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U.S. SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM 10-Q

(Mark One)

☒ **QUARTERLY REPORT PURSUANT TO SECTION 13 OR 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934**

FOR THE QUARTERLY PERIOD ENDED March 31, 2012

☐ **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 1-16467

Cortex Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware	**33-0303583**
(State or other jurisdiction of incorporation or organization)	**(I.R.S. Employer Identification No.)**

15241 Barranca Parkway, Irvine, California 92618
(Address of principal executive offices, including zip code)

(949) 727-3157
(Registrant's telephone number, including area code)

NOT APPLICABLE
(Former name, former address and former fiscal year, if changed since last report)

Indicate by 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 definitions of "large accelerated filer," "accelerated filer" and "smaller reporting company" in Rule 12b-2 of the Exchange Act.

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

Indicate by check mark whether the registrant is a shell company (as defined in Exchange Act Rule 12b-2). YES ☐ NO ☒

Indicate the number of shares outstanding of each of the issuer's classes of common stock, as of the latest practicable date.

85,623,663 shares of Common Stock as of May 10, 2012

CORTEX PHARMACEUTICALS, INC.

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Item 1A of Part II has been omitted based on the Company's status as a "smaller reporting company." Items 1 through 5 of Part II have been omitted because they are not applicable with respect to the current reporting period.

PART I. FINANCIAL INFORMATION

Item 1. Financial Statements

Cortex Pharmaceuticals, Inc.

Condensed Balance Sheets

	(Unaudited) March 31, 2012	*(Note)* December 31, 2011
Assets		
Current assets:		
Cash and cash equivalents	$ 778,440	$ 1,610,945
Restricted cash	48,309	48,309
Other current assets	59,926	85,630
Total current assets	886,675	1,744,884
Furniture, equipment and leasehold improvements, net	56,029	66,882
Other	8,889	8,889
	$ 951,593	$ 1,820,655
Liabilities and Stockholders' (Deficit) Equity		
Current liabilities:		
Accounts payable	$ 521,126	$ 472,756
Accrued wages, salaries and related expenses	242,223	235,399
Unearned revenue	48,309	48,309
Advance for MCI project	324,784	323,779
Deferred rent	56,292	64,502
Total current liabilities	1,192,734	1,144,745
Stockholders' (deficit) equity:		
Series B convertible preferred stock, $0.001 par value; $25,001 liquidation preference; shares authorized: 37,500; shares issued and outstanding: 37,500; shares issuable upon conversion: 3,679	21,703	21,703
Common stock, $0.001 par value; shares authorized: 205,000,000; shares issued and outstanding: 85,623,663 (March 31, 2012 and December 31, 2011)	85,624	85,624
Additional paid-in capital	121,354,389	121,337,670
Accumulated deficit	(121,702,857)	(120,769,087)
Total stockholders' (deficit) equity	(241,141)	675,910
	$ 951,593	$ 1,820,655

See accompanying notes.

Note: The balance sheet as of December 31, 2011 has been derived from the audited financial statements at that date, but does not include all of the information and notes required by accounting principles generally accepted in the United States for complete financial statements.

Cortex Pharmaceuticals, Inc.

Condensed Statements of Operations
(Unaudited)

	Three months ended March 31,	
	2012	2011
Revenues:		
Grant revenues	$ —	$ 25,300
Total revenues	—	25,300
Operating expenses:		
Research and development expenses	202,981	643,879
General and administrative expenses	731,373	940,418
Total operating expenses	934,354	1,584,297
Loss from operations	(934,354)	(1,558,997)
Interest income, net	584	3,151
Net loss	$ (933,770)	$ (1,555,846)
Basic and diluted net loss per share:	$ (0.01)	$ (0.02)
Shares used in calculating per share amounts		
Basic and diluted	85,623,663	78,858,197

See accompanying notes.

Cortex Pharmaceuticals, Inc.

Condensed Statements of Comprehensive Loss

(Unaudited)

	Three months ended March 31,	
	2012	2011
Net loss	$(933,770)	$(1,555,846)
Other comprehensive loss:		
Unrealized loss on marketable securities	—	(473)
Other comprehensive loss	—	(473)
Comprehensive loss	$(933,770)	$(1,556,319)

See accompanying notes.

Cortex Pharmaceuticals, Inc.

Condensed Statements of Cash Flows

(Unaudited)

	Three months ended March 31,	
	2012	2011
Cash flows from operating activities:		
Net loss	$ (933,770)	$(1,555,846)
Adjustments to reconcile net loss to net cash used in operating activities:		
Depreciation expense	7,250	25,455
Stock option compensation expense	16,719	14,139
Gain on sale of fixed assets	(1,532)	(2,550)
Changes in operating assets/liabilities:		
Restricted cash	—	18,123
Accrued interest on marketable securities	—	2,519
Unearned revenue	—	(18,123)
Other current assets	25,704	(18,368)
Accounts payable and accrued expenses	55,194	92,895
Other	(7,205)	964
Net cash used in operating activities	(837,640)	(1,440,792)
Cash flows from investing activities:		
Proceeds from sales and maturities of marketable securities	—	1,990,000
Proceeds from sales of fixed assets	5,135	2,550
Net cash provided by investing activities	5,135	1,992,550
(Decrease) increase in cash and cash equivalents	(832,505)	551,758
Cash and cash equivalents, beginning of period	1,610,945	1,037,549
Cash and cash equivalents, end of period	$ 778,440	$ 1,589,307

See accompanying notes.

