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Filed pursuant to Rule 424(b)(3) and Rule 424(c)
Registration No. 333-175905

PROSPECTUS SUPPLEMENT NO. 1

A.P. PHARMA, INC.

240,000,011 shares of Common Stock

This prospectus supplement amends the prospectus dated April 2, 2012 to allow certain stockholders or their pledgees, donees, transferees, or other successors in interest (the "Selling Stockholders"), to sell, from time to time, up to 240,000,011 shares of our common stock (the "Common Stock"). The Common Stock covered by this prospectus consists of (i) 160,000,006 shares of Common Stock which were issued pursuant to a Securities Purchase Agreement we entered into on June 29, 2011 and (ii) 80,000,005 shares of Common Stock issuable upon exercise of warrants issued pursuant to the Securities Purchase Agreement (the "Warrants").

We would not receive any proceeds from any such sale of these Shares. To the extent any of the warrants are exercised for cash, if at all, we will receive the exercise price for those warrants.

This prospectus supplement is being filed to include the information set forth in the Current Report on Form 10-Q filed on May 10, 2012, which is set forth below. This prospectus supplement should be read in conjunction with the prospectus dated April 2, 2012, which is to be delivered with this prospectus supplement.

Our Common Stock is quoted on the OTC Bulletin Board under the symbol "APPA.OB". On May 9, 2012, the last reported sale price per share of our Common Stock on the OTC Bulletin Board was $0.43. Our principal executive offices are located at 123 Saginaw Drive, Redwood City, California 94063, and our telephone number is (650) 366-2626.

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

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

THE DATE OF THIS PROSPECTUS SUPPLEMENT NO. 1 IS MAY 10, 2012

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

FORM 10-Q

☒ **Quarterly Report Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934**

For the quarterly period ended March 31, 2012

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	**94-2875566**
(State or other jurisdiction of incorporation)	**(I.R.S. Employer Identification No.)**
123 Saginaw Drive, Redwood City, CA	**94063**
(Address of principal executive offices)	**(Zip Code)**

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

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

Large accelerated filer	☐	Accelerated filer	☐
Non-accelerated filer	☐	Small 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 ☒

As of April 30, 2012, 200,046,292 shares of the registrant's Common Stock, $0.01 par value per share, were outstanding.

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A.P. Pharma, Inc.

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PART I. Financial Information.

Item 1: Financial Statements.

A.P. Pharma, Inc.
Condensed Balance Sheets
(in thousands)

	March 31, 2012 (Unaudited)	December 31, 2011 (Note 1)
Assets		
Current assets:		
Cash and cash equivalents	$ 13,444	$ 17,974
Prepaid expenses and other current assets	306	266
Total current assets	13,750	18,240
Property and equipment, net	1,114	1,075
Other long-term assets	130	130
Total assets	$ 14,994	$ 19,445
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 890	$ 1,010
Accrued expenses	1,155	1,498
Accrued disposition costs	1,173	1,082
Convertible notes payable to related parties, net of discount	143	103
Total current liabilities	3,361	3,693
Total liabilities	3,361	3,693
Stockholders' equity:		
Common stock	2,002	2,002
Additional paid-in capital	174,791	173,989
Accumulated deficit	(165,160)	(160,239)
Total stockholders' equity	11,633	15,752
Total liabilities and stockholders' equity	$ 14,994	$ 19,445

See accompanying notes to condensed financial statements.

A.P. Pharma, Inc.

Condensed Statements of Operations
(in thousands, except per share amounts)
(Unaudited)

	Three Months Ended March 31,	
	2012	2011
Contract revenue	$ —	$ 395
Operating expenses:		
Research and development	3,329	1,141
General and administrative	1,440	569
Total operating expenses	4,769	1,710
Operating loss	(4,769)	(1,315)
Interest expense, net	(61)	(1)
Loss from continuing operations	(4,830)	(1,316)
Loss from discontinued operations	(91)	(103)
Net loss	$ (4,921)	$ (1,419)
Basic and diluted net loss per share:		
Loss from continuing operations	$ (0.02)	$ (0.03)
Net loss	$ (0.02)	$ (0.04)
Shares used to compute basic and diluted net loss per share	200,046	39,869

See accompanying notes to condensed financial statements.

A.P. Pharma, Inc.

Condensed Statements of Cash Flows
(in thousands)
(Unaudited)

	Three Months Ended March 31,	
	2012	2011
Cash flows from operating activities:		
Net loss	$ (4,921)	$ (1,419)
Adjustments to reconcile net loss to net cash used in operating activities:		
Loss from discontinued operations	91	103
Depreciation and amortization	51	48
Stock-based compensation	778	239
Amortization of debt discount	40	—
Changes in operating assets and liabilities:		
Accounts receivable	—	(151)
Prepaid expenses and other current assets	(40)	125
Accounts payable	198	150
Accrued expenses	(304)	(103)
Deferred revenue	—	(16)
Net cash used in operating activities	(4,107)	(1,024)
Cash flows from investing activities:		
Purchases of property and equipment	(423)	—
Net cash used in investing activities	(423)	—
Net decrease in cash and cash equivalents	(4,530)	(1,024)
Cash and cash equivalents, beginning of period	17,974	2,109
Cash and cash equivalents, end of period	$ 13,444	$ 1,085

See accompanying notes to condensed financial statements.

