

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

FORM 10-K/A
(Amendment No. 1)

FOR ANNUAL & TRANSITION REPORTS PURSUANT TO
SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

(MARK ONE)

Annual Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the fiscal year ended December 31, 2010

or

Transition Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934
For the transition period from _____ to _____

Commission File Number: 001-33221

A.P. PHARMA, INC.

(Exact name of registrant as specified in its charter)

DELAWARE
(State or other jurisdiction of incorporation or organization)
123 SAGINAW DRIVE, REDWOOD CITY, CALIFORNIA
(Address of principal executive offices)

94-2875566
(I.R.S. Employer Identification Number)
94063
(Zip Code)

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

Securities registered pursuant to Section 12(b) of the Act:

COMMON STOCK, \$.01 par value per share

Securities registered pursuant to Section 12(g) of the Act:
NONE

Indicate by check mark if the registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Exchange Act. Yes No

Indicate by check mark if the registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Exchange Act. Yes No

Indicate by check mark whether the registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes No

Indicate by check mark whether the registrant has submitted electronically and posted on its corporate Web site, if any, every Interactive Data File required to be submitted and posted pursuant to Rule 405 of Regulation S-T (§232.405 of this chapter) during the preceding 12 months (or for such shorter period that the registrant was required to submit and post such files). Yes No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K (§229.405) is not contained herein, and will not be contained, to the best of the registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

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

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company

Indicate by check mark whether the registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes No

The aggregate market value of the voting and non-voting common equity of the registrant held by non-affiliates of the registrant as of June 30, 2010, was \$10,033,698⁽¹⁾ based upon the closing sale price on The NASDAQ Capital Market reported for such date.

As of February 28, 2011, 40,064,194 shares of registrant's Common Stock, \$.01 par value, were outstanding.

⁽¹⁾ Excludes 23,665,526 shares held by Directors, officers and stockholders whose ownership exceeds 5% of the outstanding shares at June 30, 2010. Exclusion of such shares should not be construed as indicating that the holders thereof possess the power, directly or indirectly, to direct the management or policies of the registrant, or that such person is controlled by or under common control with the registrant.

EXPLANATORY NOTE FOR FORM 10-K/A

This Amendment No. 1 on Form 10-K/A (“Amendment No. 1”) amends A.P. Pharma, Inc.’s Annual Report on Form 10-K for the year ended December 31, 2010, which was filed with the Securities and Exchange Commission (“SEC”) on March 28, 2011 (the “Original Filing”) for the sole purpose of providing the information required in Part III of Form 10-K and not included in the Original Filing. At the time of filing the Original Filing, we intended to incorporate this information by reference from our proxy statement relating to our 2011 annual meeting of stockholders. However, we will not file our definitive proxy statement within 120 days after the end of our fiscal year ended December 31, 2010. Pursuant to the rules of the Securities and Exchange Commission (the “SEC”), Item 15 of Part IV of the Original Filing has been amended to contain currently dated certifications from our President and Chief Executive Officer and Chief Financial Officer, as required by Sections 302 and 906 of the Sarbanes-Oxley Act of 2002 with respect to this Amendment 1. The currently dated certifications of our President and Chief Executive Officer and Chief Financial Officer are attached to this Form 10-K/A as Exhibits 31 and 32. We are also deleting the reference on the cover of the Original Filing to the incorporation by reference of A.P. Pharma, Inc.’s definitive proxy statement into Part III of the Original Filing, updating the signature page and the Exhibit Index in Item 15 of Part IV and appearing after the signature page.

Except as described above, this Amendment No. 1 does not amend any other information set forth in the Original Filing, and we have not updated disclosures included therein to reflect any subsequent events. References to “A.P. Pharma”, “we”, “our”, “us” or the “Company” refer to A.P. Pharma, Inc.

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PART III

ITEM 10. DIRECTORS, EXECUTIVE OFFICERS AND CORPORATE GOVERNANCE

Information about our Board of Directors

The number of Directors currently authorized to serve on our Board in accordance with our bylaws is four.

Certain information regarding each of our Directors, including his age, experience, qualifications, attributes and skills that led the Board to conclude that the individual should serve on the Board and his principal occupation and directorships during the past five years, is set forth below:

Name	Age	Position	Director Since
Paul Goddard, Ph.D.	60	Chairman	2000
John B. Whelan	49	President, Chief Executive Officer and Chief Financial Officer, Director	2011
Kevin C. Tang	44	Director	2009
Gregory Turnbull	72	Director	1986

Paul Goddard, Ph.D. has served as Chairman of our Board since November 2000. Dr. Goddard has served as Chief Executive Officer for ARYx Therapeutics, Inc., a biopharmaceutical company, since 2005 and Chairman of its Board of Directors since 2003. He has also been a Director of Adolor Corporation Inc., a biopharmaceutical company focused on the discovery, development and commercialization of prescription pain management products, since 2000 and of Onyx Pharmaceuticals, Inc., a biopharmaceutical company which develops therapies that target the molecular mechanisms that cause cancer, since 1997. From 1998 to 2000, Dr. Goddard was President and Chief Executive Officer of Elan Corporation, plc's pharmaceutical division. From 2000 to 2005, Dr. Goddard served as a Director of Xenoport, Inc., a biopharmaceutical company focused on developing and commercializing product candidates that improve the therapeutic benefits of existing drugs, and, from 1998 to 2006, Dr. Goddard served as a Director of Molecular Devices, Inc., a developer of high-performance bioanalytical measurement systems. From 1991 to 1998, Dr. Goddard served as Chairman and Chief Executive Officer of Neurex Corporation, a biopharmaceutical company developing products for pain management. In 1998, Neurex was acquired by Elan. Prior to Neurex, Dr. Goddard held various senior management positions at SmithKline Beecham. Dr. Goddard's qualifications to serve on our Board include his experience as Chief Executive Officer, Director and Chairman of publicly-traded companies, including biopharmaceutical companies, and his oversight of corporate finance functions.

John B. Whelan was appointed President, Chief Executive Officer and Director in April 2011. Mr. Whelan has served as our Acting Chief Executive Officer since June 2010 and Vice President, Finance and Chief Financial Officer since February 2009. He was Chief Operating Officer and Chief Financial Officer at Raven Biotechnologies, inc., a private company developing antibody-based cancer therapeutics, from April 2002 until the company's acquisition in July 2008. From January 2000 to March 2002, he was Vice President and Chief Financial Officer at Eos Biotechnology, Inc., a private therapeutic antibodies company. Prior to that, Mr. Whelan held a number of ascending management positions at Hewlett Packard Company, culminating in his tenure as Director of Corporate Development. Mr. Whelan's qualifications to serve on the Board include his management experience with the Company, which gives him valuable insight into the operations of the Company, and his former executive management positions with other biotechnology companies.