Cortex Pharmaceuticals, Inc.
Notes to Condensed Financial Statements
(Unaudited)

Note 1 — Basis of Presentation and Significant Accounting Principles

The accompanying unaudited interim condensed financial statements have been prepared in accordance with accounting principles generally accepted in the United States for interim financial information and the instructions to Form 10-Q and Article 10 of Regulation S-X. Accordingly, they do not include all of the information and notes required by accounting principles generally accepted in the United States for complete financial statements. In the opinion of management, all adjustments (consisting only of normal recurring accruals) considered necessary for a fair presentation have been included. Operating results for the three-month period ended March 31, 2012 are not necessarily indicative of the results that may be expected for the full fiscal year. For further information, refer to the financial statements and notes thereto included in the Company's Annual Report on Form 10-K for the fiscal year ended December 31, 2011.

The Company has incurred net losses and cash outflows from operations of approximately $934,000 and $838,000, respectively, for the three months ended March 31, 2012 and expects to incur additional losses and negative cash flow from operations in fiscal 2012 and for several more years. Management believes the Company has adequate financial resources to conduct operations into the second quarter of 2012. This raises substantial doubt about the Company's ability to continue as a going concern, which will be dependent on its ability to obtain additional financing and to generate sufficient cash flows to meet its obligations on a timely basis.

The Company is exploring its strategic and financial alternatives, including, but not limited to, new collaborations for its A MPAKINE program which would provide capital to the Company in exchange for exclusive or non-exclusive license or other rights to certain of the technologies and products that the Company is developing. Although the Company is presently engaged in discussions with a number of candidate companies, there can be no assurance that an agreement will arise from these discussions in a timely manner, or at all.

The Company will likely need to raise additional capital through the sale of debt or equity. If the Company is unable to obtain additional financing to fund operations beyond mid-second quarter of 2012, it will need to eliminate some or all of its activities, merge with another company, license or sell some or all of its assets to another company, or cease operations entirely. There can be no assurance that the Company will be able to obtain additional financing on favorable terms or at all, or that the Company will be able to merge with another Company or license or sell any or all of its assets.

Employee Stock Options and Stock-based Compensation

The Company's 2006 Stock Incentive Plan (the "2006 Plan") provides for a variety of equity vehicles to allow flexibility in implementing equity awards, including incentive stock options, nonqualified stock options, restricted stock grants, stock appreciation rights, stock payment awards, restricted stock units and dividend equivalents to qualified employees, officers, directors, consultants and other service providers. The exercise price of stock options offered under the 2006 Plan must be at least 100% of the fair market value of the common stock on the date of grant. If the person to whom an incentive stock option is granted is a 10% stockholder of the Company on the date of grant, the exercise price per share shall not be less than 110% of the fair market value on the date of grant. Options granted generally vest over a three-year period, although options granted to officers may include more accelerated vesting. Options generally expire ten years from the date of grant, but options granted to consultants may expire five years from the date of grant.

The Company recognizes expense in its financial statements for all share-based payments to employees, including grants of employee stock options, based on their fair values over the service period.

There were no options granted during the three months ended March 31, 2012. For options granted during the three months ended March 31, 2011, the fair value of each option award was estimated using the Black-Scholes option pricing model and the following assumptions: weighted average risk-free interest rate of 2.8%; dividend yield of 0%; volatility factor of the expected market price of the Company's common stock of 107%; and a weighted average life of the options of 7.0 years.

Expected volatility is based on the historical volatility of the Company's stock. The Company also uses historical data to estimate the expected term of options granted and employee termination rates. The risk-free rate for periods within the estimated life of the options is based on the U.S. Treasury yield curve in effect at the time of grant.

The weighted-average grant-date fair value per share of options granted during the three months ended March 31, 2011 was $0.11.

A summary of option activity for the three months ended March 31, 2012 is as follows:

	Shares	Weighted Average Exercise Price	Weighted Average Remaining Contractual Term	Aggregate Intrinsic Value
Balance, December 31, 2011	10,800,856	$ 1.38		
Granted	—	—		
Exercised	—	—		
Forfeited	—	—		
Expired	—	—		
Balance, March 31, 2012	10,800,856	$ 1.38	4.5 years	—
Vested and expected to vest, March 31, 2012	10,566,523	$ 1.40	4.4 years	—
Exercisable, March 31, 2012	9,689,860	$ 1.51	4.1 years	—

As of March 31, 2012, there was approximately $26,000 of total unrecognized compensation cost related to non-vested share-based compensation arrangements. That non-cash cost is expected to be recognized over a weighted-average period of less than one year.

