and expenses of the Indemnified Party (including reasonable fees and expenses to the extent incurred in connection with investigating or preparing to defend such Proceeding in a manner not inconsistent with this Section) shall be paid to the Indemnified Party, as incurred, within ten Trading Days of written notice thereof to the Indemnifying Party (regardless of whether it is ultimately determined that an Indemnified Party is not entitled to indemnification hereunder; provided, that the Indemnifying Party may require such Indemnified Party to undertake to reimburse all such fees and expenses to the extent it is finally judicially determined that such Indemnified Party is not entitled to indemnification hereunder).

(d) Contribution. If a claim for indemnification under Section 6(a) or 6(b) is unavailable to an Indemnified Party (by reason of public policy or otherwise), then each Indemnifying Party, in lieu of indemnifying such Indemnified Party, shall contribute to the amount paid or payable by such Indemnified Party as a result of such Losses, in such proportion as is appropriate to reflect the relative fault of the Indemnifying Party and Indemnified Party in connection with the actions, statements or omissions that resulted in such Losses as well as any other relevant equitable considerations. The

relative fault of such Indemnifying Party and Indemnified Party shall be determined by reference to, among other things, whether any action in question, including any untrue or alleged untrue statement of a material fact or omission or alleged omission of a material fact, has been taken or made by, or relates to information supplied by, such Indemnifying Party or Indemnified Party, and the parties' relative intent, knowledge, access to information and opportunity to correct or prevent such action, statement or omission. The amount paid or payable by a party as a result of any Losses shall be deemed to include, subject to the limitations set forth in Section 6(c), any reasonable attorneys' or other reasonable fees or expenses incurred by such party in connection with any Proceeding to the extent such party would have been indemnified for such fees or expenses if the indemnification provided for in this Section was available to such party in accordance with its terms.

The parties hereto agree that it would not be just and equitable if contribution pursuant to this Section 6(d) were determined by pro rata allocation or by any other method of allocation that does not take into account the equitable considerations referred to in the immediately preceding paragraph. Notwithstanding the provisions of this Section 6(d), no Holder shall be required to contribute, in the aggregate, any amount in excess of the amount by which the proceeds actually received by such Holder from the sale of the Registrable Securities subject to the Proceeding exceeds the amount of any damages that such Holder has otherwise been required to pay by reason of such untrue or alleged untrue statement or omission or alleged omission. No person guilty of fraudulent misrepresentation (within the meaning of Section 11(f) of the Securities Act) shall be entitled to contribution from any person who was not guilty of such fraudulent misrepresentation.

The indemnity and contribution agreements contained in this Section 6 are in addition to any liability that the Indemnifying Parties may have to the Indemnified Parties and are not in diminution or limitation of the indemnification provisions under the Purchase Agreement.

7. Miscellaneous.

(a) Remedies. In the event of a breach by the Company or by a Holder, of any of their obligations under this Agreement, each Holder or the Company, as the case may be, in addition to being entitled to exercise all rights granted by law and under this Agreement, including recovery of damages, will be entitled to specific performance of its rights under this Agreement. The Company and each Holder agree that monetary damages would not provide adequate compensation for any losses incurred by reason of a breach by it of any of the provisions of this Agreement and hereby further agree that, in the event of any action for specific performance in respect of such breach, it shall waive the defense that a remedy at law would be adequate.

(b) Compliance. Each Holder covenants and agrees that it will comply with the prospectus delivery requirements of the Securities Act as applicable to it in connection with sales of Registrable Securities pursuant to the Registration Statement.

(c) Discontinued Disposition. Each Holder agrees by its acquisition of such Registrable Securities that, upon receipt of a notice from the Company of the occurrence of any event of the kind described in Section 3(c), such Holder will forthwith discontinue disposition of such Registrable Securities under the Registration Statement until such Holder's receipt of the copies of the supplemented Prospectus and/or amended Registration Statement or until it is advised in writing (the "Advice") by the Company that the use of the applicable Prospectus may be resumed, and, in either case, has received copies of any additional or supplemental filings that are incorporated or deemed to be incorporated by reference in such Prospectus or Registration Statement. The Company may provide appropriate stop orders to enforce the provisions of this paragraph.

(d) Furnishing of Information. Each Holder shall furnish in writing to the Company such information regarding itself, the Registrable Securities held by it and the intended method of disposition of the Registrable Securities held by it, as shall be reasonably requested by the Company to effect the registration of such Registrable Securities and shall execute such documents in connection with such registration as the Company may reasonably request.

(e) Piggy-Back Registrations. If at any time during the Effectiveness Period, except as contemplated by Section 2(b) or Section 2(d) hereof, there is not an effective Registration Statement covering all of the Registrable Securities and the Company shall determine to prepare and file with the Commission a registration statement relating to an offering for its own account or the account of others under the Securities Act of any of its equity securities, other than on Form S-4 or Form S-8 (each as promulgated under the Securities Act) or their then equivalents relating to equity securities to be issued solely in connection with any acquisition of any entity or business or equity securities issuable in connection with the stock option or other employee benefit plans, then the Company shall send to each Holder a written notice of such determination and, if within 15 calendar days after the date of such notice, any such Holder shall so request in writing, the Company shall include in such registration statement all or any part of such Registrable Securities such Holder requests to be registered; provided, however, that the Company shall not be required to register any Registrable Securities pursuant to this Section 7(e) that are eligible for resale pursuant to Rule 144 promulgated under the Securities Act without volume limitation or that are the subject of a then effective Registration Statement.

(f) Amendments and Waivers. No provision of this Agreement may be waived or amended except in a written instrument signed by the Company and the Holder or Holders (as applicable) of no less than eighty percent of the then outstanding Registrable Securities. The Company shall provide prior notice to all Holders of any proposed waiver or amendment. No waiver of any default with respect to any provision, condition or requirement of this Agreement shall be deemed to be a continuing waiver in the future or a waiver of any subsequent default or a waiver of any other provision, condition or requirement hereof, nor shall any delay or omission of either party to exercise any right hereunder in any manner impair the exercise of any such right.