A.P. Pharma, Inc.

Notes to Condensed Financial Statements
(unaudited)

(1) BUSINESS AND BASIS OF PRESENTATION

A.P. Pharma, Inc. (the "Company," "we," "us" and "our") is a specialty pharmaceutical company focused on developing pharmaceutical products using our proprietary Biochronomer™ polymer-based drug delivery technology. Our primary focus is on our lead product candidate, APF530, which is being developed for the prevention of chemotherapy-induced nausea and vomiting (CINV). APF530 utilizes our Biochronomer technology and is a long-acting formulation of granisetron. The Biochronomer technology consists of bioerodible polymers designed to release drugs over a defined period of time. In May 2009, we filed a New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA) seeking approval for APF530. The FDA issued a Complete Response Letter for APF530 in March 2010. We have been working to address the issues raised by the FDA and met with the FDA in February and March 2011 to clarify the work needed to resubmit the NDA. Based on our discussions with the FDA and our assessment of the work remaining, we expect to resubmit the APF530 NDA in mid-2012. We are exploring plans to commercialize APF530 on our own or with a collaborative partner. If we pursue commercialization of APF530 without a partner, we anticipate seeking additional funding and resources that would be required to launch APF530.

We previously submitted Investigational New Drug (IND) applications for two other product candidates, APF112 and APF580. Since 2009, further development of these product candidates has been deferred in order to focus both managerial and financial resources on the development of APF530. We are currently evaluating applications of our Biochronomer delivery technology, including APF112 and APF580, to determine potential pipeline candidates following the possible approval of APF530.

The accompanying unaudited condensed financial statements have been prepared in accordance with U.S. generally accepted accounting principles (U.S. GAAP) for interim financial information and with the instructions to Form 10-Q and Article 8 of Regulation S-X. Accordingly, they do not include all of the information and footnotes required by U.S. GAAP for complete financial statements. All adjustments (all of which are of a normal recurring nature) considered necessary for a fair presentation have been included. We have evaluated subsequent events through the date that these financial statements were issued. Operating results for the three months ended March 31, 2012 are not necessarily indicative of the results that may be expected for the year ending December 31, 2012 or for any other period. The condensed balance sheet as of December 31, 2011 has been derived from the audited financial statements as of that date, but it does not include all of the information and notes required by U.S. GAAP. These unaudited condensed financial statements and the notes thereto should be read in conjunction with the audited financial statements and notes thereto, included in our Annual Report on Form 10-K for the year ended December 31, 2011 filed with the Securities and Exchange Commission (SEC) on March 26, 2012 (our 2011 10-K).

Liquidity

We have incurred significant operating losses and negative cash flows from operations and have an accumulated deficit of $165.2 million as of March 31, 2012. During 2011, we entered into two financing agreements, which have provided us capital to fund operations. In April 2011, we entered into definitive agreements for a convertible note financing, which served as a bridge loan to fund the Company's operations until additional financing was secured. The initial capital funding from the bridge loan was approximately $1.3 million, net of financing costs. In June 2011, we entered into definitive agreements for a private placement of units, which comprised of common stock and warrants. The unit financing, which closed in July 2011, provided the Company with approximately $22.8 million of proceeds, net of issuance costs. At March 31, 2012, we had cash and cash equivalents of $13.4 million. In May 2012, we received $3.0 million of cash through the issuance of additional convertible notes (See Note 11). The Company believes its current capital is sufficient to fund its planned operations into 2013.

A.P. Pharma, Inc.

Notes to Condensed Financial Statements—(Continued)
(unaudited)

Critical Accounting Policies and Estimates

The preparation of financial statements in conformity with U.S. GAAP requires our management to make estimates and assumptions about future events that affect the amounts reported in the financial statements and accompanying notes. Actual results could differ materially from those estimates. We evaluate our critical accounting policies and estimates on an ongoing basis. We base our estimates on historical experience and on various other assumptions that we believe to be reasonable under the circumstances. Actual results may differ from these estimates under different assumptions or conditions. Our critical accounting policies and estimates are discussed in our 2011 10-K.

Recent Accounting Pronouncements

There have been no recent accounting pronouncements or changes in accounting pronouncements during the three months ended March 31, 2012, as compared to the recent accounting pronouncements described in our 2011 10-K, that are of significance, or potential significance to us.

(2) CASH EQUIVALENTS

Our available-for-sale securities as of March 31, 2012 and December 31, 2011 consisted of money market funds primarily containing U.S. government-backed securities, with original maturities of ninety days or less. The carrying value of our money market funds is included in cash equivalents and approximates their fair value. The Company's bank accounts have been placed under a control agreement in accordance with the April 2011 convertible note financing (see Note 9).