Stock options and warrants issued as compensation for services to be provided to the Company by non-employees are accounted for based upon the fair value of the services provided or the estimated fair value of the option or warrant, whichever can be more clearly determined. The Company recognizes this expense over the period in which the services are provided. This expense is a non-cash charge and has no impact on the Company's available cash or working capital.

There were no stock option exercises during the three months ended March 31, 2012 or 2011. The Company issues new shares to satisfy stock option exercises.

A summary of warrant activity for the three months ended March 31, 2012 is as follows:

	Shares	Weighted Average Per Share Exercise Price
Balance, December 31, 2011	25,818,319	$ 0.70
Granted	—	—
Exercised	—	—
Expired	(2,996,927)	$ 1.66
Balance, March 31, 2012	22,821,392	$ 0.57

Net (Loss) Income per Share

For the three months ended March 31, 2012 and 2011, the effect of potentially issuable shares of common stock was not included in the calculation of diluted loss per share given that the effect would be anti-dilutive.

Comprehensive Income (Loss)

In June 2011, the Financial Accounting Standards Board issued Accounting Standards Update No. 2011-05, "Presentation of Comprehensive Income" (ASU 2011-05). ASU 2011-05 requires comprehensive income to be reported in either a single statement or in two consecutive statements reporting net income and other comprehensive income. ASU 2011-05 eliminated the option to report other comprehensive income and its components in the statement of changes in stockholder's equity.

As required, the Company retroactively adopted ASU 2011-05 effective January 1, 2012 and has elected to report comprehensive income for the three months ended March 31, 2012 and 2011 in two consecutive statements reporting net income and other comprehensive income. The adoption of ASU 2011-05 did not have a material impact on the Company's financial position or its results of operations.

Note 2 — Transactions with Biovail

In March 2010, the Company entered into an asset purchase agreement with Biovail Laboratories International SRL ("Biovail"). Pursuant to the asset purchase agreement, Biovail acquired the Company's interests in CX717, CX1763, CX1942 and the injectable dosage form of CX1739, as well as certain of its other AMPAKINE compounds and related intellectual property for use in the field of respiratory depression or vaso-occlusive crises associated with sickle cell disease. In connection with the transaction, Biovail paid the Company $10,000,000. In addition, the agreement provided the Company with the right to receive up to three milestone payments in an aggregate amount of up to $15,000,000 plus the reimbursement of certain related expenses, each conditioned upon the occurrence of particular events relating to the clinical development of certain assets that Biovail acquired. None of these events have occurred and accordingly, the Company did not record any milestone revenue related to the Biovail transaction.

As part of the transaction, Biovail licensed back to the Company certain exclusive and irrevocable rights to some acquired A MPAKINE compounds, other than CX717, an injectable dosage form of CX1739, CX1763 and CX1942, for use outside of the field of respiratory depression or vaso-occlusive crises associated with sickle cell disease. Accordingly, following the transaction with Biovail, the Company retained its rights to develop and commercialize the non-acquired AMPAKINE compounds as a potential

treatment for neurological diseases and psychiatric disorders. Additionally, the Company retained its rights to develop and commercialize the AMPAKINE compounds as a potential treatment for sleep apnea disorders, including an oral dosage form of AMPAKINE CX1739.

In September 2010, Biovail's parent corporation, Biovail Corporation, combined with Valeant Pharmaceuticals International in a merger transaction and the combined company was renamed "Valeant Pharmaceuticals International, Inc." ("Valeant"). Following the merger, in November 2010, Biovail announced its intent to exit from the respiratory depression project acquired from the Company in March 2010.

Following that announcement, the Company entered into discussions with Biovail regarding the future of the respiratory depression project. In March 2011, the Company entered into a new agreement with Biovail to reacquire the AMPAKINE compounds, patents and rights that Biovail acquired from the Company in March 2010. The new agreement includes an upfront payment by Cortex of $200,000 and potential future payments of up to $15,150,000 based upon the achievement of certain development and New Drug Application submission and approval milestones. Biovail is also eligible to receive additional payments of up to $15,000,000 based upon the Company's net sales of an intravenous dosage form of the compounds for respiratory depression.

The Company has recorded the $200,000 upfront payment to reacquire the respiratory depression project from Biovail as research and development expense during the three months ended March 31, 2011.

At any time following the completion of Phase I clinical studies and prior to the end of Phase IIa clinical studies, Biovail retains an option to co-develop and co-market intravenous dosage forms of an AMPAKINE compound as a treatment for respiratory depression and vaso-occlusive crises associated with sickle cell disease. In such an event, the Company would be reimbursed for certain development expenses to date and Biovail would share in all such future development costs with the Company. If Biovail makes the co-marketing election, the Company would owe no further milestone payments to Biovail and the Company would be eligible to receive a royalty on net sales of the compound by Biovail or its affiliates and licensees.

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

The following discussion and analysis should be read in conjunction with the Financial Statements and Notes relating thereto appearing elsewhere in this report and with "Management's Discussion and Analysis of Financial Condition and Results of Operations" presented in our Annual Report on Form 10-K for the fiscal year ended December 31, 2011.