(g) Notices. All notices, requests, consents and other communications hereunder shall be in writing, shall be sent by confirmed facsimile or electronic mail, or mailed by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, and shall be deemed given when so sent in the case of facsimile or electronic mail transmission, or when so received in the case of mail or courier, and addressed as follows:

| | |
|--------------------|---|
| If to the Company: | A.P. Pharma, Inc. 123 Saginaw Drive Redwood City, California 94063 Attention: Chief Financial Officer Facsimile: (650) 365-6490 E-Mail: jwhelan@appharma.com |
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|-----------------|---|
| With a copy to: | Latham & Watkins LLP 140 Scott Drive Menlo Park, California 94025 Attention: Alan C. Mendelson Facsimile: (650) 463-4693 E-Mail: alan.mendelson@lw.com |
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|--------------------|--|
| If to a Purchaser: | To the address set forth under such Purchaser's name on the signature pages hereto |
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| | |
|---|--|
| If to any other Person who is then the registered Holder: | To the address of such Holder as it appears in the stock transfer books of the Company |
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or such other address as may be designated in writing hereafter, in the same manner, by such Person.

(h) Successors and Assigns. This Agreement shall inure to the benefit of and be binding upon the successors and permitted assigns of each of the parties and shall inure to the benefit of each Holder. Each Holder may assign its respective rights hereunder in the manner and to the Persons as permitted under the Purchase Agreement.

(i) Execution and Counterparts. This Agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original and, all of which taken together shall constitute one and the same Agreement. In the event that any signature is delivered by facsimile transmission, such signature shall create a valid binding obligation of the party executing (or on whose behalf such signature is executed) the same with the same force and effect as if such facsimile signature were the original thereof.

(j) Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of New York as applied to contracts entered into and performed entirely in New York by New York residents.

(k) Cumulative Remedies. The remedies provided herein are cumulative and not exclusive of any remedies provided by law.

(l) Severability. If any term, provision, covenant or restriction of this Agreement is held by a court of competent jurisdiction to be invalid, illegal, void or unenforceable, the remainder of the terms, provisions, covenants and restrictions set forth herein shall remain in full force and effect and shall in no way be affected, impaired or invalidated, and the parties hereto shall use their best efforts to find and employ an alternative means to achieve the same or substantially the same result as that contemplated by such term, provision, covenant or restriction. It is hereby stipulated and declared to be the intention of the parties that they would have executed the remaining terms, provisions, covenants and restrictions without including any of such that may be hereafter declared invalid, illegal, void or unenforceable.

(m) Use of Terms. The parties agree and acknowledge that when, in this Agreement, the Company is required to use its best efforts to perform any covenant under this Agreement, such requirement shall not obligate the Company, in the reasonable judgment of the disinterested members of its Board of Directors, to perform any act that will have a material adverse effect on the Company.

(n) Headings. The headings in this Agreement are for convenience of reference only and shall not limit or otherwise affect the meaning hereof.

(o) Independent Nature of Purchasers' Obligations and Rights. The obligations of each Purchaser hereunder is several and not joint with the obligations of any other Purchaser hereunder, and no Purchaser shall be responsible in any way for the performance of the obligations of any other Purchaser hereunder. The decision of each Purchaser to purchase Securities pursuant to the Transaction Documents has been made independently of any other Purchaser. Nothing contained herein or in any other agreement or document delivered at any closing, and no action taken by any Purchaser pursuant hereto or thereto, shall be deemed to constitute the Purchasers as a partnership, an association, a joint venture or any other kind of entity, or create a presumption that the Purchasers are in any way acting in concert with respect to such obligations or the transactions contemplated by this Agreement. Each Purchaser acknowledges that no other Purchaser has acted as agent for such Purchaser in connection with making its investment hereunder and that no Purchaser will be acting as agent of such Purchaser in connection with monitoring its investment in the Securities or enforcing its rights under the Transaction Documents. Each Purchaser shall be entitled to protect and enforce its rights, including without limitation the rights arising out of this Agreement, and it shall not be necessary for any other Purchaser to be joined as an additional party in any proceeding for such purpose.

IN WITNESS WHEREOF, the parties have executed this Registration Rights Agreement as of the date first written above.

A.P. PHARMA, INC.

By: /s/ Ronald J. Prentki

Name: Ronald J. Prentki

Title: President & CEO

PURCHASERS:

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| 667, L.P. /s/ Felix Baker By: Baker Biotech Capital, L.P. (general partner) By: Baker Biotech Capital (GP), LLC (general partner) By: Felix Baker, Ph.D., Managing Member | 667, L.P. /s/ Felix Baker By: Baker Biotech Capital, L.P. (general partner) By: Baker Biotech Capital (GP), LLC (general partner) By: Felix Baker, Ph.D., Managing Member |
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| BAKER BROTHERS LIFE SCIENCES, L.P. 14159, L.P. /s/ Felix Baker By: Baker Biotech Capital, L.P. (general partner) By: Baker Biotech Capital (GP), LLC (general partner) By: Felix Baker, Ph.D., Managing Member | 14159, L.P. /s/ Felix Baker By: Baker Biotech Capital, L.P. (general partner) By: Baker Biotech Capital (GP), LLC (general partner) By: Felix Baker, Ph.D., Managing Member |
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PURCHASERS:

TANG CAPITAL PARTNERS, L.P.

/s/ Kevin Tang

Name: Kevin Tang

Title: Managing Director

PURCHASERS:

BOXER CAPITAL, LLC

/s/ Chris Fuglesang

Name: Chris Fuglesang

Title: Member

PURCHASERS:

DEERFIELD SPECIAL SITUATIONS FUNDS INTERNATIONAL, LTD.