(3) FAIR VALUE MEASUREMENTS

The three-tier fair value hierarchy utilized prioritizes the inputs used in measuring fair value as follows: Level 1) observable inputs such as quoted prices in active markets; Level 2) inputs other than the quoted prices in active markets that are observable either directly or indirectly; and Level 3) unobservable inputs in which there is little or no market data, which require us to develop our own assumptions. The hierarchy requires us to use observable market data, when available, and to minimize the use of unobservable inputs when determining fair value. On a recurring basis, we measure our available-for-sale securities at fair value. We used quoted prices in active markets (Level l) to measure the fair value of our cash equivalents in our balance sheets at March 31, 2012 and December 31, 2011. Cash equivalents consist of highly rated money market funds with maturities of ninety days or less. Due to the high ratings and short-term nature of these funds, we consider the inputs used to value all cash equivalents as Level 1 inputs.

(4) NET LOSS PER SHARE

Basic and diluted net loss per share is computed by dividing net loss by the weighted average number of common shares outstanding for the applicable period. Diluted net loss per share excludes the effect of outstanding potentially dilutive securities because they are anti-dilutive. The following table shows the outstanding potentially dilutive options, unvested restricted stock awards, warrants and convertible notes for the three months ended March 31, 2012 and 2011 (in thousands):

	Three Months Ended March 31,	
	2012	2011
Options outstanding	52,363	3,211
Unvested restricted stock awards outstanding	—	240
Warrants outstanding	84,127	3,977
Common stock underlying convertible notes outstanding	39,921	—

A.P. Pharma, Inc.

Notes to Condensed Financial Statements—(Continued)
(unaudited)

(5) STOCK-BASED COMPENSATION

The following table summarizes the stock-based compensation expense for all awards (in thousands, except per share amounts):

	Three Months Ended March 31,	
	2012	2011
Operating expenses:		
Research and development	$ 304	$ 75
General and administrative	474	164
Total stock-based compensation expense	$ 778	$ 239
Impact on basic and diluted net loss per common share	$ 0.00	$ 0.01

The following table summarizes option activity for the three months ended March 31, 2012:

	Shares	Weighted-Average Exercise Price	Weighted-Average Remaining Contractual Term (Years)
Outstanding at January 1, 2012	50,106	$ 0.31	9.42
Granted	3,150	$ 0.33	
Exercised	—		
Expired and Forfeited	(893)	$ 0.46	
Outstanding at March 31, 2012	52,363	$ 0.31	8.2

Employee Stock Purchase Plan. We adopted an Employee Stock Purchase Plan (Purchase Plan) in 1997. Qualified employees may elect to have a certain percentage of their salary withheld to purchase shares of our common stock under the Purchase Plan. In June 2011, our stockholders authorized an increase in the number of shares reserved for issuance under the Purchase Plan by 500,000, for a total of 1,000,000 shares reserved at March 31, 2012. The purchase price per share is equal to 85% of the fair market value of the stock on specified dates. There were no sales under the Purchase Plan during the three months ended March 31, 2012 and 2011.

(6) COMPREHENSIVE LOSS

Comprehensive loss for the periods reported was comprised solely of our net loss. The comprehensive loss for the three months ended March 31, 2012 and 2011 was $4.9 million and $1.4 million, respectively. There were no other changes in equity that were excluded from our net loss for all periods.

(7) DISCONTINUED OPERATIONS

Cosmeceutical and Toiletry Business

On July 25, 2000, we completed the sale of certain technology rights for our cosmeceutical and toiletry business to RP Scherer Corporation (RP Scherer), a subsidiary of Cardinal Health, Inc. Under the terms of the agreement with RP Scherer, we guaranteed a minimum gross profit percentage on RP Scherer's combined sales of products to Ortho Dermatologics

A.P. Pharma, Inc.

Notes to Condensed Financial Statements—(Continued)
(unaudited)

(Ortho) and Dermik Laboratories, Inc. (Dermik) (Gross Profit Guaranty). In July 2011, Valeant Pharmaceuticals announced that it was acquiring both Ortho and Dermik. The guaranty period initially commenced on July 1, 2000 and was to end on the earlier of: (i) July 1, 2010; or (ii) the end of two consecutive guaranty periods where the combined gross profit on sales to Ortho and Dermik equaled or exceeded the guaranteed gross profit (Two Period Test). The Gross Profit Guaranty expense totaled $944,000 for the first seven guaranty years and in those years profits did not meet the Two Period Test. Effective March 2007, in conjunction with a sale of assets by RP Scherer's successor company to an Amcol International subsidiary (Amcol), a new agreement was signed between us and Amcol, in order to provide continuity of product supply to Ortho and Dermik. This new agreement potentially extends the Gross Profit Guaranty period an additional three years to July 1, 2013, unless it is terminated earlier with the Two Period Test. Amcol has indicated that its costs to produce the products differ from those it historically charged to the RP Scherer successor company. We have requested documentation from Amcol to substantiate actual costs. Until we receive confirmation of these amounts, we have accrued the full amount Amcol represents it is currently owed. As there is no minimum amount of Gross Profit Guaranty due, no accrual for the guaranty is estimable for future years. A liability of $1.2 million related to the current amount due under the Gross Profit Guaranty is recorded as accrued disposition costs in the Condensed Balance Sheet at March 31, 2012. To date, we have not paid this amount, due to our inability to substantiate the amounts claimed by Amcol. As of the date of filing of this report, our dispute with Amcol over the Gross Profit Guaranty has been submitted to an independent accountant for resolution.