Introductory Note

This Quarterly Report on Form 10-Q contains certain forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, or the Securities Act, and Section 21E of the Securities Exchange Act of 1934, as amended, or the Exchange Act, and we intend that such forward looking statements be subject to the safe harbors created thereby. These forward-looking statements, which may be identified by words including "anticipates," "believes," "intends," "estimates," "expects," "plans," and similar expressions include, but are not limited to, statements regarding (i) future research plans, expenditures and results, (ii) potential collaborative arrangements, (iii) the potential utility of our proposed products and (iv) the need for, and availability of, additional financing.

The forward-looking statements included herein are based on current expectations, which involve a number of risks and uncertainties and assumptions regarding our business and technology. These assumptions involve judgments with respect to, among other things, future scientific, economic and competitive conditions, and future business decisions, all of which are difficult or impossible to predict accurately and many of which are beyond our control. Although we believe that the assumptions underlying the forward-looking statements are reasonable, any of the assumptions could prove inaccurate and, therefore, there can be no assurance that the results contemplated in forward-looking statements will be realized and actual results may differ materially. In light of the significant uncertainties inherent in the forward-looking information included herein, the inclusion of such information should not be regarded as a representation by us or any other person that our objectives or plans will be achieved. We undertake no obligation to publicly release the result of any revisions to these forward-looking statements that may be made to reflect events or circumstances after the date hereof, or to reflect the occurrence of unanticipated events. Readers should carefully review the risk factors described in this and other documents that we file from time to time with the Securities and Exchange Commission, or the SEC, including, without limitation, Quarterly Reports on Form 10-Q, Annual Reports on Form 10-K and subsequent Current Reports on Form 8-K.

About Cortex Pharmaceuticals

We are engaged in the discovery and development of innovative pharmaceuticals for the treatment of breathing disorders, including respiratory depression and sleep apnea. Our focus is on the on the prevention of respiratory depression in post-surgical patients. Such patients are often treated with powerful anesthetics, analgesics or sedatives — and the potential respiratory depression resulting from one or a combination of such drug treatments can lead to respiratory arrest and possibly cardiac arrest, each of which is associated with extended and costly hospital stays and significant morbidity

and mortality. We are also seeking to reduce the respiratory depression risks related to chronic opioid therapy, without impacting the pain relief provided by the opioids. In the field of sleep apnea, our goal is to provide patients with an oral therapy alternative. Currently, the most commonly prescribed therapy is CPAP, a mask-type device connected to a positive-pressure air pump that is worn while sleeping, but the device is associated with discomfort and very high patient non-compliance.

For the past several years, our discovery and development focused on therapies for the treatment of psychiatric disorders and neurological diseases. We recently performed a strategic review of our AMPAKINE® platform and determined that our clinical development in respiratory depression and sleep apnea provide the nearest term and most cost-effective opportunities for potential commercialization of our compounds. We have conducted extensive preclinical and clinical development in the treatment of neurological and psychiatric diseases and disorders, and have amassed a substantial patent portfolio in these areas. Given our current focus on the treatment of breathing disorders, we may seek to out-license or sell our rights to the use of AMPAKINE compounds for the treatment of neurological and psychiatric indications.

We are developing novel small molecule compounds that positively modulate AMPA-type glutamate receptors, a complex of proteins involved in the communication between nerve cells in the mammalian brain. These compounds, termed AMPAKINE compounds, enhance the activity of the AMPA receptor. These molecules are designed and developed as proprietary pharmaceuticals because we believe they hold promise for the treatment of diseases and disorders that are known, or thought, to involve depressed functioning of pathways in the brain that use glutamate as a neurotransmitter. Our most advanced clinical compounds is CX1739, which is in Phase II clinical development.

The AMPAKINE platform addresses large potential markets. Recent research estimates that the treatment market for respiratory depression may be approximately $1.2 billion in the U.S. alone. Research by consulting firm, Frost & Sullivan, estimates that U.S. revenues in the sleep apnea diagnostic and therapeutic devices market totaled approximately $1.35 billion in 2008, with an annual growth rate in excess of 16%. Our business plan involves partnering with larger pharmaceutical companies for research, development, clinical testing, manufacturing and global marketing of specific AMPAKINE compounds for those indications that require sizable, expensive Phase III clinical trials — and very large sales forces to achieve significant market penetration. Disorders such as respiratory depression caused by opiate analgesics and sleep apnea may benefit from treatment with AMPAKINE drugs and require a large market presence.

At the same time, subject to availability of sufficient financial resources, we plan to develop compounds internally for a selected set of indications, some of which will allow us to apply for orphan drug status. Such designation by the Food and Drug Administration, or the FDA, is usually applied to products where the number of patients in the United States in the given disease category is typically less than 200,000. These orphan drug indications typically require more modest investment in the development stages, follow a quicker regulatory path to approval, and involve a more concentrated and smaller sales force targeted at selected medical centers and a limited number of medical specialists in the United States and Europe. Such orphan drug indications that we plan to pursue internally may include multiple system atrophy and vaso-occlusive crises associated with sickle cell disease.