/s/ Darren Levine

Name: Darren Levine

Title: CFO

DEERFIELD SPECIAL SITUATIONS FUNDS, LP

/s/ Darren Levine

Name: Darren Levine

Title: CFO

ANNEX A

PLAN OF DISTRIBUTION

The selling stockholders and any of their pledgees, donees, transferees, assignees or other successors-in-interest may, from time to time, sell, transfer or otherwise dispose of any or all of their shares of common stock or interests in shares of common stock on any stock exchange, market or trading facility on which the shares are traded or in private transactions. These dispositions may be at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market price, at varying prices determined at the time of sale, or at negotiated prices. The selling stockholders may use one or more of the following methods when disposing of the shares or interests therein:

- ordinary brokerage transactions and transactions in which the broker-dealer solicits purchasers;
- block trades in which the broker-dealer will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction;
- through brokers, dealers or underwriters that may act solely as agents;
- purchases by a broker-dealer as principal and resale by the broker-dealer for its account;
- an exchange distribution in accordance with the rules of the applicable exchange;
- privately negotiated transactions;
- short sales;
- through the writing or settlement of options or other hedging transactions entered into after the effective date of the registration statement of which this prospectus is a part, whether through an options exchange or otherwise;
- broker-dealers may agree with the selling stockholders to sell a specified number of such shares at a stipulated price per share;
- a combination of any such methods of disposition; and
- any other method permitted pursuant to applicable law.

The selling stockholders may also sell shares under Rule 144 under the Securities Act of 1933, as amended (the “Securities Act”), if available, rather than under this prospectus.

Broker-dealers engaged by the selling stockholders may arrange for other broker-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling stockholders (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated. The selling stockholders do not expect these commissions and discounts to exceed what is customary in the types of transactions involved.

The selling stockholders may from time to time pledge or grant a security interest in some or all of the shares of common stock owned by them and, if they default in the performance of their secured obligations, the pledgees or secured parties may offer and sell shares of common stock from time to time under this prospectus, or under a supplement or amendment to this prospectus under Rule 424(b)(3) or other applicable provision of the Securities Act of 1933 amending the list of selling stockholders to include the pledgee, transferee or other successors in interest as selling stockholders under this prospectus.

Upon being notified in writing by a selling stockholder that any material arrangement has been entered into with a broker-dealer for the sale of common stock through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required, pursuant to Rule 424(b) under the Securities Act, disclosing (i) the name of each such selling stockholder and of the participating broker-dealer(s), (ii) the number of shares involved, (iii) the price at which such shares of common stock were sold, (iv) the commissions paid or discounts or concessions allowed to such broker-dealer(s), where applicable, (v) that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus, and (vi) other facts material to the transaction. In addition, upon being notified in writing by a selling stockholder that a donee or pledge intends to sell more than 500 shares of common stock, we will file a supplement to this prospectus if then required in accordance with applicable securities law.

The selling stockholders also may transfer the shares of common stock in other circumstances, in which case the transferees, pledgees or other successors in interest will be the selling beneficial owners for purposes of this prospectus.

In connection with the sale of the shares of common stock or interests in shares of common stock, the selling stockholders may enter into hedging transactions after the effective date of the registration statement of which this prospectus is a part with broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell shares of common stock short after the effective date of the registration statement of which this prospectus is a part and deliver these securities to close out their short positions, or loan or pledge the common stock to broker-dealers that in turn may sell these securities. The selling stockholders may also enter into option or other transactions after the effective date of the registration statement of which this prospectus is a part with broker-dealers or other financial institutions or the creation of one or more derivative securities which require the delivery to such broker-dealer or other financial institution of shares offered by this prospectus, which shares such broker-dealer or other financial institution may resell pursuant to this prospectus (as supplemented or amended to reflect such transaction).

The selling stockholders and any broker-dealers or agents that are involved in selling the shares may be deemed to be “underwriters” within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker-dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The maximum commission or discount to be received by any member of the Financial Industry Regulatory Authority (FINRA) or independent broker-dealer will not be greater than 8% of the initial gross proceeds from the sale of any security being sold.

We have advised the selling stockholders that they are required to comply with Regulation M promulgated under the Securities and Exchange Act during such time as they may be engaged in a distribution of the shares. The foregoing may affect the marketability of the common stock.

The aggregate proceeds to the selling securityholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts or commissions, if any. Each of the selling securityholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from this offering.

We are required to pay all fees and expenses incident to the registration of the shares. We have agreed to indemnify the selling stockholders against certain losses, claims, damages and liabilities, including liabilities under the Securities Act or otherwise.

We have agreed with the selling stockholders to keep the registration statement of which this prospectus constitutes a part effective until the earlier of (a) such time as all of the shares covered by this prospectus have been disposed of pursuant to and in accordance with the registration statement or (b) the date on which the shares of common stock covered by this prospectus may be sold by non-affiliates without any volume limitations pursuant to Rule 144 of the Securities Act.

THE SECURITIES EVIDENCED BY THIS CERTIFICATE HAVE NOT BEEN REGISTERED UNDER THE U.S. SECURITIES ACT OF 1933, AS AMENDED (THE "SECURITIES ACT"), OR ANY OTHER APPLICABLE SECURITIES LAWS AND HAVE BEEN ISSUED IN RELIANCE UPON AN EXEMPTION FROM THE REGISTRATION REQUIREMENTS OF THE SECURITIES ACT AND SUCH OTHER SECURITIES LAWS. NEITHER THIS SECURITY NOR ANY INTEREST OR PARTICIPATION HEREIN MAY BE REOFFERED, SOLD, ASSIGNED, TRANSFERRED, PLEDGED, ENCUMBERED, HYPOTHECATED OR OTHERWISE DISPOSED OF, EXCEPT PURSUANT TO AN EFFECTIVE REGISTRATION STATEMENT UNDER THE SECURITIES ACT OR PURSUANT TO A TRANSACTION WHICH IS EXEMPT FROM, OR NOT SUBJECT TO, SUCH REGISTRATION, IN EACH CASE IN ACCORDANCE WITH ALL APPLICABLE SECURITIES LAWS, AND IN THIS CERTIFICATE.