Kevin C. Tang has served as a member of our Board since February 2009. Mr. Tang is the Managing Director of Tang Capital Management, LLC, a life sciences-focused investment company he founded in 2002. Entities managed by Tang Capital Management, LLC hold a significant ownership position in our common stock. From 1993 to 2001, Mr. Tang held various positions at Deutsche Banc Alex Brown, Inc., an investment banking firm, most recently serving as Managing Director and head of the firm's Life Sciences research group. He has been a Director of Ardea Biosciences, Inc., a biotechnology company focused on the development of small-molecule therapeutics, since 2003. From June 2009 to September 2010, he was a Director of Penwest Pharmaceuticals Co. and, from July 2010 to September 2010, was the Chairman of its Board of Directors until its acquisition by Endo Pharmaceuticals. From 2001 to 2008, he was a Director of Trimeris, Inc. Mr. Tang's qualifications to serve on our Board include his experience as a Director of numerous biotechnology companies and his experience as a Managing Director of funds specializing in the area of life sciences.

Gregory Turnbull has served as a member of our Board since February 1986. Mr. Turnbull served as our President and Chief Executive Officer from October 2006 to July 2008 and as our interim Chief Financial Officer from January 2008 to February 2009. Mr. Turnbull has been a private investor and business consultant for over five years. Previously, he was a general partner of Cable & Howse Ventures, a venture capital firm, and also served as an investment banker with Morgan Stanley & Co. and White, Weld & Co. Mr. Turnbull has served as Chairman of the Board for Planar Systems, Inc., a company specializing in designing and marketing specialty display products and systems, since 2005 and as a Director since 1986. Mr. Turnbull was also a Director of a private company from 2001 until 2010. Mr. Turnbull's qualifications to serve on our Board include his experience as our former President and

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Chief Executive Officer and Chief Financial Officer, a current Chairman, Director and member of the governance and compensation committees of a publicly-traded company and a former member of the governance, compensation, audit and finance committees of two publicly-traded companies, and a former Director of multiple private companies.

Information about our Executive Officers

Our other executive officers and their ages and position are as follows:

<u>Name</u>	<u>Age</u>	<u>Executive Position</u>	<u>Since</u>
Michael A. Adam, Ph.D.	53	Senior Vice Present and Chief Operating Officer	2011
John Barr, Ph.D.	51	Senior Vice President of Research and Development	1997

Michael A. Adam, Ph.D. was appointed Senior Vice President and Chief Operating Officer in April 2011. Dr. Adam has been a consultant with our Company since July 2010. From October 2008 to June 2010, he was Senior Vice President of Pharmaceutical Operations at Spectrum Pharmaceuticals, Inc., a biotechnology company with fully integrated commercial and drug development operations with a primary focus in oncology. From March 2006 to February 2007, Dr. Adam served as Vice President, Drug Development Operations at Anadys Pharmaceuticals, Inc., a biopharmaceutical company dedicated to improving patient care by developing novel medicines for the treatment of hepatitis C. Prior to that, Dr. Adam held various senior positions with Pfizer, Inc., Agouron Pharmaceuticals, Inc. and Bristol-Myers Squibb Company. Dr. Adam received his Ph.D. in organic chemistry at the Massachusetts Institute of Technology.

John Barr, Ph.D. has served as our Senior Vice President, Research and Development since September 2007. He was our Vice President, Research and Development from August 2000 to September 2007 and joined us in 1997 as Director of Pharmaceutical Sciences. Dr. Barr has played a key role in evaluating and developing the potential of our novel delivery systems. Prior to joining us, he served as the Director of Biopharmaceutics for Cortech, Inc., a biotechnology company. Dr. Barr received his Ph.D. in pharmacology from the University of Glasgow in Scotland, after which he pursued post-doctoral studies at the University of Arizona.

There are no family relationships among any of our Directors or executive officers.

There are no current legal proceedings and claims, either asserted or unasserted, which arise in the ordinary course of business to which we, our executive officers or our Directors are a party. There are no current, nor in the past ten years have there been any, legal proceedings involving our Directors or executive officers related to, among others, (i) federal bankruptcy, (ii) criminal proceedings, (iii) federal or state securities laws, (iv) any judgment, decree or order enjoining a Director or officer from acting as an investment advisor, broker or dealer of securities or engaging in any type of business practice, (v) proceedings resulting from involvement in mail or wire fraud or fraud in connection with any business activity and (vi) any disciplinary sanctions or orders imposed by stock, commodities or derivatives exchange or other self-regulatory organization.

CODE OF ETHICS

We have adopted a Code of Ethics that applies to all of our Directors, officers and employees. The Code of Ethics is posted on our website at <http://www.appharma.com> under the caption "Investor Relations." If we make any substantive amendments to the code of ethics or grant any waiver, including implicit waiver, from a provision of the code of ethics to our principal executive officer, principal financial officer or principal accounting officer, we will disclose the nature of such amendment or waiver on our website or in a current report on Form 8-K that will be publicly filed.

SECTION 16(A) BENEFICIAL OWNERSHIP REPORTING COMPLIANCE

Under Section 16(a) of the Securities Exchange Act of 1934 and SEC rules, our Directors, executive officers and beneficial owners of more than 10% of any class of equity security (the "Reporting Persons") are required to file periodic reports of their ownership, and changes in that ownership, with the SEC. Based solely on our review of copies of these reports and representations of such reporting persons, we believe that during fiscal year 2010, all Reporting Persons satisfied such applicable SEC filing requirements.

CORPORATE GOVERNANCE

Due to the number of Directors currently authorized to serve on the Board, the Board of Directors determined that as of April 2011, there is no longer a need for a standing audit and finance committee, compensation and stock option committee and nominating and governance committee. The Board of Directors will assume the responsibilities of the respective committee roles.

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Our Board of Directors oversees the corporate accounting and financial reporting process. The Board appoints our independent auditor and oversees and evaluates its work, ensures written disclosures and communicates with the independent auditor, meets with management and the independent auditor to discuss our financial statements, meets with the independent auditor to discuss matters that may affect our financial statements, approves all related-party transactions, provides oversight of risk management and approves professional services provided to us by the independent public accountants. The Board is also responsible for reviewing our plans for providing appropriate financial resources to sustain our operations, including review of our strategic plan and annual operating budget. The Board of Directors has determined that Dr. Goddard qualifies as our financial expert under applicable SEC rules.

ITEM 11. EXECUTIVE COMPENSATION

The following tables and descriptive materials set forth information concerning compensation earned for services rendered to us by each person who served as the Chief Executive Officer ("CEO") during fiscal year 2010 and our next most highly compensated executive officer, who was serving as an executive officer at the end of fiscal year 2010 and whose compensation for fiscal year 2010 exceeded \$100,000 (collectively the "Named Executive Officers"). No one served us as an executive officer during 2010 other than our Named Executive Officers.

Summary Compensation Table

The following table sets forth information concerning compensation earned for services rendered to us by the Named Executive Officers.