In our licensing discussions, we seek to reserve rights that may be viewed as a natural expansion beyond some of the orphan drug uses to selected larger areas of therapy to thereby allow us to potentially further develop our compounds for such larger non-orphan drug indications. If we are successful in the pursuit of this operating strategy, we may be in a position to contain our costs over the next few years, to maintain our focus on the research and early development of novel pharmaceuticals (where we believe that we have the ability to compete) and eventually to participate more fully in the commercial development of AMPAKINE products in the United States.

Critical Accounting Policies and Management Estimates

The SEC defines critical accounting policies as those that are, in management's view, most important to the portrayal of our financial condition and results of operations and most demanding of our judgment. Our discussion and analysis of our financial condition and results of operations are based upon our financial statements, which have been prepared in accordance with accounting principles generally accepted in the United States. The preparation of these financial statements requires us to make estimates and judgments that affect the reported amounts of assets, liabilities, revenues and expenses and related disclosures of contingent assets and liabilities.

We base our estimates on historical experience and on various other assumptions that are believed to be reasonable under the circumstances. This process forms the basis for making judgments about the carrying values of assets and liabilities that are not readily apparent from other sources. Actual results may differ from these estimates under different assumptions or conditions.

Employee Stock Options and Stock-Based Compensation

We measure our share-based compensation cost at the grant date based on the estimated fair value of the award and recognize it as expense over the vesting period. Determining the fair value of share-based awards at the grant date requires judgment in estimating the amount of share-based awards that are expected to forfeit. Additional key input assumptions used to estimate the fair value of share-based awards include the expected option term, the expected volatility of our stock over the option's expected term, the risk-free interest rate over the option's expected term and our expected annual dividend yield. If actual results differ significantly from these estimates, stock-based compensation expense and our results of operations could be materially impacted.

The above listing is not intended to be a comprehensive list of all of our accounting policies. In many cases, the accounting treatment of a particular transaction is specifically dictated by accounting principles generally accepted in the United States, with no need for our judgment in their application. There are also areas in which our judgment in selecting any available alternative would not produce a materially different result.

Going Concern

Our independent registered public accounting firm has expressed substantial doubt as to our ability to continue as a going concern, in its report for the fiscal year ended December 31, 2011, given that we did not have adequate working capital to finance our day-to-day operations for at least the following twelve month period. Our continued existence depends upon the success of our efforts to raise additional capital necessary to meet our obligations as they become due and to obtain sufficient capital to execute our business plan. We intend to obtain capital primarily through issuances of debt or equity or entering into collaborative arrangements with corporate partners. There can be no assurance that we will be successful in completing additional financing or collaboration transactions. If we cannot obtain adequate funding, we may be required to significantly curtail or even shut down our operations.

Results of Operations

General

From inception (February 10, 1987) through the fiscal quarter ended on March 31, 2012, we have sustained losses aggregating approximately $117,324,000. Continuing losses are anticipated over the next several years. During that time, our ongoing operating expenses will only be offset, if at all, by proceeds from research grants and possible payments under planned strategic alliances that we are seeking with other pharmaceutical companies for the clinical development, manufacturing and marketing of our products. The nature and timing of payments to us under other planned strategic alliances, if and when entered into, are likely to significantly affect our operations and financing activities and to produce substantial period-to-period fluctuations in reported financial results. Over the longer term, we will be dependent upon the successful introduction of a new product into the North American market from our internal development, as well as the successful commercial development of our products by our prospective partners to attain profitable operations from royalties or other product-based revenues.

Comparison of the Three Months ended March 31, 2012 and 2011

For the three months ended March 31, 2012, our net loss of approximately $934,000 compares with a net loss of approximately $1,556,000 for the corresponding prior year period.

Grant revenues for the three months ended March 31, 2011 include amounts awarded by the Michael J. Fox Foundation for Parkinson's Research. The related funding will allow us to test select AMPAKINE compounds for their ability to restore brain function in animal models of Parkinson's disease.

Our research and development expenses for the three months ended March 31, 2012 decreased to approximately $203,000 from approximately $644,000 for the corresponding prior year quarter, or by 68%, with the most significant decrease related to sublicense fees of $200,000 related to our March 2011 transaction to reacquire the AMPAKINE rights and compounds from Biovail. See Note 2 to the Financial Statements. For the three months ended March 31, 2012 and 2011, other costs related to the access and protection of our AMPAKINE technology totaled approximately $67,000 and $116,000, respectively, reflecting the timing of patent filings and fees.

Our expenses for research and development personnel, outside experts and consultants approximated $80,000 and $209,000 for the three months ended March 31, 2012 and 2011, respectively, with most of the decrease due to a decrease in personnel-related expenses. For the same periods, laboratory facility and supply costs were approximately $25,000 and $104,000, respectively, reflecting a reduced allocation of rent expense following decreases in our levels of research and development personnel.

Amounts incurred for our internal research and development costs, including indirect amounts allocated to research and development, and costs for retaining outside experts for consulting and research activities are deemed to benefit the entire AMPAKINE platform rather than specific AMPAKINE compounds.