The cosmeceutical and toiletry business is reported as discontinued operations for all periods presented in the accompanying Condensed Statements of Operations.

Loss from discontinued operations primarily represents the loss attributable to changes in estimates of our cosmeceutical and toiletry business that was sold to RP Scherer on July 25, 2000, as follows (in thousands):

	Three Months Ended March 31,	
	2012	2011
Cosmeceutical and Toiletry Business		
Change in estimates for gross profit guarantees	$ (91)	$ (103)

There was no material basic and diluted loss per common share resulting from discontinued operations for the three months ended March 31, 2012 and 2011.

(8) SIGNIFICANT AGREEMENTS

Merial Limited

In September 2009, we entered into a world-wide license and development agreement with Merial Limited (Merial), a leading animal health company, for a long-acting pain management product for cats and dogs. Under the terms of the agreement, we received a nonrefundable upfront license fee and would receive development funding and potential future milestones, in addition to royalties following commercialization. Under the license and development agreement, we were obligated to perform reimbursable development services and provide any improvements related to the licensed technology during the six-year development period. We recognized the upfront license fee ratably over the development period, and recognized revenue from the development services when the services were rendered.

In May 2011, we received notice of termination from Merial due to their concerns about the commercial potential of the product under development in the animal health market. We recognized $0 and $0.4 million of revenue related to development services provided to Merial in the three months ended March 31, 2012 and 2011, respectively. The remaining balance of deferred revenue related to the upfront license fee of $0.1 million was recognized as revenue in the quarter ended June 30, 2011, upon termination of the licensing agreement by Merial.

(9) CONVERTIBLE NOTES TO RELATED PARTIES

In April 2011, we entered into a Securities Purchase Agreement (Purchase Agreement) with certain institutional investors (Purchasers), including a fund affiliated with Kevin C. Tang, who is one of our directors, for a private placement of up to $4.5 million in Senior Secured Convertible Notes due 2021 (Notes). Pursuant to the Purchase Agreement, the Company may issue up to $4.5 million aggregate principal amount of Notes, which are convertible into shares of the Company's

A.P. Pharma, Inc.

Notes to Condensed Financial Statements—(Continued)
(unaudited)

common stock at a rate of 25,000 shares for every $1,000 of principal and accrued interest due under the Notes (Conversion Shares). The initial funding from the bridge loan, which resulted in the issuance of $1.5 million aggregate principal amount of Notes, was approximately $1.3 million, net of financing costs. In May 2012, we received $3.0 million of cash through the issuance of the remaining Notes (See Note 11). The holders of the Notes may require prepayment of the Notes at any time beginning on or after May 2, 2012, at each holder's option.

The Notes are secured by substantially all of the assets of the Company, including placing our bank accounts under a control agreement. The Notes initially bore interest at 20% per annum, payable quarterly in cash or in additional principal amount of Notes at the election of the Purchasers. In June 2011, the Notes were amended to reduce the interest rate to 6% per annum effective July 1, 2011.

There is no right to convert the Notes to the extent that after giving effect to such conversion, the holder would beneficially own in excess of 9.99% of the Company's outstanding common stock after the conversion. Each holder of the Notes can increase or decrease this beneficial ownership conversion limit by written notice to the Company, which will not be effective until 61 days after delivery of the notice.

The Company is in compliance with all debt-related covenants at March 31, 2012. Upon the occurrence of an event of default, holders of the Notes have the right to require the Company to redeem all or a portion of their Notes.

Pursuant to the Purchase Agreement, the Company agreed to file a registration statement registering the Conversion Shares for resale. In May 2011, the Company filed a registration statement on Form S-1 registering these shares for resale; the registration statement was declared effective on July 29, 2011.

Concurrent with the approval of the offer and sale of the Notes, the Board of Directors approved the termination of the Company's Preferred Shares Rights Agreement (Rights Agreement), effective immediately prior to the initial closing date. Under the Rights Agreement, preferred stock purchase rights were distributed to stockholders of record as of January 2, 2007 and to each person who acquires the company stock thereafter. The rights were exercisable only upon the acquisition, or the acquisition of the right to acquire, by a person or group of affiliated or associated persons, of 20% or more (34% for Tang Capital Partners, LP and 30% for Baker Brothers Investments) of the outstanding shares of the company's common stock. These rights were terminated as a result of the termination of the Rights Agreement. The Rights Agreement had not been triggered as of that date.

