Table of Contents

Filed Pursuant to Rule 424(b)(3) and Rule 424(c)
Registration No. 333-174288

November 8, 2011

PROSPECTUS SUPPLEMENT NO. 2

69,600,669 SHARES OF COMMON STOCK

A.P. Pharma, Inc.

This prospectus supplement amends the prospectus dated July 29, 2011 (as supplemented on August 15, 2011) 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 69,600,669 shares of our common stock (the "Common Stock"), all of which are issuable upon the conversion of our Senior Secured Convertible Notes due 2021 or the "Notes" (such underlying shares being referred to as herein as the "Shares"). The number of shares registered in the Registration Statement is based upon the shares potentially issuable under the Notes at maturity in May 2021 (based on the current outstanding principal balance of $1,500,000 and assuming all interest payments are made in-kind). We note that the actual number of Shares that may be issued under the Notes may be less, if the Notes are converted prior to maturity or if the Note holders elect to receive interest payments in cash.

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 November 7, 2011, which is set forth below. This prospectus supplement should be read in conjunction with the prospectus dated July 29, 2011 and any supplements thereto, which are to be delivered with this prospectus supplement.

Our common stock is quoted on the OTCQB Market under the ticker symbol "APPA.PK." On November 7, 2011, the last reported closing price per share of our common stock was $0.26 per share.

Investing in our securities involves a high degree of risk. Before investing in any of our securities, you should read the discussion of material risks in investing in our common stock. See "Risk Factors" on page 3 of the prospectus.

Neither the Securities and Exchange Commission nor any state securities commission has approved or disapproved of these securities or passed upon the adequacy or accuracy of this prospectus. Any representation to the contrary is a criminal offense.

THE DATE OF THIS PROSPECTUS SUPPLEMENT NO. 2 IS NOVEMBER 8, 2011

Table of Contents

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 September 30, 2011

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 ☒

At October 31, 2011, the number of outstanding shares of the Company's common stock, par value $.01, was 200,017,796.

Table of Contents

A.P. Pharma, Inc.

INDEX

PART I. Financial Information

Item 1: Financial Statements:

A.P. Pharma, Inc.

Condensed Balance Sheets
(in thousands)

	September 30, 2011 (Unaudited)	December 31, 2010 (Note 1)
Assets		
Current assets:		
Cash and cash equivalents	$ 21,019	$ 2,109
Accounts receivable	—	110
Prepaid expenses and other current assets	301	282
Total current assets	21,320	2,501
Property and equipment, net	346	357
Other long-term assets	130	53
Total assets	$ 21,796	$ 2,911
Liabilities and Stockholders' Equity		
Current liabilities:		
Accounts payable	$ 433	$ 159
Accrued expenses	1,121	461
Accrued disposition costs	986	703
Deferred revenue	—	237
Total current liabilities	2,540	1,560
Convertible notes payable, net of discount	64	—
Deferred revenue	—	35
Total liabilities	2,604	1,595
Stockholders' equity:		
Common stock	2,002	401
Additional paid-in capital	173,168	149,340
Accumulated deficit	(155,978)	(148,425)
Total stockholders' equity	19,192	1,316
Total liabilities and stockholders' equity	$ 21,796	$ 2,911

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 September 30,		Nine Months Ended September 30,	
	2011	2010	2011	2010
Contract revenue	$ —	$ 351	$ 646	$ 1,122
Operating expenses:				
Research and development	2,929	1,541	5,352	5,762
General and administrative	1,160	445	2,238	3,561
Total operating expenses	4,089	1,986	7,590	9,323
Operating loss	(4,089)	(1,635)	(6,944)	(8,201)
Interest expense, net	(62)	(1)	(326)	(2)
Gain on sale of royalty interest	—	—	—	2,500
Loss from continuing operations	(4,151)	(1,636)	(7,270)	(5,703)
Loss from discontinued operations	(51)	(36)	(283)	(47)
Net loss	$ (4,202)	$ (1,672)	$ (7,553)	$ (5,750)
Basic and diluted net loss per share:				
Loss from continuing operations	$ (0.02)	$ (0.04)	$ (0.08)	$ (0.14)
Net loss	$ (0.02)	$ (0.04)	$ (0.08)	$ (0.15)
Shares used to compute basic and diluted net loss per share	198,279	39,507	93,381	39,481

See accompanying notes to condensed financial statements.

A.P. Pharma, Inc.