Our clinical development expenses of approximately $27,000 and $44,000 for the quarters ended March 31, 2012 and 2011 include amounts related to our lead AMPAKINE CX1739, including amounts for our completed Phase IIa proof of concept study with the compound in patients with sleep apnea.

For the quarter ended March 31, 2012, our non-cash stock compensation charges for research and development amounted to approximately $4,000 compared to a credit of approximately $29,000 for the corresponding prior year period, with the difference reflecting credits related to a reduction in personnel during the 2011 period and recovered amounts related to previously forfeited options.

At this time, we are just beginning the clinical development of CX1739 and developing other preclinical backup candidates. Subject to the availability of sufficient finances, as the clinical development of CX1739 expands, our research and development costs are anticipated to increase significantly.

External preclinical and clinical expenses to date through March 31, 2012 for CX717 and CX1739 amounted to approximately $16,000,000 and $4,000,000, respectively.

Our general and administrative expenses for the three months ended March 31, 2012 decreased from approximately $940,000 to approximately $731,000, or by 22%, compared to the corresponding prior year period, primarily reflecting reduced personnel-related expenses, along with decreased fees for legal and other professional services.

For the three months ended March 31, 2012, our non-cash stock compensation charges within general and administrative expenses decreased from approximately $44,000 to approximately $13,000, or by 67%, relative to the corresponding prior year period.

Liquidity and Capital Resources

Sources and Uses of Cash

We may receive proceeds from the exercise of previously issued warrants to purchase shares of our common stock. The table below summarizes the warrants outstanding as of March 31, 2012 that were issued in connection with prior offerings and placements of our securities. None of the warrants are "in-the-money" as of March 31, 2012 and we can give no assurance that we will receive proceeds from the exercise of any of the outstanding warrants.

Date of Issuance	Exercise Price per Share	Number of Warrants Outstanding as of March 31, 2012	Expiration Date	Approximate Potential Proceeds, if Fully Exercised
August 2007[1]	$2.64	2,830,000	August 28, 2012	$7,471,000
August 2007[2]	$3.96	176,875	August 28, 2012	$700,000
April 2009[1]	$0.27	6,941,176	October 17, 2012	$1,889,000
April 2009[2]	$0.26	433,824	October 17, 2012	$113,000
July 2009[1]	$0.27	6,060,470	January 31, 2013	$1,636,000
July 2009[2]	$0.37	606,047	January 31, 2013	$222,000
June 2010[1]	$0.21	4,081,633	June 7, 2012	$841,000
October 2011[1]	$0.10	1,691,367	October 20, 2013	$175,000

[1] Represents warrants issued to the investor(s) in the related transaction.
[2] Represents warrants issued to the placement agent(s) in the related transaction.

Warrants detailed above with issuance dates between August 2007 and July 2009 may be settled by a cashless exercise. In such an event, the holder of the warrants would receive a number of unregistered shares representing the gain on exercise of such warrants, divided by the volume weighted average price of the Company's common stock on the trading day immediately preceding such exercise.

As of March 31, 2012, we had cash and cash equivalents totaling approximately $778,000 and a working capital deficit of approximately $306,000. In comparison, as of December 31, 2011, we had cash and cash equivalents of approximately $1,611,000 and working capital of approximately $600,000. The decreases in cash and working capital reflect amounts required to fund our operations.

For the three months ended March 31, 2012, net cash used in operating activities was approximately $838,000, and included our net loss for the period of approximately $934,000, adjusted for non-cash expenses for depreciation and stock compensation approximating $24,000, and changes in operating assets and liabilities. Net cash used in operating activities was approximately $1,441,000 for the three months ended March 31, 2011 and included our net loss for the period of approximately $1,556,000, adjusted for non-cash expenses for depreciation and stock compensation approximating $40,000, and changes in operating assets and liabilities.

For the three months ended March 31, 2012, net cash provided by investing activities was not significant. Net cash provided by investing activities for the three months ended March 31, 2011 approximated $1,993,000 and primarily represented the proceeds from the maturity of marketable securities.

There was no cash provided by or used in financing activities for the three months ended March 31, 2012 or 2011.

Commitments

We lease approximately 32,000 square feet of research laboratory, office and expansion space under an operating lease that expires May 31, 2012. The commitments under the lease agreement for the remaining two months ending May 31, 2012 are approximately $99,000.

In addition to amounts reflected on the balance sheet as of March 31, 2012, our remaining commitments for preclinical and clinical studies amount to approximately $174,000.

Subsequent to March 31, 2012, we executed an operating lease agreement for approximately 5,000 square feet of office space with a lease term beginning June 1, 2012 and ending May 31, 2015. The commitments under the new lease agreement for the seven months ending December 31, 2012, the years ending December 31, 2013 and 2014 and the five months ending May 31, 2015 are approximately $64,000, $103,000, $117,000 and $49,000, respectively. Provided that we are in compliance with the terms and conditions of the new lease, we have the option to terminate the lease at the expiration of the twelfth month or twenty-fourth month by providing four months prior written notice.