The Notes contain an embedded conversion feature which was in-the-money on the issuance date. Based on an effective fixed conversion rate of 25,000 shares for every $1,000 of principal and accrued interest due under the Notes, the total conversion benefit at issuance exceeded the loan proceeds. Therefore, a full debt discount was recorded in an amount equal to the face value of the Notes on the issuance date and the Company began amortizing the resultant debt discount over the 10-year term of the Notes. During the three months ended March 31, 2012, accrued interest of approximately $24,000 was paid-in-kind and rolled into the Note principal balance, which resulted in an additional debt discount of approximately $24,000. For the three months ended March 31, 2012, interest expense relating to the stated rate was approximately $24,000, and interest expense relating to the amortization of the debt discount was approximately $40,000.

As of March 31, 2012, the carrying value of the Notes was approximately $143,000, which is comprised of the $1,597,000 principal amount of the Note outstanding, less debt discount of $1,454,000. Accrued interest on the principal balance was $24,000 at March 31, 2012.

(10) STOCKHOLDERS' EQUITY

Amendments to Articles of Incorporation

In June 2011, we amended our certificate of incorporation to increase the number of shares of authorized common stock to 1,500,000,000, par value $0.01 per share. Prior to the amendment, the number of shares of authorized common stock was 100,000,000, par value $0.01 per share. The certificate of amendment was approved by a majority of our stockholders on June 29, 2011.

Stock Plans

At our annual meeting in June 2011, our stockholders approved an amendment to our 2007 Equity Incentive Plan to increase the maximum number of shares of common stock available for grant by 90,000,000 shares of common stock,

A.P. Pharma, Inc.

Notes to Condensed Financial Statements—(Continued)
(unaudited)

resulting in an aggregate of 95,000,000 shares of common stock authorized for issuance pursuant to awards granted under our 2007 Equity Incentive Plan. The stockholders also approved an amendment to our 1997 Employee Stock Purchase Plan to increase by 500,000 the number of shares of common stock reserved for issuance under the plan, for a total of 1,000,000 shares reserved as of March 31, 2012.

Private Placement

In June 2011, the Company entered into a Securities Purchase Agreement with certain purchasers (Securities Purchase Agreement), pursuant to which the Company agreed to sell for an aggregate price of $24.0 million, 160,000,006 shares of its common stock (Shares) and warrants to purchase 80,000,005 shares of its common stock (Warrants) at an exercise price of $0.18 per share (Private Placement). The Private Placement closed on July 1, 2011. For each Share purchased, the investors received one Warrant to purchase 0.5 shares of common stock (together with a Share, a Unit), at a purchase price of $0.15 per Unit. The Warrants were immediately exercisable and expire on the fifth anniversary of the closing date of July 1, 2011. The Warrants may be exercised for cash only or, if a registration statement is not then effective and available for the resale of the shares of common stock issuable upon exercise of the Warrants, by surrender of such Warrant, or a portion of such Warrant, by way of cashless exercise. There is no right to exercise the Warrants to the extent that after giving effect to such exercise the holder would beneficially own in excess of 9.99% of the outstanding shares of common stock following such exercise (or such other limit as may be designated by any particular purchaser). Each holder of the Warrants can amend or waive the foregoing limitation by written notice to the Company, with such waiver taking effect only upon the expiration of a 61-day notice period.

Under the terms of the Securities Purchase Agreement, on July 29, 2011, the Company filed a registration statement with the SEC to register for resale the Shares and the shares of common stock issuable upon the exercise of the Warrants (collectively, the Registrable Securities). The registration statement was declared effective on August 4, 2011. If the Company fails to keep the registration statement continuously effective for a designated time (with limited exceptions), the Company may be obligated to pay to the holders of the Registrable Securities liquidated damages in an amount equal to 1.0% per month of such holder’s pro rata interest in the total purchase price of the Private Placement.

The Company had received advance proceeds of approximately $20.3 million as of June 30, 2011. The remaining $3.7 million was received in July 2011 when the financing closed. Total proceeds were reported net of issuance costs of approximately $1.2 million. The Shares and Warrants were recorded as equity at their fair values on the issuance date.

(11) SUBSEQUENT EVENTS

On May 8, 2012, we received $3.0 million in cash through the issuance of Notes pursuant to the subsequent closing under the April 2011 Purchase Agreement (See Note 9). The Notes, which are convertible into shares of the Company’s common stock at a rate of 25,000 shares for every $1,000 of principal, bear interest at 6% per annum and mature on May 2, 2021. The Purchasers have purchased the full amount of Notes that the Company was obligated to sell under the Purchase Agreement. If the $4.5 million principal amount of Notes are converted, the Company would issue 112.5 million shares of its common stock.

Item 2. Management's Discussion and Analysis of Financial Condition and Results of Operations

Forward-looking Statements

This Form 10-Q contains "forward-looking statements" as defined by the Private Securities Reform Act of 1995. These forward-looking statements involve risks and uncertainties, including uncertainties associated with: the progress of our research, development and clinical programs; the possibility that the FDA will require us to take additional steps before resubmitting our NDA for APF530, which will require substantial time and expense on our part; the timing of regulatory approval and commercial introduction of APF530 and future product candidates; our ability to market, commercialize and achieve market acceptance for APF530 or other future product candidates; our ability to establish collaborations for our technology, APF530 and other future product candidates; our estimates for future performance; our estimates regarding our capital requirements and our needs for additional financing; our ability to protect or enforce our intellectual property rights, volatility in the trading price or our common stock, and other risks and uncertainties identified in our 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.