WARRANT NO. «Warrant No» NUMBER OF SHARES: «No of Shares»

DATE OF ISSUANCE: October 22, 2009 (subject to adjustment)

WARRANT TO PURCHASE SHARES
OF COMMON STOCK OF
A.P. PHARMA, INC.

This Warrant is issued to «Purchaser», or its registered assigns (including any successors or assigns, the "Purchaser"), pursuant to that certain Securities Purchase Agreement, dated as of October 19, 2009, between A.P. Pharma, Inc., a Delaware corporation (the "Company"), the Purchaser and certain other purchasers thereunder (the "Purchase Agreement") and is subject to the terms and conditions of the Purchase Agreement.

1. EXERCISE OF WARRANT.

(a) Subject to the terms and conditions herein set forth, upon surrender of this Warrant at the principal office of the Company and upon payment of the Warrant Price (as defined below) by wire transfer to the Company or cashier's check drawn on a United States bank made payable to the order of the Company, or exercise of the right to credit the Warrant Price against the fair market value of the Warrant Stock (as defined below) at the time of exercise (the "Net Exercise Right") pursuant to Section 1(b), the Purchaser is entitled to purchase from the Company, at any time after the date hereof and on or before 5:00 p.m. New York City time on January 7, 2015 (the "Expiration Date") (subject to earlier termination of this Warrant as set forth herein), up to «No of Shares» shares (as adjusted from time to time pursuant to the provisions of this Warrant) of Common Stock (as defined below) of the Company (the "Warrant Stock"), at a purchase price of \$0.88 per share (the "Warrant Price").

(b) Net Exercise Right. If the Company shall receive written notice from the Purchaser at the time of exercise of this Warrant that the holder elects to exercise the Net Exercise Right, the Company shall deliver to such holder (without payment by the Purchaser of any exercise price in cash) that number of fully paid and nonassessable shares of Common Stock, par value \$0.01 per share, of the Company ("Common Stock") equal to the quotient obtained by dividing (y) the value of this Warrant (or the specified portion thereof) on the date of exercise, which value shall be determined

by subtracting (1) the Aggregate Warrant Price (as defined below) of the Warrant Stock (or the specified portion thereof) immediately prior to the exercise of this Warrant from (2) the Aggregate Fair Market Value (as defined below) of the Warrant Stock (or the specified portion thereof) issuable upon exercise of this Warrant (or specified portion thereof) on the date of exercise by (z) the Fair Market Value (as defined below) of one share of Common Stock on the date of exercise. The “Fair Market Value” of a share of Common Stock shall mean the last reported sale price and, if there are no sales, the last reported bid price, of the Common Stock on the business day prior to the date of exercise as reported by the NASDAQ Capital Market or such other principal exchange or quotation system on which the Common Stock is then traded or, if the Common Stock is not publicly traded, the price determined in good faith by the Company’s Board of Directors. The “Aggregate Warrant Price” shall be determined by multiplying the number of shares of Warrant Stock by the Warrant Price of one share of Warrant Stock. The “Aggregate Fair Market Value” of the Warrant Stock shall be determined by multiplying the number of shares of Warrant Stock by the Fair Market Value of one share of Warrant Stock.

(c) Limitation on Exercise. Notwithstanding anything to the contrary contained herein, the number of shares of Warrant Stock that may be acquired by the Purchaser upon any exercise of this Warrant (or otherwise in respect hereof) shall be limited to the extent necessary to ensure that, following such exercise (or other issuance), the total number of shares of Common Stock then beneficially owned by the Purchaser and any other Persons whose beneficial ownership of Shares of Common Stock would be aggregated with the Purchaser’s for purposes of Section 13(d) of the Securities Exchange Act of 1934, as amended (the “Exchange Act”), does not exceed 9.999% 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). For such purposes, beneficial ownership shall be determined in accordance with Section 13(d) of the Exchange Act and the rules and regulations promulgated thereunder. Upon the written request of the Purchaser, the Company shall within three Business Days confirm orally and in writing to such Purchaser the number of Shares of Common Stock. This provision shall not restrict the number of shares of Common Stock which a Purchaser may receive or beneficially own in order to determine the amount of securities or other consideration that such Purchaser may receive in the event of a transaction contemplated in Section 2 of this Warrant.

2. TREATMENT OF WARRANT UPON A FUNDAMENTAL TRANSACTION. If, at any time while this Warrant is outstanding: (i) the Company effects any merger or consolidation of the Company with or into another person, in which the shareholders of the Company as of immediately prior to the transaction own less than a majority of the outstanding stock of the surviving entity; (ii) the Company effects any sale of all or substantially all of its assets in one or a series of related transactions; (iii) any tender offer or exchange offer (whether by the Company or another person) is completed pursuant to which holders of Common Stock are permitted to tender or exchange their shares for other securities, cash or property; or (iv) the Company effects any reclassification of the Common Stock or any compulsory share exchange pursuant to which the Common Stock is effectively converted into or exchanged for other securities, cash or property (each, a “Fundamental Transaction”), then the Purchaser shall have the right thereafter to receive, upon exercise of this Warrant, the same amount and kind of securities, cash or property as it would have been entitled to receive upon the occurrence of such Fundamental Transaction if it had been, immediately prior to such Fundamental Transaction, the holder of the number of Warrant Stock then issuable upon exercise in full of this Warrant (the

“Alternate Consideration”). The Company shall not effect any such Fundamental Transaction unless prior to or simultaneously with the consummation thereof, any successor to the Company, surviving entity or the corporation purchasing or otherwise acquiring such assets or other appropriate corporation or entity shall assume the obligation to deliver to the Purchaser, such Alternate Consideration as, in accordance with the foregoing provisions, the Purchaser may be entitled to purchase, and the other obligations under this Warrant. The provisions of this Section 2 shall similarly apply to subsequent transactions analogous to a Fundamental Transaction. Prior to the consummation of any such Fundamental Transaction in (i) or (ii) above, the Company shall obtain any necessary stockholder approval as required under the rules and regulations promulgated by the NASDAQ Capital Market.