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

	Nine Months Ended September 30,	
	2011	2010
Cash flows from operating activities:		
Net loss	$ (7,553)	$ (5,750)
Adjustments to reconcile net loss to net cash used in operating activities:		
Loss from discontinued operations	283	47
Depreciation and amortization	137	178
Amortization of debt discount	64	—
Stock-based compensation	1,097	1,386
Changes in operating assets and liabilities:		
Accounts receivable	110	(157)
Prepaid expenses and other assets	(96)	338
Accounts payable	274	(5)
Accrued expenses	710	(524)
Deferred revenue	(272)	(76)
Net cash used in continuing operating activities	(5,246)	(4,563)
Net cash provided by discontinued operations	—	—
Net cash used in operating activities	(5,246)	(4,563)
Cash flows from investing activities:		
Purchases of property and equipment	(126)	(75)
Net cash used in investing activities	(126)	(75)
Cash flows from financing activities:		
Proceeds from sale of units of common stock and warrants, net of issuance costs	22,772	—
Proceeds from convertible note financing	1,500	—
Proceeds from the exercise of stock options	—	42
Proceeds from the issuance of shares under the Employee Stock Purchase Plan	10	18
Net cash provided by financing activities	24,282	60
Net increase (decrease) in cash and cash equivalents	18,910	(4,578)
Cash and cash equivalents, beginning of period	2,109	7,593
Cash and cash equivalents, end of period	$ 21,019	$ 3,015

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 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). In May 2009, we filed a New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA) under Section 505(b)(2) of the Federal Food, Drug and Cosmetic Act seeking approval for APF530. We are seeking regulatory approval of APF530 for the prevention of acute CINV for patients undergoing both moderately and highly emetogenic chemotherapy, and for prevention of delayed CINV for patients undergoing moderately emetogenic chemotherapy. In March 2010, we received a Complete Response Letter to the APF530 NDA. Since receiving the Complete Response Letter, we have been working to address the issues raised by the FDA. We 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 during the first half of 2012. If we obtain regulatory approval for APF530, we intend to seek a collaborative arrangement to commercialize APF530, or anticipate obtaining additional funding and resources that would be required to launch APF530 without a partner.

In addition to APF530, we have a pipeline of other product candidates that use our Biochronomer technology. Further development of our pipeline products has been temporarily deferred in order to focus managerial and financial resources on the APF530 resubmission responsive to issues identified in the March 2010 Complete Response Letter.

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 10 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 and nine months ended September 30, 2011 are not indicative of the results that may be expected for the year ending December 31, 2011 or for any other period. The condensed balance sheet as of December 31, 2010 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, 2010 filed with the Securities and Exchange Commission (SEC) on March 28, 2011, as amended on May 2, 2011 (our 2010 10-K).

Liquidity

We have incurred significant operating losses and negative cash flows from operations and have an accumulated deficit of $156.0 million as of September 30, 2011. At September 30, 2011, we had cash and cash equivalents of $21.0 million. During the three months ended June 30, 2011, we entered into two financing agreements which have provided capital to fund operations. In April 2011, we entered into definitive agreements for a convertible note financing, which served as 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 of common stock and warrants. The financing, which closed in July 2011, provided the Company with approximately $22.8 million of proceeds, net of issuance costs. The Company believes the capital generated through these financings is sufficient to fund its planned operations into 2013 and therefore, alleviates going concern considerations at this reporting date.

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. Except for the accounting policy mentioned below, our critical accounting policies and estimates are discussed in our 2010 10-K.

Warrants Issued in Connection with Equity Financings

We generally account for warrants issued in connection with equity financings as a component of equity, unless there is a deemed possibility that we may have to settle warrants in cash.

Recent Accounting Pronouncements

In June 2011, the Financial Accounting Standards Board (FASB) issued ASU 2011-05, *Comprehensive Income (Topic 220): Presentation of Comprehensive Income.* ASU 2011-05 eliminates the option to present the components of other comprehensive income as part of the statement of changes in stockholders' equity and instead, requires separate statements of comprehensive income. The amendment is effective for fiscal years and interim periods within those years, beginning after December 15, 2011. In October 2011, the FASB decided that the specific requirement to present items that are reclassified from other comprehensive income to net income alongside their respective components of net income and other comprehensive income will be deferred. Therefore, those requirements will not be effective for public entities for fiscal years and interim periods within those years beginning after December 15, 2011. We do not expect the adoption of ASU 2011-05 to have a material impact on our financial position and results of operations.

(2) CASH EQUIVALENTS

Our available-for-sale securities as of September 30, 2011 and December 31, 2010 consisted of money market funds primarily containing U.S. government-backed or collateralized overnight 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 10).