Overview

We are a specialty pharmaceutical company focused on developing pharmaceutical products using our proprietary Biochronomer polymer-based drug delivery technology. The Biochronomer technology consists of bioerodible polymers designed to release drugs over a defined period of time. Our primary focus is on our lead product candidate, APF530, which is being developed for the prevention of chemotherapy-induced nausea and vomiting (CINV). APF530 utilizes our Biochronomer technology and is a long-acting formulation of granisetron. In May 2009, we filed a New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA) seeking approval for APF530. The FDA issued a Complete Response Letter for APF530 in March 2010. We have been working to address the issues raised by the FDA and met with the FDA in February and March 2011 to clarify the work needed to resubmit the NDA. Based on our discussions with the FDA and our assessment of the work remaining, we expect to resubmit the APF530 NDA in mid-2012. We are exploring plans to commercialize APF530 on our own or with a collaborative partner. If we pursue commercialization of APF530 without a partner, we anticipate seeking additional funding and resources that would be required to launch APF530.

We previously submitted Investigational New Drug (IND) applications for two other product candidates, APF112 and APF580. Since 2009, further development of these product candidates has been deferred in order to focus both managerial and financial resources on the development of APF530. We are currently evaluating applications of our Biochronomer delivery technology, including APF112 and APF580, to determine potential pipeline candidates following the possible approval of APF530.

Critical Accounting Policies and Estimates

We prepare our consolidated financial statements in accordance with U.S. generally accepted accounting principles, which requires management to make estimates and assumptions. Management bases these estimates and assumptions on historical results and known trends as well as management forecasts. Actual results could differ from these estimates and assumptions. See our Annual Report on Form 10-K for the year ended December 31, 2011, Part II, Item 7 — "Management's Discussion and Analysis of Financial Condition and Results of Operations-Critical Accounting Policies and Estimates."

Recent Accounting Pronouncements

There have been no recent accounting pronouncements or changes in accounting pronouncements during the three months ended March 31, 2012, as compared to the recent accounting pronouncements described in our 2011 10-K, that are of significance, or potential significance to us.

Results of Operations for the Three Months Ended March 31, 2012 and 2011

Contract revenue, which is derived from work performed under collaborative research and development arrangements, was $0 and $0.4 million for the three months ended March 31, 2012 and 2011, respectively. All of our contract revenue for the three months ended March 31, 2011 was derived from an agreement with Merial Limited (Merial) that we entered into in September 2009 for a long-acting pain management product for companion animals. In May 2011, we received notice of termination from Merial, as they did not see the commercial potential of the product under development in the animal health market.

Our research and development costs consist primarily of employee salaries and other personnel-related expenses, facility-related expenses, laboratory consumables, development manufacturing, clinical and pre-clinical related services performed by clinical research organizations, research institutions and other outside service providers.

Research and development expenses under collaborative agreements approximate the revenue recognized, excluding milestone and up-front payments received under such arrangements.

Research and development expense for the three months ended March 31, 2012 increased by $2.2 million to $3.3 million, from $1.1 million for the three months ended March 31, 2011. Compared to the prior year, headcount-related costs, including stock compensation expense, and project spending for APF530 were higher in the current fiscal quarter as we worked to address the issues raised by the FDA in the Complete Response Letter. Research and development expense for the year 2012 is expected to be higher as compared to 2011 due to project-related expenses and additional resources required for the NDA resubmission.

Our general and administrative costs consist of salaries and related expenses, professional fees, directors' fees, investor relations costs, insurance expense and related overhead cost allocation.

General and administrative expense for the three months ended March 31, 2012 increased by $0.8 million to $1.4 million, from $0.6 million for the three months ended March 31, 2011. The increase in the current fiscal quarter was primarily due to higher consulting costs, professional fees and stock compensation expense. General and administrative expense for the year 2012 is expected to be higher as compared to 2011 due to increased support activities related to the NDA resubmission.

Interest expense, net was $61,000 and $1,000 for the three months ended March 31, 2012 and 2011, respectively. For the current fiscal quarter, interest expense, net consists primarily of interest expense and amortization of debt discount related to the April 2011 convertible note financing.

Loss from discontinued operations represents the loss attributable to the gross profit guaranty associated with the sale of our cosmeceutical and toiletry business. The loss from discontinued operations was $91,000 and $103,000 for the three months ended March 31, 2012 and 2011, respectively. See Note 7 of Notes to Condensed Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Capital Resources and Liquidity

We had cash and cash equivalents of $13.4 million at March 31, 2012. In May 2012, we received $3.0 million in cash through the issuance of convertible notes, which results in cash and cash equivalents of $16.4 million at March 31, 2012 on a pro forma basis. Cash and cash equivalents decreased by $4.5 million from December 31, 2011 to March 31, 2012, due primarily to cash used in operations.