Name and Principal Position(s)	Year	Salary	Stock Awards ⁽¹⁾	Option Awards ⁽¹⁾	Non-Equity Incentive Plan Compensation ⁽²⁾	All Other Compensation ⁽³⁾	Total
John B. Whelan ⁽⁵⁾ President, Chief Executive Officer and Chief Financial Officer	2010	\$300,000	\$ —	\$363,765	\$ —	\$ 7,350	\$ 671,115
	2009	259,616	—	211,050	40,000	6,923	517,589
John Barr Sr. Vice President, Research and Development	2010	302,000	—	363,765	—	17,082	682,847
	2009	313,616	—	112,288	47,250	15,450	488,604
Ronald J. Prentki ⁽⁴⁾ Former President and Chief Executive Officer	2010	191,250	—	462,600	—	880,422	1,534,272
	2009	441,346	56,786	—	72,000	7,350	577,482

⁽¹⁾ This column represents the aggregate grant date fair value, computed in accordance with Financial Accounting Standards Board ("FASB") Accounting Standard Codification ("ASC") Topic 718, for stock options and awards granted to the Named Executive Officers in 2010 and 2009. Pursuant to SEC rules, the amounts shown exclude the impact of estimated forfeitures related to service-based vesting conditions. The assumptions used in calculating the fair value of the stock options and awards can be found under Note 7 to the Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2010. For additional information on stock options awarded to the Named Executive Officers in 2010 and in prior years, see below under Outstanding Equity Awards at 2010 Fiscal Year-End table, respectively. These amounts reflect the grant date fair value for these stock options and awards, and do not necessarily correspond to the actual value that will be realized by the Named Executive Officers.

⁽²⁾ The amounts listed were earned in 2009 and paid in February 2010 and reflect cash awards to the named individuals under the bonus program. No cash incentive or bonus amounts were paid for 2010 performance.

⁽³⁾ The stated amounts include a travel allowance for Dr. Barr of \$7,800 and \$8,100 in 2010 and 2009, respectively, and matching contributions to our 401(k) Plan. We made matching cash contributions equal to 50% of each participant's contribution during the plan year up to a maximum amount equal to the lesser of 3% of each participant's annual compensation or \$7,350 in 2010 and 2009. The amount for Mr. Prentki includes a severance payment of \$850,000 and \$25,400 for 12 months of continued COBRA coverage, both related to his resignation in June 2010.

⁽⁴⁾ Mr. Prentki was our President and Chief Executive Officer since July 2008 and resigned in June 2010.

⁽⁵⁾ Mr. Whelan was appointed President and Chief Executive Officer in April 2011. He had been our Acting Chief Executive Officer since May 2010 and Chief Financial Officer since February 2009.

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During fiscal year 2010, we did not maintain a bonus plan. However, historically, we have maintained a bonus plan under which employees, including Named Executive Officers, have been eligible for bonus payments. Bonus payments for officers are based on the attainment of corporate and/or individual goals. Each corporate and/or individual goal represents a predetermined percentage of the officer's targeted bonus, which is a pre-determined percentage of the officer's base pay. In 2009, Messrs. Prentki and Whelan and Dr. Barr earned bonuses of \$72,000, \$40,000 and \$47,250, respectively, which were each paid in February 2010. The performance-based cash bonus plan for 2009 for Messrs. Prentki and Whelan and Dr. Barr consisted of payment of a percentage of year-end base salary based on achievement of corporate objectives. The performance-based cash bonus targets for 2009 for Messrs. Prentki and Whelan and Dr. Barr were 50%, 35% and 35%, respectively, of year-end salary.

In connection with Mr. Prentki's resignation, we entered into a separation and release agreement with him pursuant to which he was paid cash severance of \$850,000 and is entitled to the reimbursement of continued healthcare coverage under COBRA for up to 12 months. In addition, in accordance with his management retention agreement, we provided him with 12 months of accelerated vesting of his outstanding stock options and up to 12 months following his termination of employment to exercise such options.

Retirement Plans

We have established and maintain a retirement savings plan under section 401(k) of the Internal Revenue Code to cover our eligible employees. The Internal Revenue Code allows eligible employees to defer a portion of their compensation, within prescribed limits, on a tax deferred basis through contributions to a 401(k) plan. Our 401(k) plan is qualified under Section 401(a) of the Internal Revenue Code and its associated trust is exempt from federal income taxation under Section 501(a) of the Internal Revenue Code. Our 401(k) plan permits us to make matching contributions on behalf of eligible employees, and we currently make these matching contributions up to a maximum amount equal to the lesser of 3% of each participant's annual compensation or \$7,350 for 2010.

Outstanding Equity Awards at Fiscal Year-End

The following table sets forth information regarding outstanding equity awards held by our Named Executive Officers at December 31, 2010:

Name	Option Awards				Stock Awards	
	Number of Securities Underlying Unexercised Options Exercisable	Number of Securities Underlying Unexercised Options Not Exercisable ⁽¹⁾	Option Exercise Price (\$)	Option Expiration Date	Number of Shares or Units of Stock That Have Not Vested	Market Value of Shares or Units of Stock That Have Not Vested (\$)
John B. Whelan	15,625	134,375	0.600	07/08/20	—	—
	31,250	118,750	1.930	02/17/20	—	—
	160,417	189,583 ⁽⁴⁾	0.610	02/23/19	—	—
John Barr	15,625	134,375	0.600	07/08/20	—	—
	31,250	118,750	1.930	02/17/20	—	—
	61,333	98,667 ⁽³⁾	0.710	01/16/19	—	—
	53,223	19,769	1.370	01/15/18	—	—
	85,318	31,690	1.370	01/15/18	—	—
	8,568	182	5.120	01/16/17	—	—
	8,750	—	6.400	01/10/16	—	—
	6,250	—	9.800	01/14/14	—	—
	1,875	—	4.280	01/23/13	—	—
	3,125	—	5.760	08/22/12	—	—
Ronald J. Prentki	5,000	—	8.000	08/21/11	—	—
	3,750	—	8.000	08/21/11	—	—
	1,020,833 ⁽²⁾	—	\$ 1.190	06/15/11	—	\$ —
	26,311 ⁽²⁾	—	1.930	06/15/11	—	—

⁽¹⁾ All unvested options vest ratably monthly over the first four years of the ten-year option term, except where noted.

⁽²⁾ Option vested on June 15, 2010 in accordance with the separation agreement and can be exercised on or until June 15, 2011.

⁽³⁾ Option vests ratably monthly over the first five years over a 10-year option term.

⁽⁴⁾ Option vested 25% on February 23, 2010 and the remainder ratably over the following 36 months.

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Non-qualified Defined Contribution and Other Non-qualified Deferred Compensation Plans

We do not maintain a defined benefit pension plan or a nonqualified deferred compensation plan.

Payments Upon Termination or Change In Control

Payments Upon Termination

In conjunction with the resignation of Mr. Prentki as our President and Chief Executive Officer in June 2010, we made a payment of \$850,000 in July 2010 in accordance with an employment agreement. In addition, pursuant to his employment agreement, there was continued vesting of his unvested stock options and lapse of forfeiture and transfer restrictions on restricted stock previously granted to him, both for a 12 month period following his termination. We are also paying health care benefits for up to 12 months.

