CORTEX PHARMACEUTICALS INC/DE/
Form 424B3
August 21, 2009
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Filed Pursuant to Rule 424(b)(3)

Registration No. 333-161143

PROSPECTUS

CORTEX PHARMACEUTICALS, INC.

12,120,939 Shares of Common Stock

($0.001 par value)

This prospectus relates to the offer and sale from time to time of up to 12,120,939 shares of our common stock all of which are issuable upon the conversion of our Series F Preferred Stock. All of these shares are being offered by one security holder named in this prospectus.

The prices at which such security holder may sell the shares in this offering will be determined by the prevailing market price for the shares or in negotiated transactions. We will not receive any of the proceeds from the sale of the shares.

Our common stock is traded on NYSE Amex Equities Market under the symbol COR. On August 20, 2009, the last reported sale price of our common stock was $0.23 per share.

See Risk Factors beginning on page 3 to read about the risks you should consider carefully before buying shares of our common stock.

The information in this prospectus is not complete and may be changed. These securities may not be sold until the Securities and Exchange Commission declares our registration statement effective. This prospectus is not an offer to sell these securities and is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

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 is August 20, 2009.

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You should rely only on the information contained or incorporated by reference in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. Offers to sell and offers to buy the shares of common stock are valid only in jurisdictions where offers and sales are permitted. The information contained in this prospectus, as well as information we have previously filed with the Securities and Exchange Commission and incorporated by reference, is accurate only as to the date on the front of such documents, regardless of the time of delivery of the prospectus or of any sale of the common stock.

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ABOUT CORTEX PHARMACEUTICALS

In this prospectus, the terms Cortex, the Company, we, us, and our refer to Cortex Pharmaceuticals, Inc.

We are engaged in the discovery and development of innovative pharmaceuticals for the treatment of psychiatric disorders, neurological diseases and brain mediated breathing disorders. Our primary focus is to develop novel small molecule compounds that positively modulate AMPA-type glutamate receptors, a complex of proteins that is involved in communication between nerve cells in the mammalian brain. We are developing a family of proprietary pharmaceuticals known as AMPAKINE® compounds, which enhance the activity of this receptor. We believe that AMPAKINE compounds hold promise for the treatment of neurological and psychiatric 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 are CX717 and CX1739, which currently are in Phase II clinical development.

The AMPAKINE platform addresses large potential markets. 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. At the same time, we plan to develop compounds internally for a selected set of indications, many of which will allow us to apply for Orphan Drug status. These 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 in the U.S. and Europe. 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.

While not an Orphan Drug indication, the acute treatment of respiratory depression represents an additional market that we may potentially pursue internally. However, we will continue to evaluate related partnership opportunities for the indication. Based upon results from our two Phase IIa studies with CX717, we believe that pre-administration of an AMPAKINE compound may prevent opiate-induced respiratory depression, while preserving the opiate s pain relieving effects. As a result, an AMPAKINE compound may improve the safety margin for giving powerful pain relievers following surgical procedures and thereby provide a valuable tool for anesthesiologists and surgeons to optimize pain management in their patients.

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More comprehensive information about us is available through our Internet website at http://www.cortexpharm.com. The information on our website is not incorporated by reference into this prospectus. Our executive offices are located at 15241 Barranca Parkway, Irvine, California 92618, and our telephone number is (949) 727-3157.

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RISK FACTORS

Your investment in our common stock involves a high degree of risk. You should consider the risks described below and the other information contained in this prospectus and incorporated by reference in this prospectus carefully before deciding to invest in our common stock. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations. If any of the following risks actually occur, our business, financial condition and operating results would be harmed. As a result, the trading price of our common stock could decline, and you could lose a part or all of your investment.

Risks related to our business

Our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern.

In its audit opinion issued in connection with our balance sheets as of December 31, 2008 and 2007 and our statements of operations, stockholder s equity and cash flows for the years ended December 31, 2008, 2007 and 2006, our independent registered public accounting firm has expressed substantial doubt about our ability to continue as a going concern given our recurring net losses and negative cash flows from operations. Our financial statements for the year ended December 31, 2008 have been prepared on a going concern basis, which contemplates the realization of assets and the satisfaction of liabilities and commitments in the normal course of business. Such financial statements do not include any adjustments relating to the recoverability and classification of recorded asset amounts or amounts of liabilities that might be necessary should we be unable to continue in existence. While we have relied principally in the past on external financing to provide liquidity and capital resources for our operations, we can provide no assurance that cash generated from our operations together with cash received in the future from external financing will be sufficient to enable us to continue as a going concern.