Net cash used in operating activities for the three months ended March 31, 2012 was $4.1 million, compared to net cash used in operating activities of $1.0 million for the three months ended March 31, 2011. The $3.1 million increase in net cash used was primarily due to the increase in operating loss.

Net cash used in investing activities for the three months ended March 31, 2012 was $423,000, which was used for purchases of property and equipment.

Historically, we have financed our operations, including technology and product research and development, primarily through sales of our common stock and other securities, royalties received on sales of Retin-A Micro and Carac, the sale of our rights to royalties on sales of Retin-A Micro and Carac, income from collaborative research and development fees, proceeds received from the sales of our Analytical Standards division and our cosmeceutical and toiletry business and interest earned on short-term investments.

In April 2011, we entered into definitive agreements for a convertible note financing of up to $4.5 million, which served as a bridge loan to fund the Company's operations until additional financing was secured. The initial funding from the bridge loan was approximately $1.3 million, net of financing costs. In May 2012, we received $3.0 million of cash through the issuance of the remaining additional convertible notes.

In June 2011, we entered into definitive agreements for a private placement of units comprised of common stock and warrants, for which we received advance proceeds of $20.3 million as of June 30, 2011. The financing closed in July 2011, at which time the remaining $3.7 million was received. We believe the capital generated through these financings is sufficient to fund planned operations into 2013.

We are exploring plans to commercialize APF530 on our own or with a collaborative partner. If we pursue commercialization of APF530 without a partner, we anticipate seeking additional funding and resources that would be required to launch APF530. Based on our discussions with the FDA and our assessment of the work remaining, we expect to resubmit the APF530 NDA in mid-2012. We do not currently have the financial resources to launch APF530. The amount of additional funding that we may require depends on various factors, including the results of the on-going regulatory review by the FDA of our APF530 NDA, our efforts to respond to the FDA's Complete Response Letter, our ability to establish a partnership with a pharmaceutical company for the commercialization of APF530, the time and costs related to manufacturing of APF530, if approved, and technological and market developments of drugs that may compete with APF530. There can be no assurance that APF530 will be approved and, if approved, that we will be successful in obtaining the additional necessary financial resources and expertise, with or without a partner, that will be required to launch APF530.

Our capital requirements going forward will depend on numerous factors including: the number and characteristics of product development programs we pursue and the pace of each program; the scope, rate of progress, results and costs of preclinical testing and clinical trials; the time, cost and outcome involved in seeking regulatory approvals; scientific progress in our research and development programs; the magnitude and scope of our research and development programs; our ability to establish and maintain strategic collaborations or partnerships for research, development, clinical testing; manufacturing and marketing of our product candidates; the cost and timing of establishing sales, marketing and distribution capabilities for a specialty sales force if we commercialize any products independently; the cost of establishing clinical and commercial supplies of our product candidates and any products that we may develop; and general market conditions.

We may not be able to raise sufficient additional capital when we need it or to raise capital on favorable terms. The sale of additional equity in the future may be dilutive to our stockholders. If we are unable to obtain adequate funds on reasonable terms, we may be required to curtail operations significantly or to obtain funds by entering into financing, supply or collaboration agreements on unattractive terms.

Contractual Obligations

Below is a summary of fixed payments related to certain contractual obligations (in millions), consisting solely of our operating lease obligations. This table excludes amounts already recorded on our balance sheet as current liabilities as of March 31, 2012.

	Total	Less than 1 year	2 to 3 years	4 to 5 years	More than 5 years
Other operating leases	$3.5	$ 0.7	$1.5	$1.3	$ —

Under the terms of the agreement with RP Scherer, we guaranteed a minimum gross profit percentage on RP Scherer's combined sales of products to Ortho and Dermik. See Note 7 of Notes to Condensed Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

The holders of the convertible notes issued in May 2011 and May 2012 may require prepayment of the Notes at any time beginning on or after May 2, 2012 at each holder's option. See Notes 9 and 11 of Notes to Condensed Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Off- Balance Sheet Arrangements

As of March 31, 2012 we did not have any off-balance sheet arrangements.

Item 3. Quantitative and Qualitative Disclosures about Market Risk

Not applicable.

Item 4. Controls and Procedures

Evaluation of disclosure controls and procedures: We carried out an evaluation, under the supervision and with the participation of our management, including John B. Whelan, who serves as both our Chief Executive Officer and Chief Financial Officer, of the effectiveness of our disclosure controls and procedures as defined in Rule 13a-15(e) and 15(d)-15(e) of the Securities and Exchange Act of 1934. Based upon that evaluation, the Chief Executive Officer and Chief Financial Officer concluded that as of March 31, 2012, the end of period covered by this report, our disclosure controls and procedures were effective at the reasonable assurance level.

Changes in internal controls: During the three months ended March 31, 2012, there have been no significant changes in our internal control over financial reporting that materially affected, or are reasonably likely to materially affect, our internal control over financial reporting.

PART II. OTHER INFORMATION

Item 1. Legal Proceedings

Not applicable.