Potential Payments Upon Termination

On March 23, 2005, we entered into a change of control agreement with Dr. Barr. Dr. Barr's agreement was amended and restated on November 8, 2007 as a management retention agreement. The agreement was again amended on December 23, 2008 without affecting any of its economic provisions to conform with Treasury Regulations under Section 409A of the Internal Revenue Code. The agreement, as amended, provides that if Dr. Barr's employment is terminated by us without good cause or by him for good reason, as such terms are defined in his agreement, he shall receive his annual base salary in effect on the date of termination, the average of any bonus paid during each of the three 12-month periods prior to termination, and the continued vesting of his unvested stock options, all for a 12-month period following such termination, and the lapse of all remaining forfeiture and transfer restrictions on restricted stock previously granted to him. Such salary and bonus payments shall be paid in twelve equal monthly installments. We also agreed to pay health care benefits for up to 12 months. In addition, upon a change of control, if he is involuntarily terminated, all of his unvested stock options shall immediately vest.

In conjunction with the appointment of John B. Whelan as our Chief Financial Officer, we entered into a retention and change of control agreement with Mr. Whelan on February 9, 2009. The agreement provides that if Mr. Whelan's employment is terminated by us without good cause or by him for good reason, as such terms are defined in his agreement, he shall receive his annual base salary in effect on the date of termination, the average of any bonus paid during each of the three 12-month periods prior to termination, and the continued vesting of his unvested stock options and lapse of forfeiture and transfer restrictions on restricted stock previously granted to him, all for a 12-month period following such termination. Such salary and bonus payments shall be paid in twelve equal monthly installments. We also agreed to pay health care benefits for up to 12 months. In addition, upon a change of control, if he is involuntarily terminated, all of his unvested stock options shall immediately vest.

In connection with Mr. Whelan's appointment as President and Chief Executive Officer, we entered into a management retention agreement with Mr. Whelan on April 25, 2011 (the "Whelan Management Agreement"). The Whelan Management Agreement provides that if Mr. Whelan's employment is terminated by us not in connection with a change of control, without cause, as such term is defined in the Whelan Management Agreement, or by Mr. Whelan as a result of certain events set forth in the Whelan Management Agreement, during the 12 months after the date of termination (the "Severance Period"), he shall receive (i) an amount equal to the monthly base salary he was receiving immediately prior to the termination, (ii) the average bonus paid during each of the three 12-month periods (or such shorter period of time during which he was eligible for a bonus) prior to termination, and (iii) the immediate vesting of unvested stock options, restricted stock and other equity awards that otherwise would have vested during the Severance Period. We also agreed to reimburse for or continue to pay for health care benefits during the Severance Period, or such date when he is no longer eligible for such benefits under applicable law. In the event Mr. Whelan's employment is terminated by us without good cause or he resigns for good reason within 12 months following a change of control of the Company, then in lieu of the above benefits during the 18-month period after the date of termination (the "Change of Control Severance Period"), he shall receive (i) an amount equal to the greater of (A) the base salary he was receiving immediately prior to the termination or (B) the base salary he was receiving immediately prior to the change of control, (ii) 150% of the average bonus paid during each of the three 12-month periods (or such shorter period of time during which he was eligible for a bonus) prior to termination, and (iii) the immediate vesting of unvested stock options, restricted stock and other equity awards. We also agreed to reimburse for or continue to pay for health care benefits during the Change of Control Severance Period, or such date when he is no longer eligible for such benefits under applicable law.

The following table sets forth information regarding potential payments to be made to Mr. Whelan or Dr. Barr if a change of control had occurred and their termination payments were triggered on December 31, 2010, assuming maximum payouts which would occur if a change of control had occurred. The same termination payments would be triggered upon a termination of employment by us without good cause or by executive for good reason, other than the value of acceleration of previously unvested options.

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Name	Base Salary (\$)	Bonus (\$)	Value of Options Previously Unvested (\$) ⁽¹⁾	Total
John Barr	\$ 302,000	\$44,260	\$ —	\$346,260
John B. Whelan	300,000	40,000	—	340,000

⁽¹⁾ The dollar value of unvested stock options is calculated based on the excess of the closing market price of our common stock on December 31, 2010 over the exercise price of these options. Options would be exercisable for a 90-day period beyond potential termination date. There is no value reported as the option exercise price was higher than the closing market price as of December 31, 2010.

Director Compensation

Non-Chair, Non-Employee Director Compensation

Our non-chair, non-employee Directors did not receive cash compensation for their service as members of our Board or any of its committees until April 2011, when the Board enacted prospective cash payments to these Directors of \$30,000 annually. The following Director compensation information includes compensation paid during 2010 to three Directors who resigned from the Board in early 2011: Stephen R. Davis, Toby Rosenblatt and Robert Zerbe, M.D.

Dr. Zerbe and Messrs. Rosenblatt and Turnbull each received a restricted stock award in 2010 of 109,933 shares of our common stock. The restricted stock awards vested 14,042 shares on May 20, 2010 and 47,946 shares on November 20, 2010. Mr. Turnbull's remaining restricted stock award of 47,945 shares is scheduled to vest on the day prior to the next annual meeting. Mr. Tang received a restricted stock award of 95,891 shares of our common stock. The restricted stock award vested 47,946 shares on November 20, 2010, and 47,945 shares are scheduled to vest on the day prior to the next annual meeting. Dr. Zerbe and Mr. Rosenblatt resigned effective April 18, 2011 and April 13, 2011, respectively.

Mr. Davis became a member of our Board in February 2010 and received a restricted stock award in 2010 of 31,088 shares of our common stock. The restricted stock vests and all restrictions thereon lapse with respect to one-third of the shares on each anniversary of the date of the grant, subject to Mr. Davis's continued service on the Board. Mr. Davis voluntarily cancelled his restricted stock award of 31,088 on February 16, 2011. Mr. Davis also received a restricted stock award for 95,891 shares of our common stock. The restricted stock award vested 47,946 shares on November 20, 2010, and the remaining 47,945 shares were cancelled upon his resignation from the Board effective February 23, 2011.

Chairman Compensation

Dr. Goddard's annual cash retainer for his services as Chairman of our Board is \$30,000, plus participation in the same equity compensation structure and in the prospective cash compensation as the other non-employee Directors. Dr. Goddard received a restricted stock award in 2010 of 109,933 shares of our common stock. The restricted stock awards vested 14,042 shares on May 20, 2010 and 47,946 shares on November 20, 2010.

The following table shows 2010 compensation for all of our non-employee Directors and our Chairman.