(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 our cash equivalents at fair value on a recurring basis in our balance sheets at September 30, 2011 and December 31, 2010. Cash equivalents consist of highly rated money market funds with maturities of ninety days or less, and are purchased daily at par value with specified yield rates. Due to the high ratings and short-term nature of these funds, we consider the values of all cash equivalents as Level 1 inputs.

A.P. Pharma, Inc.

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

(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. Diluted net loss per share excludes the effect of outstanding potentially dilutive securities because they are anti-dilutive. The following table shows the potentially dilutive options, unvested restricted stock awards, warrants and convertible notes outstanding for the nine months ended September 30, 2011 and 2010 (in thousands):

	Nine Months Ended September 30,	
	2011	2010
Options outstanding	49,774	3,263
Unvested restricted stock awards outstanding	—	606
Warrants outstanding	84,127	3,977
Common stock related to convertible notes outstanding	38,750	—

(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 September 30,		Nine Months Ended September 30,	
	2011	2010	2011	2010
Operating expenses:				
Research and development	$ 324	$ 55	$ 473	$ 194
General and administrative	427	142	624	1,192
Total stock-based compensation expense	$ 751	$ 197	$1,097	$1,386
Impact on basic and diluted net loss per common share	$ 0.00	$ 0.01	$ 0.01	$ 0.04

The following table summarizes option activity for the nine months ended September 30, 2011:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term (Years)
Outstanding at January 1, 2011	3,217,240	$ 1.49	5.42
Granted	47,720,000	$ 0.26	
Exercised	—	—	
Expired and forfeited	(1,163,453)	$ 1.50	
Outstanding at September 30, 2011	49,773,787	$ 0.31	9.66

A.P. Pharma, Inc.

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

The following table summarizes restricted stock award activity for the nine months ended September 30, 2011:

	Shares	Weighted Average Grant Date Fair Value
Outstanding at January 1, 2011	318,758	$ 0.85
Awarded	—	—
Released	(143,835)	$ 0.73
Forfeited	(174,923)	$ 0.94
Outstanding at September 30, 2011	—	—

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 September 30, 2011. The purchase price per share is equal to 85% of the fair market value of the stock on specified dates. Sales under the Purchase Plan during the nine months ended September 30, 2011 and 2010 were 49,486 and 25,567 shares at an average price of $0.20 and $0.68, respectively. Shares available for future purchase under the Purchase Plan are 559,672 at September 30, 2011.

(6) COMPREHENSIVE LOSS

Comprehensive loss for the periods reported was comprised solely of our net loss. The comprehensive loss for the three and nine months ended September 30, 2011 was $4.2 million and $7.6 million, respectively. The comprehensive loss for the three and nine months ended September 30, 2010 was $1.7 million and $5.8 million, respectively. There were no other changes in equity that were excluded from our net loss for all periods.

(7) INCOME TAXES

There was no provision for income taxes for the three and nine months ended September 30, 2011 and 2010 because we incurred net operating losses.

(8) 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 Neutrogena (Ortho) and Dermik Laboratories, Inc. (Dermik) (the Gross Profit Guaranty). Both Ortho and Dermik were acquired by Valeant Pharmaceuticals in July 2011. The guaranty period initially commenced on July 1, 2000 and was to end on the earlier of July 1, 2010 or the end of two consecutive guaranty periods where the combined gross profit on sales to Ortho and Dermik equals or exceeds the guaranteed gross profit (the 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 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 differ from those it charged historically to the RP Scherer successor company to produce the products. 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

A.P. Pharma, Inc.

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

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 $1.0 million related to the current amount due under the Gross Profit Guaranty is recorded as accrued disposition costs as of September 30, 2011.

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 represents primarily 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 September 30,		Nine Months Ended September 30,	
	2011	2010	2011	2010
Cosmeceutical and Toiletry Business				
Change in estimates for gross profit guarantees	$ 51	$ 36	$ 283	$ 47

There was no material basic and diluted loss per common share from discontinued operations for the three and nine months ended September 30, 2011 and 2010.

(9) 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 that were 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 $0.5 million of revenue related to development services to Merial in the three and nine months ended September 30, 2011, respectively, and $0.3 million and $1.0 million of revenue for the three and nine months ended September 30, 2010, 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 when the earnings process was completed.

Paul Royalty Fund

On January 18, 2006, we sold our rights to royalties on sales of Retin-A Micro® and Carac®, effective October 1, 2005, to an affiliate of the Paul Royalty Fund for $30.0 million. Proceeds of $25.0 million were received upon the closing of the transaction and subsequent $2.5 million payments were received in both 2007 and January 2010 upon the achievement of certain milestones.