3. CERTAIN ADJUSTMENTS.

(a) Splits and Subdivisions; Dividends. In the event the Company should at any time, or from time to time, fix a record date for the effectuation of a split or subdivision of the outstanding shares of Common Stock, or the determination of the holders of Common Stock entitled to receive a dividend or other distribution payable in additional shares of Common Stock or other securities or rights convertible into, or entitling the holder thereof to receive directly or indirectly, additional shares of Common Stock (hereinafter referred to as the “Common Stock Equivalents”) without payment of any consideration by such holder for the additional shares of Common Stock or Common Stock Equivalents (including the additional shares of Common Stock issuable upon conversion or exercise thereof), then, as of such record date (or the date of such distribution, split or subdivision if no record date is fixed), the per share Warrant Price shall be appropriately decreased and the number of shares of Warrant Stock shall be appropriately increased in proportion to such increase (or potential increase) of outstanding shares.

(b) Combination of Shares. If the number of shares of Common Stock outstanding at any time after the date hereof is decreased by a combination of the outstanding shares of Common Stock, the per share Warrant Price shall be appropriately increased and the number of shares of Warrant Stock shall be appropriately decreased in proportion to such decrease in outstanding shares.

(c) Adjustments for Other Distributions. In the event the Company shall declare a distribution payable in securities of other persons, evidences of indebtedness issued by the Company or other persons, assets (excluding cash dividends paid out of net profits) or options or rights not referred to in Section 2(b), then, in each such case for the purpose of this Section 2(d), upon exercise of this Warrant the holder hereof shall be entitled to a proportionate share of any such distribution as though such holder was the holder of the number of shares of Common Stock into which this Warrant may be exercised as of the record date fixed for the determination of the holders of Common Stock entitled to receive such distribution.

4. NO FRACTIONAL SHARES. No fractional shares of Warrant Stock will be issued in connection with any exercise of this Warrant. In lieu of any fractional shares which would otherwise be issuable, the Company shall pay cash equal to the product of such fraction multiplied by the Fair Market Value of one share of Warrant Stock.

5. NO STOCKHOLDER RIGHTS. Until the exercise of this Warrant or any portion of this Warrant, the Purchaser shall not have nor exercise any rights by virtue hereof as a stockholder

of the Company (including without limitation the right to notification of stockholder meetings or the right to receive any notice or other communication concerning the business and affairs of the Company).

6. **RESERVATION OF STOCK.** The Company covenants that during the period this Warrant is exercisable, the Company will reserve from its authorized and unissued Common Stock a sufficient number of shares of Common Stock (or other securities, if applicable) to provide for the issuance of Warrant Stock (or other securities) upon the exercise of this Warrant. The Company agrees that its issuance of this Warrant shall constitute full authority to its officers who are charged with the duty of executing stock certificates to execute and issue the necessary certificates for the Warrant Stock upon the exercise of this Warrant.

7. **MECHANICS OF EXERCISE.**

(a) This Warrant may be exercised by the holder hereof, in whole or in part, by the surrender of this Warrant and the Notice of Exercise attached hereto as Exhibit A duly completed and executed on behalf of the holder hereof, at the principal office of the Company together with payment in full of the Warrant Price (unless the Purchaser has elected the Net Exercise Right) then in effect with respect to the number of shares of Warrant Stock as to which the Warrant is being exercised. This Warrant shall be deemed to have been exercised immediately prior to the close of business on the date of its surrender for exercise as provided above, and the person entitled to receive the Warrant Stock issuable upon such exercise shall be treated for all purposes as the holder of such shares of record as of the close of business on such date. The Company at its expense shall cause to be issued and delivered to the person or persons entitled to receive the same a certificate or certificates for the number of full shares of Warrant Stock issuable upon such exercise, together with cash in lieu of any fraction of a share as provided above. The shares of Warrant Stock issuable upon exercise hereof shall, upon their issuance, be validly issued, fully paid and nonassessable, and free from all preemptive rights, taxes, liens and charges with respect to the issue thereof. In the event that this Warrant is exercised in part, the Company at its expense will execute and deliver a new Warrant of like tenor exercisable for the number of shares for which this Warrant may then be exercised.

(b) To the extent permitted by law, the Company's obligations to issue and deliver Warrant Stock in accordance with the terms hereof are absolute and unconditional, irrespective of any action or inaction by the Purchaser to enforce the same, any waiver or consent with respect to any provision hereof, the recovery of any judgment against any person or any action to enforce the same, or any setoff, counterclaim, recoupment, limitation or termination, or any breach or alleged breach by the Purchaser or any other person of any obligation to the Company or any violation or alleged violation of law by the Purchaser or any other person, and irrespective of any other circumstance that might otherwise limit such obligation of the Company to the Purchaser in connection with the issuance of Warrant Stock. Nothing herein shall limit a Purchaser's right to pursue any other remedies available to it hereunder, at law or in equity including, without limitation, a decree of specific performance and/or injunctive relief with respect to the Company's failure to timely deliver certificates representing shares of Common Stock upon exercise of the Warrant as required pursuant to the terms hereof.