Name ⁽¹⁾	Fees Earned or Paid in Cash	Option Awards ⁽²⁾	Stock Awards ⁽²⁾	All Other Compensation	Total
Stephen R. Davis ⁽³⁾	\$ —	\$ —	\$130,000	\$ —	\$130,000
Paul Goddard, Ph.D. ⁽⁴⁾⁽⁶⁾	30,000	—	97,101	—	127,101
Toby Rosenblatt ⁽⁴⁾⁽⁷⁾	—	—	97,101	—	97,101
Kevin Tang ⁽⁵⁾	—	—	70,000	—	70,000
Gregory Turnbull ⁽⁴⁾⁽⁸⁾	—	—	97,101	—	97,101
Robert Zerbe, M.D. ⁽⁴⁾⁽⁹⁾	—	—	97,101	—	97,101

⁽¹⁾ Mr. Prentki is not included in this table as he received no compensation for his service as a Director. The compensation received by Mr. Prentki as an employee is shown in the Summary Compensation Table.

⁽²⁾ Amount represents the aggregate grant date fair value of options and awards computed in accordance with "FASB" "ASC" Topic 718. The assumptions used in calculating the fair value of the stock options and awards can be found under Note 7 to the Consolidated Financial Statements in our Annual Report on Form 10-K for the year ended December 31, 2010.

⁽³⁾ Mr. Davis joined our Board in February 2010. He resigned effective February 23, 2011. The restricted stock award granted in February 2010 vests one-third of the shares on each anniversary date of the grant. Mr. Davis voluntarily cancelled his restricted stock award granted in February 2010 on February 16, 2011. The restricted stock award granted in May 2010 vested 50% on November 20, 2010. At December 31, 2010, Mr. Davis had restricted stock awards covering 79,033 shares of our common stock were outstanding.

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- (4) The restricted stock award granted in February 2010, vested 100% on May 20, 2010 and restricted stock award granted in May 2010, vested 50% on November 20, 2010. Mr. Rosenblatt and Dr. Zerbe resigned effective April 13, 2011 and April 18, 2011, respectively.
- (5) The restricted stock award granted in May 2010, vested 50% on May 20, 2010 and 50% on November 20, 2010. At December 31, 2010, Mr. Tang had restricted stock awards covering 47,945 shares of our common stock outstanding.
- (6) At December 31, 2010, Dr. Goddard had restricted stock awards covering 47,945 shares of our common stock and options to purchase 79,500 shares of our common stock outstanding.
- (7) At December 31, 2010, Mr. Rosenblatt had restricted stock awards covering 47,945 shares of our common stock and stock options to purchase 29,500 shares of our common stock outstanding. Mr. Rosenblatt resigned effective April 13, 2011.
- (8) At December 31, 2010, Mr. Turnbull had restricted stock awards covering 47,945 shares of our common stock and options to purchase 195,750 shares of our common stock outstanding.
- (9) At December 31, 2010, Dr. Zerbe had restricted stock awards covering 47,945 shares of our common stock and options to purchase 28,250 shares of our common stock outstanding. Dr. Zerbe resigned effective April 18, 2011.

ITEM 12. SECURITY OWNERSHIP OF CERTAIN BENEFICIAL OWNERS AND MANAGEMENT AND RELATED STOCKHOLDER MATTERS

The following table sets forth information regarding ownership of our common stock as of February 15, 2011, or an earlier date for information based on filings with the SEC, by (a) each person known to us to own more than 5% of the outstanding shares of our common stock, (b) each of our Directors, (c) our Chief Executive Officer and each other executive officer named in the compensation tables, and (d) all Directors and executive officers as a group. The information in this table is based solely on statements in filings with the SEC or other reliable information. Unless otherwise indicated, the address of each of the named individuals is c/o A.P. Pharma, Inc., 123 Saginaw Drive, Redwood City, CA 94063. The percentage of ownership is based on 40,143,227 shares of common stock outstanding as of February 15, 2011. Beneficial ownership of shares is determined in accordance with the rules of the SEC and includes voting and investment power with respect to the shares. Shares of common stock subject to outstanding options and warrants exercisable within 60 days of February 15, 2011 are deemed outstanding for computing the percentage of ownership of the person holding such options or warrants, but are not deemed outstanding for computing the percentage of any other person. Except as otherwise noted, each person or entity has sole voting and investment power with respect to the shares shown. Unless otherwise noted, none of the shares shown as beneficially owned are subject to pledge.

Name		Number of Shares ⁽¹⁾	Percent of Class ⁽¹⁾
Kevin C. Tang, Tang Capital Management, LLC and its affiliates ⁽²⁾ 4401 Eastgate Mall San Diego, California 92121		11,224,853	28.0%
Baker Bros. Advisors, LLC ⁽³⁾ 667 Madison Avenue New York, NY 10065		6,861,818	17.1%
Kevin C. Tang ⁽²⁾	Director	11,224,853	28.0%
Gregory Turnbull ⁽⁴⁾	Director	441,017	*
Paul Goddard ⁽⁵⁾	Chairman of the Board	305,433	*
Toby Rosenblatt ⁽⁶⁾	Director	239,734	*
Robert Zerbe ⁽⁷⁾	Director	230,322	*
Stephen R. Davis ⁽⁸⁾	Director	126,979	*
John Barr ⁽⁹⁾	Senior Vice President, Research and Development	400,100	*
John B. Whelan ⁽¹⁰⁾	President, Chief Executive Officer and Chief Financial Officer	251,043	*
Ronald Prentki ⁽¹¹⁾	Former President and Chief Executive Officer	1,094,543	*
Officers and Directors as a group (9 persons) ⁽¹²⁾		21,175,842	50.4%

* Less than 1%.

(1) Based on shares of common stock issued and outstanding as of February 15, 2011. Assumes the exercise of all outstanding options, warrants and rights to purchase Common Stock held by such person or group to the extent exercisable within 60 days of February 15, 2011, and that no other person has exercised any outstanding stock options.