(10) CONVERTIBLE NOTES

In April 2011, we entered into a Securities Purchase Agreement (the Purchase Agreement) with certain institutional investors (the Purchasers), including a fund affiliated with Kevin Tang, who is on our Board of Directors, for a private placement of up to $4.5 million in Senior Secured Convertible Notes due 2021 (the 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 common stock at a rate of 25,000 shares for every $1,000 of principal and accrued interest due under the Notes (the Conversion Shares). The initial funding from the bridge loan was approximately $1.3 million, net of financing costs. The Purchasers may also purchase 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.

A.P. Pharma, Inc.

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

The Notes are secured by substantially all of the assets of the Company, including placing the 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 interest rate was lowered to 6% per annum effective July 1, 2011 in the Amended Secured Convertible Note Agreement.

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 September 30, 2011. 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 for resale the Conversion Shares. 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 (the 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 $0.04 per share, 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. On July 1, 2011, accrued interest of $50,000 was paid-in-kind and rolled into the Note principal balance, which resulted in an additional debt discount of $50,000.

As of September 30, 2011, the carrying value of the Notes was approximately $64,000, which is comprised of the $1,550,000 Note principal less debt discount of $1,486,000. Accrued interest on the principal balance was $23,250 at September 30, 2011.

(11) 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, 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 September 30, 2011.

A.P. Pharma, Inc.

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

Private Placement

In June 2011, the Company entered into a Securities Purchase Agreement with certain purchasers (the 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 (the Shares) and warrants to purchase 80,000,005 shares of its common stock (the Warrants) with an exercise price of $0.18 per share (the 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, a Unit), at a purchase price of $0.15 per Unit. The Warrants became exercisable on July 1, 2011, the date of issuance, and expire on the fifth anniversary of that date. 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 as of September 30, 2011. The Shares and Warrants were recorded as equity at their fair values on the issuance date.

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; 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 contains the 5-HT3 antagonist, granisetron, formulated in our proprietary Biochronomer drug delivery system, which allows therapeutic drug levels to be maintained for five days with a single subcutaneous injection. In May 2009, we filed a New Drug Application (NDA) with the U.S. Food and Drug Administration (FDA) seeking approval for APF530. During 2008, APF530 completed a pivotal Phase 3 clinical trial that was the basis for the application. In March 2010, we received a Complete Response Letter on the APF530 NDA. Since receiving the Complete Response Letter, we have been working to address the issues raised by the FDA. We 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 during the first half of 2012. If we obtain regulatory approval for APF530, we intend to seek a collaborative arrangement to commercialize APF530, or anticipate obtaining additional funding and resources that would be required to launch APF530 without a partner.

In addition to APF530, we have a pipeline of other product candidates that use our Biochronomer technology. Further development of our pipeline products has been temporarily deferred in order to focus managerial and financial resources on the APF530 resubmission responsive to issues identified in the March 2010 Complete Response Letter.

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, 2010 in Part II, Item 7 — "Management's Discussion and Analysis of Financial Condition and Results of Operations-Critical Accounting Policies and Estimates."

Recent Accounting Pronouncements

Recent accounting pronouncements are disclosed in Note 1 to the Condensed Financial Statements included in Item 1 of this Quarterly Report on Form 10-Q.

Results of Operations for the Three and Nine Months Ended September 30, 2011 and 2010

Contract revenue, which is derived from work performed under collaborative research and development arrangements, was $0 and $0.6 million for the three and nine months ended September 30, 2011, respectively, and $0.4 million and $1.1 million for the three and nine months ended September 30, 2010, respectively. The majority of our contract revenue has been derived from an agreement with Merial Limited that we entered into in September 2009 for a long-acting pain management product for companion animals. The amount of contract revenue has varied from period to period depending on the level of activity requested of us by our collaborators. 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. Therefore, we do not expect contract revenue for the second half of 2011.

Our research and development costs consist primarily of employee salaries and other personnel-related expenses, facility-related expenses, laboratory consumables, polymer 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 September 30, 2011 increased by $1.4 million, from $1.5 million for the three months ended September 30, 2010, to $2.9 million. Research and development expense for the nine months ended September 30, 2011 decreased by $0.4 million, from $5.8 million for the nine months ended September 30, 2010, to $5.4 million. Compared to the prior year, project spending for APF530 in 2011 was lower in the first half of the year but increased in the current fiscal quarter as we worked to address the issues raised by the FDA in the Complete Response Letter. Additionally, stock compensation expense was higher in the three months ended September 30, 2011. Research and development expense for the year 2011 is expected to be higher as compared to 2010 due to project-related expenses 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 September 30, 2011 increased by $0.8 million, from $0.4 million for the three months ended September 30, 2010, to $1.2 million. 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 nine months ended September 30, 2011 decreased by $1.4 million, from $3.6 million for the nine months ended September 30, 2010, to $2.2 million. The decrease for the nine month period was primarily due to compensation expense incurred in the prior year related to the resignation of our former chief executive officer. General and administrative expense is expected to be lower in 2011, as compared to 2010, primarily due to compensation expense previously mentioned.