8. **CERTIFICATE OF ADJUSTMENT.** Whenever the Warrant Price or number or type of securities issuable upon exercise of this Warrant is adjusted, as herein provided, the Company

shall, at its expense, promptly deliver to the Purchaser a certificate of an officer of the Company setting forth the nature of such adjustment and showing in detail the facts upon which such adjustment is based.

9. REPRESENTATIONS OF PURCHASER. As of the date hereof, the Purchaser hereby confirms the representations and warranties made by the Purchaser in Section 4 of the Purchase Agreement.

10. COMPLIANCE WITH SECURITIES LAWS.

(a) The Purchaser understands that this Warrant and the Warrant Stock are characterized as “restricted securities” under the federal securities laws inasmuch as they are being acquired from the Company in a transaction not involving a public offering and that under such laws and applicable regulations this Warrant and the Warrant Stock may be resold without registration under the Securities Act only in certain limited circumstances. In this connection, the Purchaser represents that it is familiar with Rule 144 under the Securities Act of 1933, as amended (the “Securities Act”), as presently in effect, and understands the resale limitations imposed thereby and by the Securities Act.

(b) Prior and as a condition to any exercise of this Warrant (unless the Purchaser has elected the Net Exercise Right) or the sale or transfer of the Warrant Stock issuable upon exercise of this Warrant, the Purchaser shall furnish to the Company such certificates, representations, agreements and other information, including an opinion of counsel, as the Company or the Company’s transfer agent reasonably may require to confirm that such exercise, sale or transfer is being made pursuant to an exemption from, or in a transaction not subject to, the registration requirements of the Securities Act unless such Warrant Stock is being sold or transferred pursuant to an effective registration statement.

(c) The Purchaser acknowledges that the Company may place a restrictive legend on the Warrant Stock issuable upon exercise of this Warrant in order to comply with securities laws unless such shares of Warrant Stock are otherwise freely tradable pursuant to an effective Registration Statement, under Rule 144 of the Securities Act or otherwise.

11. NOTICES OF RECORD DATE. In the event of:

(a) any taking by the Company of a record of the holders of any class of securities for the purpose of determining the holders thereof who are entitled to receive any dividend (other than a cash dividend payable out of earned surplus of the Company) or other distribution, or any right to subscribe for, purchase or otherwise acquire any shares of stock of any class or any other securities or property, or to receive any other right; or

(b) any Fundamental Transaction; or

(c) any voluntary or involuntary dissolution, liquidation or winding-up of the Company,

then and in each such event the Company will mail or cause to be delivered to the Purchaser (or a permitted transferee in compliance with Section 10 above) a notice specifying (i) the date on which any such record is to be taken for the purpose of such dividend, distribution or right, and stating the amount and character of such dividend, distribution or right, and (ii) the date on which any such Fundamental

Transaction, dissolution, liquidation or winding-up is to take place, and the time, if any, as of which the holders of record of Common Stock (or other securities) shall be entitled to exchange their shares of Common Stock (or other securities) for securities or other property deliverable upon such Fundamental Transaction, dissolution, liquidation or winding-up. Such notice shall be delivered at least ten (10) business days prior to the date therein specified.

12. **REPLACEMENT OF WARRANTS.** On receipt of evidence reasonably satisfactory to the Company of the loss, theft, destruction or mutilation of this Warrant and, in the case of any such loss, theft, destruction or mutilation of this Warrant, on delivery of an indemnity agreement or security reasonably satisfactory in form and amount to the Company or, in the case of any such mutilation, on surrender and cancellation of such Warrant, the Company at its expense will execute and deliver, in lieu thereof, a new Warrant of like tenor.

13. **NO IMPAIRMENT.** Except to the extent as may be waived by the holder of this Warrant, the Company will not, by amendment of its charter or through a Fundamental Transaction, dissolution, sale of assets or any other voluntary action, avoid or seek to avoid the observance or performance of any of the terms of this Warrant, but will at all times in good faith assist in the carrying out of all such terms and in the taking of all such action as may be necessary or appropriate in order to protect the rights of the Purchaser against impairment.

14. **SATURDAYS, SUNDAYS, HOLIDAYS, ETC.** If the last or appointed day for the taking of any action or the expiration of any right required or granted herein shall be a Saturday or Sunday or shall be a legal U.S. holiday, then such action may be taken or such right may be exercised on the next succeeding day not a Saturday, Sunday or legal U.S. holiday.

15. **TRANSFERS; EXCHANGES.** (a) Subject to compliance with applicable federal and state securities laws and Section 10 hereof, this Warrant may be transferred by the Purchaser with respect to any or all of the Warrant Stock purchasable hereunder. Upon surrender of this Warrant to the Company, together with the Notice of Assignment in the form attached hereto as Exhibit B duly completed and executed on behalf of the Purchaser, for transfer of this Warrant as an entirety by Purchaser, the Company shall issue a new Warrant of the same denomination to the assignee. Upon surrender of this Warrant to the Company, together with the Notice of Assignment in the form attached hereto as Exhibit B duly completed and executed on behalf of the Purchaser, for transfer of this Warrant with respect to a portion of the Warrant Stock purchasable hereunder, the Company shall issue a new Warrant to the assignee, in such denomination as shall be requested by the Purchaser, and shall issue to the Purchaser a new Warrant covering the number of shares in respect of which this Warrant shall not have been transferred.

(b) This Warrant is exchangeable, without expense, at the option of the Purchaser, upon presentation and surrender hereof to the Company for other warrants of different denominations entitling the holder thereof to purchase in the aggregate the same number of shares of Common Stock purchasable hereunder. This Warrant may be divided or combined with other warrants that carry the same rights upon presentation hereof at the principal office of the Company together with a written notice specifying the denominations in which new warrants are to be issued to the Purchaser and signed by the Purchaser hereof. The term "Warrants" as used herein includes any warrants into which this Warrant may be divided or exchanged.