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- (2) Based on information obtained directly from Tang Capital Management, LLC and its affiliates reporting beneficial ownership of Kevin C. Tang of 11,224,853 shares. Includes 47,945 shares of restricted stock, subject to a right of repurchase which lapses on May 18, 2011. Mr. Tang retains 1,539,000 shares of common stock in a margin brokerage account.
- (3) Based on information set forth in a Form 13F filed with the SEC on February 14, 2011 by Baker Bros. Advisors, LLC reporting beneficial ownership of 6,861,818 shares.
- (4) Includes 175 shares owned by Mr. Turnbull's spouse, 5,350 shares held in a benefit or retirement plan, 195,750 shares underlying stock options exercisable on or before April 15, 2011 and 47,945 shares of restricted stock, subject to a right of repurchase which lapses on May 18, 2011.
- (5) Includes 11,250 shares held in a family trust, 79,500 shares underlying stock options exercisable within 60 days of February 15, 2011 and 47,945 shares of restricted stock, subject to a right of repurchase which lapses on May 18, 2011.
- (6) Includes 29,500 shares underlying stock options exercisable within 60 days of February 15, 2011 and 47,945 shares of restricted stock, subject to a right of repurchase which lapses on May 18, 2011. Mr. Rosenblatt resigned effective April 13, 2011.
- (7) Includes 28,250 shares underlying stock options exercisable within 60 days of February 15, 2011 and 47,945 shares of restricted stock, subject to a right of repurchase which lapses on May 18, 2011. Dr. Zerbe resigned effective April 18, 2011.
- (8) Includes 31,088 shares of restricted stock, subject to a right of repurchase which lapses one-third on each anniversary date of the grant and 47,945 shares of restricted stock, subject to a right of repurchase which lapses on May 18, 2011. Mr. Davis voluntarily cancelled his restricted stock award of 31,088 on February 16, 2011. Mr. Davis resigned effective February 23, 2011.
- (9) Includes 332,625 shares underlying stock options exercisable within 60 days of February 15, 2011.
- (10) Includes 251,043 shares underlying stock options exercisable within 60 days of February 15, 2011. Mr. Whelan was appointed our President, Chief Executive Officer, effective April 24, 2011.
- (11) Includes 1,047,144 shares underlying stock options exercisable within 60 days of February 15, 2011 in accordance with the separation agreement. Mr. Prentki resigned as President, Chief Executive Officer and Director in June 2010.
- (12) For Mr. Davis, includes 31,088 shares of restricted stock, subject to a right of repurchase which lapses one-third on each anniversary date of the grant and 47,945 shares of restricted stock, subject to a right of repurchase which lapses on May 18, 2011. Mr. Davis voluntarily cancelled his restricted stock award of 31,088 on February 16, 2011. Mr. Davis, Mr. Rosenblatt and Dr. Zerbe resigned effective February 23, 2011, April 13, 2011 and April 18, 2011, respectively.

Equity Compensation Plan Information

The table below discloses information as of December 31, 2010 with respect to our equity compensation plans that have been approved by stockholders and plans that have not been approved by stockholders.

Plan Category	Number of Securities to be Issued upon Exercise of Outstanding Options	Weighted-Average Exercise Price of Outstanding Options	Number of Securities Remaining Available for Future Issuance under Equity Compensation Plans (Excluding Securities Reflected in Column (a))
Equity compensation plans approved by security holders:			
Stock option and award plans	2,188,282	\$ 1.62	2,039,549
Employee Stock Purchase Plan	—	—	109,158
Equity compensation plans not approved by security holders ⁽¹⁾	1,028,958	1.22	—
Total	3,217,240	\$ 1.49	2,148,707

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- (1) In October 2000, we adopted the Non-Qualified Stock Plan covering 62,500 shares. In September 2007, the Board, subject to approval by the Compensation and Stock Option Committee, authorized the reservation for issuance of an additional 1,000,000 shares under the plan and authorized amendments to the plan to limit participation awards to new hires, to provide for stock appreciation rights and to require the exercise price of any non-qualified stock option to be at 100% or more of fair market value. In July 2008, the Board authorized the reservation of another 1,000,000 shares for issuance under the Non-Qualified Stock Plan. The availability of the recently added shares for awards will expire in 2017. Under the Non-Qualified Stock Plan, awards may be granted only as a material inducement to any new hire accepting employment or consultancy with us. The plan provides for the discretionary award of options, restricted stock and stock appreciation rights or any combination of these awards to an eligible person, provided however, that only non-qualified stock options may be granted under the plan. Under the plan, the term of any non-qualified stock option granted may not exceed 10 years, and the exercise price of any such non-qualified stock option must be at least 100% of the fair market value of the Common Stock at the date of grant. Options generally vest over a period of four years. The remaining shares available in the Non-Qualified Stock Plan expired in October 2010.

ITEM 13. CERTAIN RELATIONSHIPS AND RELATED TRANSACTIONS AND DIRECTOR INDEPENDENCE

Board Independence

Our Board has determined that the following Directors are “independent Directors” as defined by the rules of The NASDAQ Stock Market (“NASDAQ”): Dr. Goddard and Mr. Tang. Although the Company’s common stock is not listed on NASDAQ, the Board uses the definition of independence from the NASDAQ listing standards to assess independence of our Directors. Under applicable SEC and NASDAQ rules, the existence of certain “related-party” transactions above certain thresholds between a Director and us are required to be disclosed and preclude a finding by the Board that the Director is independent.

Related-Party Transactions

Pursuant to our Code of Ethics, our executive officers, Directors and employees must disclose transactions involving actual or apparent conflicts of interest, such as related-party transactions, to the Chairman of the Board. As a matter of policy, all related-party transactions between us and any of our officers, Directors or principal stockholders, are approved by a majority of the independent and disinterested members of our Board, are on terms no less favorable to us than could be obtained from unaffiliated third parties and are in connection with bona fide business purposes.

On April 24, 2011, we entered into a Securities Purchase Agreement (the “Purchase Agreement”) with Tang Capital Partners, L.P. and the other purchasers named therein. Mr. Tang, one of our Directors, is the Managing Director of Tang Capital Management, LLC, the general partner of Tang Capital Partners, L.P. Pursuant to the Purchase Agreement, the Company may issue up to \$4.5 million aggregate principal amount of convertible notes due 2021 that are convertible into shares of the Company’s common stock, par value \$0.01. The Company is to receive \$1.5 million at an initial closing, including \$1.2 million from Tang Capital Partners, L.P. The purchasers may also purchase their pro rata interest of up to an additional \$3.0 million aggregate principal amount of notes from time to time, with such right expiring upon the second anniversary of the initial closing date.

ITEM 14. PRINCIPAL ACCOUNTANT FEES AND SERVICES

The following table shows the fees paid or accrued by us for the audit and other services provided by Odenberg, Ullakko, Muranishi & Co. LLP for fiscal 2010 and 2009.

	2010	2009
Audit Fees ⁽¹⁾	\$149,500	\$183,500
Audit-Related Fees ⁽²⁾	—	—
Tax Fees ⁽³⁾	29,275	32,413
All other Fees ⁽⁴⁾	—	—
Total	\$178,775	\$215,913

- (1) Audit fees represent fees for professional services provided in connection with the audit of our financial statements, review of our quarterly financial statements and routine regulatory filings.
- (2) Audit-related fees consist primarily of accounting consultations, employee benefit plan audits and services related to business acquisitions and divestitures.
- (3) Tax fees principally include fees for tax compliance and for Section 382 consulting services. Tax compliance fees totaled \$23,525 and \$22,404 for 2010 and 2009, respectively. Section 382 fees and FIN 48 fees totaled \$5,750 and \$10,009, respectively for 2010 and 2009.
- (4) All other fees are fees for any services not included in the first three categories.

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PART IV

ITEM 15. EXHIBITS AND FINANCIAL STATEMENT SCHEDULES

See Exhibit Index beginning on page 15.

SIGNATURES

Pursuant to the requirement of Section 13 or 15 (d) of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned, thereunto duly authorized.

A.P. PHARMA, INC.

By: /s/ John B. Whelan
John B. Whelan
President, Chief Executive Officer and
Chief Financial Officer
Date: May 2, 2011

Pursuant to the requirements of the Securities Exchange Act of 1934, this report has been signed by the following persons in the capacities and on the dates indicated.