Interest expense, net of $62,000 and $326,000 for the three and nine months ended September 30, 2011, respectively, consists primarily of interest expense and amortization of debt discount related to the April 2011 convertible note financing. For the nine months ended September 30, 2011, interest expense, net also includes debt issuance costs.

The gain on sale of royalty interest of $2.5 million represents a milestone payment we received in January 2010 from an affiliate of the Paul Royalty Fund. The payment represents a final milestone payment that became due to us in January 2010 under an agreement that we entered into effective October 1, 2005 to sell our royalty rights to Retin-A Micro ® and Carac ®.

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 $51,000 and $283,000 for the three and nine months ended September 30, 2011, respectively. Loss from discontinued operations was $36,000 and $47,000 for the three and nine months ended September 30, 2010. See Note 8 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 $21.0 million at September 30, 2011. Cash and cash equivalents increased by $18.9 million at September 30, 2011 from December 31, 2010 due primarily to net proceeds of $24.1 million received from the convertible note financing in April 2011 and the private placement of units completed in July 2011, offset by our cash used in operations.

Net cash used in operating activities for the nine months ended September 30, 2011 was $5.2 million, compared to net cash used of $4.6 million for the nine months ended September 30, 2010. The $0.6 million increase in net cash used was primarily due to the receipt of a $2.5 million milestone payment from an affiliate of the Paul Royalty Fund in the prior year period, which was offset by a $1.9 million decrease in net cash used in our operating activities (which excludes the impact of the milestone payment).

Net cash used in investing activities for the nine months ended September 30, 2011 was $126,000, compared to net cash used in investing activities of $75,000 for the nine months ended September 30, 2010, which was for purchases of property and equipment.

Net cash provided by financing activities for the nine months ended September 30, 2011 was $24.3 million, compared to

net cash provided of $0.1 million for the nine months ended September 30, 2010, primarily due to net proceeds received from the convertible note financing in April 2011 and the June 2011 private placement of units of common stock and warrants.

Historically, we have financed our operations, including technology and product research and development, primarily through sales of our common stock, royalties received, the sale of our rights to royalties, 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 March 2010, we received a Complete Response Letter for our APF530 NDA. Since receiving the Complete Response Letter, we have been working to address the issues raised by the FDA. We 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 during the first half of 2012.

In April 2011, we entered into definitive agreements for a bridge loan, which was intended to fund Company operations until additional financing was secured. The initial 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 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.

If we obtain regulatory approval for APF530, we anticipate pursuing either a collaborative arrangement to commercialize APF530 with a partner, which will provide the necessary financial resources and expertise to launch APF530, or anticipate obtaining additional funding and resources that would be required to launch APF530 without a partner. 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). This table excludes amounts already recorded on our balance sheet as current liabilities as of September 30, 2011.

	Total	Less than 1 year	2 to 3 years	4 to 5 years	More than 5 years
Operating leases	$ 3.7	$ 0.7	$ 1.4	$ 1.6	$ —

Off- Balance Sheet Arrangements

As of September 30, 2011 we did not have any off-balance sheet arrangements.

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 September 30, 2011, 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 September 30, 2011, 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 1A. Risk Factors

Please see the risk factors previously disclosed in our Annual Report on Form 10-K for the year ended December 31, 2010 (the Annual Report), as amended and supplemented in subsequent Quarterly Reports on Form 10-Q (collectively, the Risk Factors). The Risk Factors, along with those risks described above under "Management's Discussion and Analysis of Financial Condition and Results of Operations" 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

The Company has previously disclosed this information on Current Reports on Forms 8-K filed by the Company on June 30, 2011.

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.

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: November 7, 2011

Table of Contents

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: November 7, 2011

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

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: November 7, 2011

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

Table of Contents

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 September 30, 2011 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.

November 7, 2011

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

Table of Contents

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 September 30, 2011 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.

November 7, 2011

/s/ John B. Whelan

John B. Whelan
Chief Financial Officer