16. PAYMENT OF TAXES AND EXPENSES. The Company shall pay any recording, filing, stamp or similar tax which may be payable in respect of any transfer involved in the issuance of, and the preparation and delivery of certificates (if applicable) representing, (i) any Warrant Stock purchased upon exercise of this Warrant or (ii) new or replacement warrants in the Purchaser's name or the name of any transferee of all or any portion of this Warrant.

17. MISCELLANEOUS. This Agreement shall be governed by and construed in accordance with the internal laws of the State of New York. All notices, requests, consents and other communications hereunder shall be in writing, shall be sent by confirmed facsimile or electronic mail, or mailed by first-class registered or certified airmail, or nationally recognized overnight express courier, postage prepaid, and shall be deemed given when so sent in the case of facsimile or electronic mail transmission, or when so received in the case of mail or courier, and addressed as follows: (a) if to the Company, at 123 Saginaw Drive, Redwood City, California 94063, Attention: Chief Financial Officer; Facsimile: (650) 365-6490; E-Mail: jwhelan@appharma.com; with a copy to Latham & Watkins LLP, 140 Scott Drive, Menlo Park, California 94025, Attention: Alan C. Mendelson; Facsimile: (650) 463-2600; E-Mail: alan.mendelson@lw.com and (b) if to the Purchaser, at such address or addresses as may have been furnished by the Purchaser to the Company in writing. The invalidity or unenforceability of any provision hereof shall in no way affect the validity or enforceability of any other provisions.

18. AMENDMENT; WAIVER. Any term of this Warrant may be amended or waived (either generally or in a particular instance and either retroactively or prospectively) with the written consent of the Company and the Purchaser. No waivers of any term, condition or provision of this Warrant, in any one or more instances, shall be deemed to be, or construed as, a further or continuing waiver of any such term, condition or provision.

[Signature Page Follows]

IN WITNESS WHEREOF, this Common Stock Purchase Warrant is issued effective as of the date first set forth above.

A.P. PHARMA, INC.

By: _____ ;

Name:

Title:

EXHIBIT A

NOTICE OF INTENT TO EXERCISE
(To be signed only upon exercise of Warrant)

To: A.P. Pharma, Inc.

The undersigned, the Purchaser of the attached Warrant, hereby irrevocably elects to exercise the purchase right represented by such Warrant for, and to purchase thereunder, _____ (_____) shares of Common Stock of A.P. Pharma, Inc. and

(choose one)

_____ herewith makes payment of _____ Dollars (\$_____) thereof

or

_____ exercises the Net Exercise Right pursuant to Section 1(b) thereof and requests that the certificates for such shares be issued in the name of, and delivered to _____, whose address is _____.

The undersigned by its signature below it hereby represents and warrants that it is an “accredited investor” as defined in Rule 501(a) of Regulation D promulgated under the Securities Act of 1933, as amended, and agrees to be bound by the terms and conditions of the attached Warrant as of the date hereof, including Section 10 thereof.

DATED: _____

(Signature must conform in all respects to name of the Purchaser as specified on the face of the Warrant)

«Purchaser»
Address: _____

EXHIBIT B

NOTICE OF ASSIGNMENT FORM

FOR VALUE RECEIVED, «Purchaser» (the “Assignor”) hereby sells, assigns and transfers all of the rights of the undersigned Assignor under the attached Warrant with respect to the number of shares of common stock of A.P. Pharma, Inc. (the “Company”) covered thereby set forth below, to the following “Assignee” and, in connection with such transfer, represents and warrants to the Company that the transfer is in compliance with Section 9 of the Warrant and applicable federal and state securities laws:

NAME OF ASSIGNEE

ADDRESS/FAX NUMBER

Dated: _____

Signature: _____

Witness: _____

ASSIGNEE ACKNOWLEDGMENT

The undersigned Assignee acknowledges that it has reviewed the attached Warrant and by its signature below it hereby represents and warrants that it is an “accredited investor” as defined in Rule 501(a) of Regulation D promulgated under the Securities Act of 1933, as amended, and agrees to be bound by the terms and conditions of the attached Warrant as of the date hereof, including Section 10 thereof.

Signature: _____

;

By: _____

;

Its: _____

0;

□

Address: _____

SECOND AMENDMENT TO RIGHTS AGREEMENT

This Second Amendment dated as of October 20, 2009 (this "Second Amendment"), to the Preferred Shares Rights Agreement, dated as of December 18, 2006, and amended on October 1, 2008 (as amended, the "Agreement") is between A.P. Pharma, Inc., a Delaware corporation (the "Company"), and Computershare Trust Company N.A. (the "Rights Agent").

Pursuant to Section 27 of the Agreement, this Amendment is being executed by the Company and the Rights Agent for the purpose of amending the Agreement as set forth below:

The Agreement is hereby amended as follows:

1. The last sentence of Section 1(a) shall be amended and restated in its entirety by the following:

"Notwithstanding the foregoing or any provision to the contrary in this Agreement, (i) none of Tang Capital Partners LP, or its Affiliates or Associates (the "Tang Entities") is an Acquiring Person pursuant to this Agreement, unless such Person acquires Beneficial Ownership of 34% or more of the then outstanding shares of Common Stock and (ii) none of Baker Brothers Advisors LLC, or its Affiliates or Associates (the "Baker Entities") is an Acquiring Person pursuant to this Agreement, unless such Person acquires Beneficial Ownership of 30% or more of the then outstanding shares of Common Stock."

2. The last sentence of Section 1(h) shall be amended and restated in its entirety by the following:

"Notwithstanding the foregoing or any provision to the contrary in this Agreement, a Distribution Date shall not occur solely by reason of (i) the Tang Entities acquiring Beneficial Ownership of more than 20% but less than 34% of the then outstanding shares of Common Stock or (ii) the Baker Entities acquiring Beneficial Ownership of more than 20% but less than 30% of the then outstanding shares of Common Stock."