<u>Signature</u>	<u>Title</u>	<u>Date</u>
<u>/s/ John B. Whelan</u> John B. Whelan	President, Chief Executive Officer and Chief Financial Officer, Director (Principal Executive Officer and Principal Financial and Accounting Officer)	May 2, 2011
<u>/s/ Paul Goddard</u> Paul Goddard	Chairman of the Board of Directors	May 2, 2011
<u>/s/ Kevin C. Tang</u> Kevin C. Tang	Director	May 2, 2011
<u>/s/ Gregory Turnbull</u> Gregory Turnbull	Director	May 2, 2011

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EXHIBIT INDEX

- 2.1 – Copy of Asset Purchase Agreement between Registrant and RP Scherer South, Inc. dated June 21, 2000.⁽¹⁾
- 3-A – Copy of Registrant's Certificate of Amendment of Certificate of Incorporation.⁽²⁾
- 3-B – Copy of Registrant's Bylaws.⁽³⁾
- 3-C – Copy of Registrant's Certificate of Designation.⁽⁴⁾
- 4-A – Copy of Registrant's Preferred Shares Rights Agreement.⁽⁵⁾
- 4-B – Copy of Registrant's Form of Rights Certificate.⁽⁶⁾
- 4-C – First Amendment to Registrant's Preferred Shares Rights Agreement.⁽⁷⁾
- 4-D – Copy of Specimen Common Stock Certificate.⁽⁸⁾
- 10-C – Registrant's 1992 Stock Plan dated August 11, 1992.^{(9)*}
- 10-D – Registrant's 1997 Employee Stock Purchase Plan, as amended to date.^{(10)*}
- 10-E – Lease Agreement between Registrant and Metropolitan Life Insurance Company for lease of Registrant's executive offices in Redwood City dated as of November 17, 1997.⁽¹¹⁾
- 10-F – Registrant's 2002 Equity Incentive Plan dated June 13, 2002.^{(12)*}
- 10-G – Agreement between Registrant and RHEI Pharmaceuticals, Inc. (RHEI) granting exclusive license to RHEI to develop and sell APF530 in Greater China dated October 1, 2006.⁽¹³⁾
- 10-H – Royalty Interest Agreement between Registrant and Paul Royalty Fund dated January 18, 2006.⁽¹⁴⁾
- 10-I – Amended and Restated Retention and Non-Competition Agreement between the Registrant and Michael O'Connell effective August 23, 2007.^{(15)*}
- 10-J – Management Retention Agreement between the Registrant and Dr. John Barr dated as of November 8, 2007.^{(16)*}
- 10-K – Registrant's 2007 Equity Incentive Plan.^{(17)*}
- 10-L – Form of 2007 Equity Incentive Plan Stock Option Agreement.^{(18)*}
- 10-M – Form of 2007 Equity Incentive Plan Restricted Stock Unit Agreement.^{(19)*}
- 10-N – Agreement with Johnson & Johnson dated April 14, 1992.⁽²⁰⁾
- 10-O – Form of 2007 Equity Incentive Plan Restricted Stock Award Agreement.^{(10)*}
- 10-P – Form of 2002 Equity Incentive Plan Stock Option Agreement.^{(10)*}
- 10-Q – Form of 2002 Equity Incentive Plan Restricted Stock Agreement.^{(10)*}
- 10-R – Amendment to the Registrant's Non-Qualified Plan.^{(21)*}
- 10-S – Form of Indemnification Agreement.^{(10)*}
- 10-T – Registrant's Non-Qualified Plan dated June 13, 2002.^{(22)*}
- 10-U – Employment Letter Agreement with Ronald Prentki, President and Chief Executive Officer dated July 3, 2008.^{(23)*}
- 10-V – Amendment to Employment Letter Agreement with Ronald Prentki, President and Chief Executive Officer dated December 30, 2008.^{(24)*}
- 10-W – Amendment to Management Retention Agreement between the Registrant and Dr. John Barr dated December 23, 2008.^{(24)*}
- 10-X – Employment Letter Agreement with John B. Whelan, Chief Financial Officer dated as of February 9, 2008.^{(24)*}
- 10-Y – Development and License Agreement dated as of September 11, 2009, between the Registrant and Merial Limited.⁽²⁵⁾
- 10-Z – Securities Purchase Agreement, dated as of October 19, 2009, by and among the Registrant and the purchasers listed therein.⁽²⁶⁾
- 10-AA – Registration Rights Agreement, dated as of October 22, 2009, by and among the Registrant and the purchasers listed therein.⁽²⁷⁾
- 10-AB – Form of Warrant to Purchase Shares of Common Stock.⁽²⁸⁾
- 10-AC – Second Amendment to Preferred Shares Rights Agreement, dated as of October 20, 2009, by and between the Registrant and Computershare Trust Company N.A.⁽²⁹⁾
- 10-AD – Separation and Release Agreement between Ronald J. Prentki and the Registrant dated May 25, 2010.^{(30)*}
- 23.1 – Consent of Independent Registered Public Accounting Firm.
- 31.1 – Certification of Chief Executive Officer pursuant to Rules 13A-15(e) Promulgated under the Securities Exchange Act of 1934 as amended.
- 31.2 – Certification of Chief Financial Officer pursuant to Rules 13A-15(e) Promulgated under the Securities Exchange Act of 1934 as amended.

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32 – Certification of Chief Executive Officer and Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