In June 2000, we received approximately $247,000 from the Institute for the Study of Aging, or the Institute, a non-profit foundation supported by the Estee Lauder Trust. The advance partially offset our limited costs for our testing in patients with mild cognitive impairment that we conducted with our partner, Servier. Provided that we comply with the conditions of the funding agreement, including the restricted use of the amounts received, repayment of the advance has been extended until we enter an AMPAKINE compound into Phase III clinical trials for Alzheimer's disease. Upon such potential clinical trials, repayment would include interest computed at a rate equal to one-half of the prime lending rate. In lieu of cash, in the event of repayment the Institute may elect to receive the balance of outstanding principal and accrued interest as shares of our common stock. The conversion price for such form of repayment shall initially equal $4.50 per share, subject to adjustment under certain circumstances.

Staffing

As of March 31, 2012, we had six full-time employees, which we believe will be sufficient to meet our personnel requirements. We do not anticipate significant increases in the number of our full-time employees within the coming year and will continue to outsource a substantial amount of our development activities to qualified vendors.

Outlook

We believe that we have adequate financial resources to conduct our operations into the second quarter of 2012. Our forecast of the period of time through which our financial resources will be adequate to support our operations is forward-looking information, and actual results could vary.

Our ongoing cash requirements will depend on numerous factors, particularly the progress of our clinical trials involving CX1739 and our ability to negotiate and complete collaborative agreements

or out-licensing arrangements. In order to help fund our on-going operating cash requirements, we intend to seek new collaborations for our “low impact” and “high impact” AMPAKINE programs that include initial cash payments and on-going development support. We may also seek to raise additional funds and explore other strategic and financial alternatives, such as a merger or sale of assets transaction.

There are significant uncertainties as to our ability to access potential sources of capital. We may not be able to enter into any collaboration on terms acceptable to us, or at all, due to conditions in the pharmaceutical industry or in the economy in general. Competition for such arrangements is intense, with a large number of biopharmaceutical companies attempting to secure alliances with more established pharmaceutical companies. Although we have been engaged in discussions with candidate companies, there is no assurance that an agreement or agreements will arise from these discussions in a timely manner, or at all, or that revenues that may be generated thereby will offset operating expenses sufficiently to reduce our short-term funding requirements.

Even if we are successful in obtaining a collaboration for our A MPAKINE program, we may have to relinquish rights to technologies, product candidates or markets that we might otherwise seek to develop ourselves. These same risks apply to any attempt to out-license our compounds.

Similarly, due to market conditions and other possible limitations on equity offerings, we may not be able to sell additional securities or raise other funds on terms acceptable to us, if at all. Any additional equity financing, if available, would likely result in substantial dilution to existing stockholders.

Additional Risks and Uncertainties

Our proposed products are in the preclinical or early clinical stage of development and will require significant further research, development, clinical testing and regulatory clearances. They are subject to the risks of failure inherent in the development of products based on innovative technologies. These risks include, but are not limited to, the possibilities that any or all of the proposed products will be found to be ineffective or unsafe, or otherwise fail to receive necessary regulatory clearances; that the proposed products, although effective, will be uneconomical to market; that third parties may now or in the future hold proprietary rights that preclude us from marketing them; or that third parties will market superior or equivalent products. Accordingly, we are unable to predict whether our research and development activities will result in any commercially viable products or applications. Further, due to the extended testing and regulatory review process required before marketing clearance can be obtained, we do not expect to be able to commercialize any therapeutic drug for at least four years, either directly or through our current or prospective partners or licensees. There can be no assurance that our proposed products will prove to be safe or effective or receive regulatory approvals that are required for commercial sale.

Off-Balance Sheet Arrangements

We have not engaged in any "off-balance sheet arrangements" within the meaning of Item 303(a)(4)(ii) of Regulation S-K.

Item 3. Quantitative and Qualitative Disclosures About Market Risk

We are exposed to certain market risks associated with interest rate fluctuations on our advance from the Institute for the Study of Aging, which is due when we enter an AMPAKINE compound into Phase III clinical testing as a potential treatment for Alzheimer's disease. Potential repayment would include interest accruing at a rate equal to one-half of the prime lending rate. Changes in interest rates generally affect the fair value of such debt, but, based upon historical activity, such changes are not expected to have a material impact on earnings or cash flows. As of March 31, 2012, the principal and accrued interest of the advance amounted to approximately $325,000.

We are not subject to significant risks from currency rate fluctuations as we typically conduct a limited number of transactions in foreign currencies. In addition, we do not utilize hedging contracts or similar instruments.

Item 4. Controls and Procedures

We maintain disclosure controls and procedures (as defined in Rules 13a-15(e) and 15(d)-15(e) under the Exchange Act) that are designed to ensure that information required to be disclosed in our reports under the Exchange Act is recorded, processed, summarized and reported within the time periods specified in the SEC's rules and forms, and that such information is accumulated and communicated to our management, including our Chief Executive Officer, or the CEO, and Chief Financial Officer, or the CFO, as appropriate, to allow timely decisions regarding required disclosure.