3. This Second Amendment shall be deemed to be entered into under the laws of the State of Delaware and for all purposes shall be governed by and construed in accordance with the laws of such State applicable to contracts to be made and performed entirely within such State.

4. This Second Amendment may be executed in any number of counterparts and each of such counterparts shall for all purposes be deemed to be an original, and all such counterparts shall together constitute but one and the same instrument.

5. As amended hereby, the Agreement shall remain in full force and effect.

[Remainder of page intentionally left blank]

IN WITNESS WHEREOF, the parties hereto have executed this Second Amendment to Rights Agreement as of the date and year first above written.

A.P. PHARMA, INC.

By: /s/ Ronald J. Prentki
Name: Ronald J. Prentki
Title: President & CEO

COMPUTERSHARE TRUST COMPANY N.A.
AS RIGHTS AGENT

By: /s/ Kelli Gwinn
Name: Kelli Gwinn
Title: Vice President

A.P. Pharma Announces Private Equity Placement

– Company to Raise \$8.1 million to Fund NDA Stage Program –

Redwood City, CA – October 20, 2009 – A.P. Pharma (Nasdaq: APPA), a specialty pharmaceutical company, today announced it has entered into a definitive securities purchase agreement with certain existing accredited investors providing for a private placement of up to \$13.1 million in two tranches, the first consisting of common stock and warrants with aggregate proceeds of approximately \$8.1 million, and a second tranche of common stock with proceeds of approximately \$5 million.

A.P. Pharma expects to complete the first tranche of the private placement on October 22, 2009, subject to the satisfaction of customary closing conditions. Pursuant to the terms of the securities purchase agreement, the Company will sell approximately 8.0 million shares of common stock at \$0.88 per share, the closing price on the date of signing the securities purchase agreement, October 19, 2009. The purchasers of the common stock at the first closing will also receive warrants to purchase approximately 4.0 million shares of common stock, exercisable through January 7, 2015 for an exercise price of \$0.88 per share. The purchasers will pay \$0.125 per underlying share for the warrants at the first closing. The securities purchase agreement also provides, under certain conditions, for the purchasers in the first closing to have the right to purchase up to 5.2 million shares of common stock at \$0.97 per share prior to May 14, 2010. At the closing of the first tranche, the purchasers will pay \$0.125 per underlying share for the right to purchase shares in the second tranche.

A.P. Pharma plans to use the proceeds from the offering to support the Company's operations and manufacturing, development and regulatory activities needed to gain approval for APF530, its lead product candidate. The U.S. Food and Drug Administration (FDA) is currently reviewing the Company's New Drug Application (NDA) for APF530, and based on the Prescription Drug User Fee Act (PDUFA), has issued an action date of March 18, 2010. APF530 is being developed for the prevention of chemotherapy-induced nausea and vomiting (CINV) and is a long-acting formulation of granisetron utilizing the Company's proprietary Biochronomer™ drug delivery system.

Participants in the transaction were Baker Brothers Investments (Baker Brothers), Tang Capital Partners (Tang Capital), Tavistock Life Sciences and Deerfield Partners. At the time of the first closing, the Company amended its Preferred Shareholders Rights Agreement to permit an increase in the beneficial ownership of Tang Capital and Baker Brothers to 34% and 30%, respectively.

Upon the initial closing, Baker Brothers has the right to designate one new independent member to A.P. Pharma's Board of Directors. Following the second closing, if Baker Brothers purchases its allocated shares in the second tranche, it will have the right to designate one additional member to the Board of Directors.

The shares and warrants sold in the private placement and the shares issuable upon the exercise of the related warrants have not been registered under the Securities Act of 1933, as amended, or state securities laws, and may not be offered or sold in the United States without being registered with the Securities and Exchange Commission (SEC) or through an applicable exemption from SEC registration requirements. The shares and warrants were offered and sold only to accredited investors. The Company has agreed to file a resale registration statement covering all the shares of the common stock issued to the investors at the first closing and the shares issuable to them at the second closing and upon exercise of the warrants, up to the maximum number of shares permitted to be registered under the federal securities laws.

This news release shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of any of the securities referred to in this news release in any state in which such offer, solicitation or sale would be unlawful prior to the registration or qualification under the securities laws of any such state. Any offering of A.P. Pharma common stock under the resale registration statements referred to in this news release will be made only by means of a prospectus.

About A.P. Pharma

A.P. Pharma is a specialty pharmaceutical company developing products using its proprietary Biochronomer™ polymer-based drug delivery technology. The Company's primary focus is on its lead product candidate, APF530, for the prevention of CINV. The NDA for APF530 was submitted in May 2009 and accepted for review in July 2009, at which time the FDA set a PDUFA date of March 18, 2010. The Company has additional clinical and preclinical stage programs in the area of pain management, all of which utilize its bioerodible injectable and implantable delivery systems. For further information, visit the Company's web site at www.appharma.com.

A.P. Pharma's Forward-looking Statements

This news release contains "forward-looking statements" as defined by the Private Securities Litigation Reform Act of 1995. These forward-looking statements involve risks and uncertainties, including uncertainties associated with timely development, approval, launch and acceptance of new products, satisfactory completion of clinical studies, establishment of new corporate alliances, progress in research and development programs and other risks and uncertainties identified in the Company's filings with the Securities and Exchange Commission. We caution investors that forward-looking statements reflect our analysis only on their stated date. We do not intend to update them except as required by law.

Contacts

Corporate Contact:

A.P. Pharma, Inc.
John B. Whelan, Vice President, Finance and Chief Financial Officer
650-366-2626

and

Investor and Media Relations:

Corporate Communications Alliance, LLC
Edie DeVine
209-814-9564