- ⁽¹⁾ Filed as an Exhibit with corresponding Exhibit No. to Registrant's Form 8-K filed August 9, 2000 (file No. 000-16109), and incorporated herein by reference.
 - ⁽²⁾ Filed as Exhibit 3.1 to Registrant's Form 10-Q filed August 4, 2009, and incorporated herein by reference.
 - ⁽³⁾ Filed as an Exhibit with corresponding Exhibit No. to Registrant's Registration Statement on Form S-1 (Registration No. 33-15429) and incorporated herein by reference.
 - ⁽⁴⁾ Filed as Exhibit 3.C to Registrant's Form 8-K filed December 19, 2006, and incorporated herein by reference.
 - ⁽⁵⁾ Filed as Exhibit 4.A to Registrant's Form 8-K filed December 19, 2006, and incorporated herein by reference.
 - ⁽⁶⁾ Filed as Exhibit 4.B to Registrant's Form 8-K filed December 19, 2006, and incorporated herein by reference.
 - ⁽⁷⁾ Filed as Exhibit 4.1 to Registrant's Form 8-K filed October 7, 2008, and incorporated herein by reference.
 - ⁽⁸⁾ Filed as Exhibit 4.1 to Registrant's Registration Statement on Form S-3 (Registration No. 333-162968) filed November 6, 2009, and incorporated herein by reference.
 - ⁽⁹⁾ Filed as Exhibit No. 28.1 to Registrant's Registration Statement on Form S-8 (Registration No. 33-50640), and incorporated herein by reference.
 - ⁽¹⁰⁾ Filed as an Exhibit with corresponding Exhibit No. to Registrant's Annual Report on Form 10-K for the year ended December 31, 2007, and incorporated herein by reference.
 - ⁽¹¹⁾ Filed as an Exhibit with corresponding Exhibit No. to Registrant's Annual Report on Form 10-K for the year ended December 31, 1997, and incorporated herein by reference.
 - ⁽¹²⁾ Filed as Exhibit No. 99.1 to Registrant's Registration Statement on Form S-8 (Registration No. 333-90428), and incorporated herein by reference.
 - ⁽¹³⁾ Filed as Exhibit 10.AA to Registrant's Form 10-Q filed November 7, 2006, and incorporated herein by reference.
 - ⁽¹⁴⁾ Filed as Exhibit 10-Y to Registrant's Form 10-Q filed May 15, 2006, and incorporated herein by reference.
 - ⁽¹⁵⁾ Filed as Exhibit 10.14 to the Registrant's Form 10-Q filed November 14, 2007 and incorporated herein by reference.
 - ⁽¹⁶⁾ Filed as Exhibit 10.15 to the Registrant's Form 10-Q filed November 14, 2007 and incorporated herein by reference.
 - ⁽¹⁷⁾ Filed as Exhibit No 4.1 to Registrant's Registration Statement on Form S-8 (Registration No. 333-148660) and incorporated herein by reference.
 - ⁽¹⁸⁾ Filed as Exhibit no. 4.3 to Registrant's Registration Statement on Form S-8 (Registration No 333-148660) and incorporated herein by reference.
 - ⁽¹⁹⁾ Filed as Exhibit No 4.4 to Registrant's Registration Statement on Form S-8 (Registration No. 333-148660), and incorporated herein by reference.
 - ⁽²⁰⁾ Filed as an Exhibit with corresponding Exhibit No. to Registrant's Annual Report on Form 10-K for the year ended December 31, 1992, and incorporated herein by reference.
 - ⁽²¹⁾ Filed as Exhibit 10.16 to the Registrant's Form 10-Q dated November 14, 2007 and incorporated herein by reference.
 - ⁽²²⁾ Filed as Exhibit No. 99.2 to Registrant's Registration Statement on Form S-8 (Registration No. 333-90428), and incorporated herein by reference.
 - ⁽²³⁾ Filed as an Exhibit with corresponding Exhibit No. to the Registrant's Form 10-Q filed August 14, 2008, and incorporated herein by reference.
 - ⁽²⁴⁾ Filed as an Exhibit with corresponding Exhibit No. to Registrant's Annual Report on Form 10-K filed March 30, 2009, and incorporated herein by reference.
 - ⁽²⁵⁾ Filed as Exhibit 10.1 to the Registrant's Form 10-Q filed November 16, 2009 and incorporated herein by reference.
 - ⁽²⁶⁾ Filed as Exhibit 10.1 to the Registrant's Form 8-K filed on October 22, 2009 and incorporated herein by reference.
 - ⁽²⁷⁾ Filed as Exhibit 10.2 to the Registrant's Form 8-K filed on October 22, 2009 and incorporated herein by reference.
 - ⁽²⁸⁾ Filed as Exhibit 10.3 to the Registrant's Form 8-K filed on October 22, 2009 and incorporated herein by reference.
 - ⁽²⁹⁾ Filed as Exhibit 10.4 to the Registrant's Form 8-K filed on October 22, 2009 and incorporated herein by reference.
 - ⁽³⁰⁾ Filed as Exhibit 10.1 to the Registrant's Form 8-K filed on June 1, 2010 and incorporated herein by reference.
- * Management contract or compensatory plans.

CERTIFICATIONS

I, John B. Whelan, certify that:

1. I have reviewed this annual report on Form 10-K/A of A.P. Pharma, Inc. (the "registrant") ;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under my supervision to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonable likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's Board of Directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonable likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 2, 2011

/s/ John B. Whelan

John B. Whelan
Chief Executive Officer

CERTIFICATIONS

I, John B. Whelan, certify that:

1. I have reviewed this annual report on Form 10-K/A of A.P. Pharma, Inc. (the "registrant") ;
2. Based on my knowledge, this report does not contain any untrue statement of a material fact or omit to state a material fact necessary to make the statements made, in light of the circumstances under which such statements were made, not misleading with respect to the period covered by this report;
3. Based on my knowledge, the financial statements, and other financial information included in this report, fairly present in all material respects the financial condition, results of operations and cash flows of the registrant as of, and for, the periods presented in this report;
4. The registrant's other certifying officer and I are responsible for establishing and maintaining disclosure controls and procedures (as defined in Exchange Act Rules 13a-15(e) and 15d-15(e)) and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)) for the registrant and have:
 - a) Designed such disclosure controls and procedures, or caused such disclosure controls and procedures to be designed under my supervision, to ensure that material information relating to the registrant, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;
 - b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under my supervision to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles;
 - c) Evaluated the effectiveness of the registrant's disclosure controls and procedures and presented in this report our conclusions about the effectiveness of the disclosure controls and procedures, as of the end of the period covered by this report based on such evaluation; and
 - d) Disclosed in this report any change in the registrant's internal control over financial reporting that occurred during the registrant's most recent fiscal quarter (the registrant's fourth fiscal quarter in the case of an annual report) that has materially affected, or is reasonable likely to materially affect, the registrant's internal control over financial reporting; and
5. The registrant's other certifying officer and I have disclosed, based on our most recent evaluation of internal control over financial reporting, to the registrant's auditors and the audit committee of registrant's Board of Directors (or persons performing the equivalent functions):
 - a) All significant deficiencies and material weaknesses in the design or operation of internal control over financial reporting which are reasonable likely to adversely affect the registrant's ability to record, process, summarize and report financial information; and
 - b) Any fraud, whether or not material, that involves management or other employees who have a significant role in the registrant's internal control over financial reporting.

Date: May 2, 2011

/s/ John B. Whelan

John B. Whelan
Chief Financial Officer

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of A.P. Pharma, Inc. (the "Company") on Form 10-K/A for the year ending December 31, 2010 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John B. Whelan, Chief Executive Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ John B. Whelan

John B. Whelan
Chief Executive Officer
May 2, 2011

**CERTIFICATION PURSUANT TO 18 U.S.C. SECTION 1350, AS ADOPTED
PURSUANT TO SECTION 906 OF THE SARBANES-OXLEY ACT OF 2002**

In connection with the Annual Report of A.P. Pharma, Inc. (the "Company") on Form 10-K/A for the year ending December 31, 2010 as filed with the Securities and Exchange Commission on the date hereof (the "Report"), I, John B. Whelan, Chief Financial Officer of the Company, certify, pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002, that:

- (1) The Report fully complies with the requirements of section 13(a) or 15(d) of the Securities Exchange Act of 1934; and
- (2) The information contained in the Report fairly presents, in all material respects, the financial condition and result of operations of the Company.

/s/ John B. Whelan

John B. Whelan
Chief Financial Officer
May 2, 2011