We performed an evaluation, under the supervision and with the participation of our management, including the CEO and CFO, of the effectiveness of the design and operation of our disclosure controls and procedures as of the end of the period covered by this report, pursuant to Rules 13a-15(b) and 15d-15(b) under the Exchange Act. Based upon that evaluation, the CEO and CFO have concluded that our disclosure controls and procedures, as of the end of the period covered by this report, were effective in timely alerting them to material information required to be included in our periodic filings under the Exchange Act.

There has been no change in our internal control over financial reporting (as defined in Rules 13(a)-15(f) and 15(d)-15(f) under the Exchange Act) during the period covered by this report that has materially affected, or is reasonably likely to materially affect, our internal control over financial reporting.

Limitations on the Effectiveness of Controls

Our management, including our CEO and CFO, does not expect that our disclosure controls and internal controls will prevent all error and all fraud. A control system, no matter how well conceived and operated, can provide only reasonable, not absolute, assurance that the objectives of the control system are met. Further, the design of a control system must reflect the fact that there are resource constraints, and the benefits of controls must be considered relative to their costs. Because of inherent limitations in all control systems, no evaluation of controls can provide absolute assurance that all control issues and instances of fraud, if any, have been detected. These inherent limitations include the realities that judgments in decision-making can be faulty, and that breakdowns can occur because of simple error or mistake. Additionally, controls can be circumvented by the individual acts of some persons, by collusion of two or more people, or by management override of the control.

The design of any system of controls is also based in part upon certain assumptions about the likelihood of future events, and there can be no assurance that any design will succeed in achieving its stated goals under all potential future conditions; over time, a control may become inadequate because of changes in conditions, or the degree of compliance with the policies or procedures may deteriorate. Because of inherent limitations in a cost-effective control system, misstatements due to error or fraud may occur and not be detected.

PART II. OTHER INFORMATION

Item 6. Exhibits

Exhibits

31.1	Certification of Chief Executive Officer Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934.
31.2	Certification of Chief Financial Officer Pursuant to Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934.
32	Certification of Chief Executive Officer and Chief Financial Officer Pursuant to Rule 13a-14(b)/15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350.
101.INS	XBRL Instance Document.+
101.SCH	XBRL Taxonomy Extension Schema Document.+
101.CAL	XBRL Taxonomy Extension Calculation Linkbase Document.+
101.LAB	XBRL Taxonomy Extension Label Linkbase Document.+
101.PRE	XBRL Taxonomy Extension Presentation Linkbase Document.+

+ The XBRL information is being furnished and not filed for purposes of Section 18 of the Securities Exchange Act of 1934, as amended, and is not incorporated by reference into any registration statement under the Securities Act of 1933, as amended.

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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.

CORTEX PHARMACEUTICALS, INC.

May 15, 2012 By: /S/ MARIA S. MESSINGER

Maria S. Messinger
Vice President and Chief Financial Officer;
Corporate Secretary
(Authorized Signer and Chief Accounting Officer)

EXHIBIT 31.1

Certification of Chief Executive Officer Pursuant to
Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934

I, Mark A. Varney, Ph.D., certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cortex Pharmaceuticals, 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(s) 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, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under 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(s) 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 15, 2012

/s/ Mark A. Varney

Mark A. Varney, Ph.D.
President and Chief Executive Officer

EXHIBIT 31.2

Certification of Chief Financial Officer Pursuant to
Rule 13a-14(a)/15d-14(a) of the Securities Exchange Act of 1934

I, Maria S. Messinger, certify that:

1. I have reviewed this quarterly report on Form 10-Q of Cortex Pharmaceuticals, 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(s) 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, including its consolidated subsidiaries, is made known to us by others within those entities, particularly during the period in which this report is being prepared;

   (b) Designed such internal control over financial reporting, or caused such internal control over financial reporting to be designed under 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(s) 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 15, 2012

/s/ Maria S. Messinger

Maria S. Messinger
Vice President, Chief Financial Officer and Secretary

EXHIBIT 32

Certification of Chief Executive Officer and Chief Financial Officer Pursuant to Rule 13a-14(b)/15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350

Mark A. Varney, Ph.D., President and Chief Executive Officer of Cortex Pharmaceuticals, Inc. (the "Company"), and Maria S. Messinger, Chief Financial Officer of the Company, each certifies, pursuant to Rule 13a-14(b) or Rule 15d-14(b) of the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350, that:

(1) the Quarterly Report on Form 10-Q of the Company for the quarterly period ended March 31, 2012 (the "Report") fully complies with the requirements of Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (15 U.S.C. 78m or 780(d)); and

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

Dated: May 15, 2012

/s/ Mark A. Varney
Mark A. Varney, Ph.D.
President and Chief Executive Officer

Dated: May 15, 2012

/s/ Maria S. Messinger
Maria S. Messinger
Vice President, Chief Financial Officer and Secretary

This certification accompanies the Quarterly Report pursuant to Rule 13a-14(b) or Rule 15d-14(b) under the Securities Exchange Act of 1934 and 18 U.S.C. Section 1350 and shall not be deemed filed by the Company for purposes of Section 18 of the Securities Exchange Act of 1934.