Item 1A. Risk Factors

Please see the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2011 (the "Annual Report"). The risk factors set forth in the Annual Report, along with those risks described above under "Management's Discussion and Analysis of Financial Condition and Results of Operations" and elsewhere herein should be reviewed carefully, in conjunction with the other information contained in this Form 10-Q and our financial statements. These factors, among others, could cause actual results to differ materially from those currently anticipated and contained in forward-looking statements made in this Form 10-Q and presented elsewhere by our management from time to time. See the discussion of forward-looking statements in "Part I, Item 2—Management's Discussion and Analysis of Financial Condition and Results of Operations."

Item 2. Unregistered Sales of Equity Securities and Use of Proceeds

Not applicable.

Item 3. Defaults Upon Senior Securities

Not applicable.

Item 4. Mine Safety Disclosures

Not applicable.

Item 5. Other Information

On May 8, 2012, the Company received $3.0 million in cash through the issuance of senior secured convertible notes due 2021 (Notes) in a subsequent closing under the Securities Purchase Agreement (Purchase Agreement) dated April 24, 2011 between the Company and the purchasers named therein (Purchasers). The initial issuance of $1.5 million aggregate principal amount of Notes pursuant to the Purchase Agreement was disclosed in a Current Report on Form 8-K filed with the Commission on April 24, 2011 (Note Issuance 8-K). Following the issuance of $3.0 million of Notes, the Purchasers have purchased the full amount of Notes that the Company was obligated to sell under the Purchase Agreement.

The Notes are secured by substantially all of the assets of the Company and bear interest at 6% per annum, payable

quarterly in cash or in additional principal amount of Notes at the election of the Purchasers. The Notes are convertible into shares of the Company's common stock at a conversion rate of 25,000 shares per $1,000 principal amount of Notes. Additional terms of the Notes are identical to those in the initial Notes described in the Note Issuance 8-K, including the conversion rate adjustments, beneficial ownership limit, events of default and registration rights obligations. However, the Purchasers have agreed to waive their right to require the Company to register the shares underlying the additional notes until they provide notice otherwise.

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 (Securities Act), and Regulation D under the Securities Act.

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

Item 6. Exhibits

Exhibit 31.1 - Certification of Chief Executive Officer pursuant to Rule 13a-14(a) promulgated under the Securities Exchange Act of 1934 as amended.

Exhibit 31.2 - Certification of Chief Financial Officer pursuant to Rule 13a-14(a) promulgated under the Securities Exchange Act of 1934 as amended.

Exhibit 32.1 - Certification of Chief Executive Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

Exhibit 32.2 - Certification of Chief Financial Officer pursuant to 18 U.S.C. Section 1350, as adopted pursuant to Section 906 of the Sarbanes-Oxley Act of 2002.

Exhibit 101.INS† XBRL Instance Document

Exhibit 101.SCH† XBRL Taxonomy Extension Schema Document

Exhibit 101.CAL† XBRL Taxonomy Extension Calculation Linkbase Document

Exhibit 101.DEF† XBRL Extension Definition

Exhibit 101.LAB† XBRL Taxonomy Extension Label Linkbase Document

Exhibit 101.PRE† XBRL Taxonomy Extension Presentation Linkbase Document

† XBRL information is furnished and not filed or a part of a registration statement or prospectus for purposes of Sections 11 or 12 of the Securities Exchange Act of 1933, as amended, is deemed not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and otherwise is not subject to liability under these sections.

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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 thereunto duly authorized.

A.P. PHARMA, INC.

/S/ JOHN B. WHELAN

John B. Whelan
President, Chief Executive Officer and Chief Financial Officer

Date: May 10, 2012

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Exhibit 31.1

SECTION 302 CERTIFICATIONS

I, John B. Whelan, Chief Executive Officer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of A.P. Pharma, Inc.;
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 our supervision, to ensure that material information relating to the registrant is made known to us by others, 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 our 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 reasonably 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 the 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 reasonably 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 10, 2012

/s/ John B. Whelan
John B. Whelan
Chief Executive Officer

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Exhibit 31.2

SECTION 302 CERTIFICATIONS

I, John B. Whelan, Chief Financial Officer, certify that:

1. I have reviewed this quarterly report on Form 10-Q of A.P. Pharma, Inc.;

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 our supervision, to ensure that material information relating to the registrant is made known to us by others, 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 our 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 reasonably 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 the 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 reasonably 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 10, 2012

/s/ John B. Whelan
John B. Whelan
Chief Financial Officer

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Exhibit 32.1

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 Quarterly Report of A.P. Pharma, Inc. (the "Company") on Form 10-Q for the period ending March 31, 2012 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 Section 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

May 10, 2012

/s/ John B. Whelan
John B. Whelan
Chief Executive Officer

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Exhibit 32.2

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 Quarterly Report of A.P. Pharma, Inc. (the "Company") on Form 10-Q for the period ending March 31, 2012 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 Section 15(d) of the Securities Exchange Act of 1934, as amended; and

(2) the information contained in the Report fairly presents, in all material respects, the financial condition and results of operations of the Company.

May 10, 2012

/s/ John B. Whelan
John B. Whelan
Chief Financial Officer