We have a history of net losses; we expect to continue to incur net losses and we may never achieve or maintain profitability.

Since our formation on February 10, 1987 through June 30, 2009, we have generated only modest operating revenues and we have incurred net losses approximating $112,438,000. For the years ended December 31, 2008, 2007 and 2006, our net losses were approximately $14,596,000, $12,969,000, and $16,055,000, respectively. As of June 30, 2009, we had an accumulated deficit of approximately $115,301,000. We have not generated any revenue from product sales to date, and it is possible that we will never generate revenues from product sales in the future. Even if we do achieve significant revenues from product sales, we expect to incur significant operating losses over the next several years. As with other companies in the biotechnology industry, it is possible that we will never achieve profitable operations.

If we are unable to progress in our clinical development of AMPAKINE CX717 for an acute indication in a timely manner, or at all, there could be a significant negative impact on our business operations and the market price of our common stock.

On October 10, 2007, the Division of Psychiatry Products of the FDA notified us that it rejected our IND to study AMPAKINE CX717 in ADHD. The denial was based upon results of animal toxicology studies that we filed with the agency. At this time, we do not anticipate re-submitting further data to the FDA for CX717 in the ADHD indication.

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Our objective is to continue our plans to develop CX717 for the acute treatment of respiratory depression and to continue our study of CX717 in our Alzheimer s disease PET scan study. We believe that the IND previously filed with the Division of Neurology Products of the FDA for the treatment of Alzheimer s disease will not be affected by the actions of the Division of Psychiatry Products. However, there can be no assurance that we will receive final FDA approval for any eventual New Drug Application submission.

We also believe that by developing an acute use for CX717, such as treatment of respiratory depression, the risks perceived to be associated with higher chronic doses required for ADHD may be mitigated. Additionally, the risk/benefit ratio for the treatment of patients with life-threatening respiratory depression is substantially different than for the treatment of ADHD. Also, our preclinical data for animal models of improvement of memory and cognition consistently shows that the dose level of CX717 required is 5-10 fold less than the dose required in animal models of ADHD. We believe that either lower dosage levels for chronic administration and/or acute uses are possible options for the continued development of CX717.

If we are unable to progress in our clinical development of AMPAKINE CX717 for an acute indication in a timely manner, or at all, there could be a significant negative impact on our business operations and the market price of our common stock.

We will need additional capital in the future and, if it is not available on terms acceptable to us, or at all, we may need to scale back our research and development efforts and may be unable to continue our business operations.

We will require substantial additional funds to advance our research and development programs and to continue our operations, particularly if we decide to independently conduct later-stage clinical testing and apply for regulatory approval of any of our proposed products, and if we independently undertake marketing and promotion of our products. Additionally, we may require additional funds in the event that we decide to pursue strategic acquisitions of or licenses for other products or businesses. Based on our current operating plan, including ongoing clinical trials and other research and development costs, we estimate that our existing cash resources and the net proceeds from our July 2009 offering of convertible preferred stock and warrants to purchase shares of our common stock, will be sufficient to meet our requirements late into the fourth quarter of calendar year 2009. We believe that we will require additional capital to fund on-going operations beyond that time. Additional funds may result from milestone payments related to our licensing agreements with Organon and Servier, although there is no assurance that we will receive milestone payments from Organon or Servier within the desired timeframe, or at all. Additional funds also may result from the exercise of warrants to purchase shares of our common stock. As of July 31, 2009, warrants to purchase up to approximately 22 million shares of our common stock were outstanding at exercise prices ranging from $0.26 to $4.29 per share. If these remaining warrants are fully exercised, of which there can be no assurance, such exercise would provide approximately $23,250,000 of additional capital.

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Our cash requirements in the future may be significantly different from our current estimates and depend on many factors, including:

- the results of our clinical trials;
- the time and costs involved in obtaining regulatory approvals;
- the costs of setting up and operating our own marketing and sales organization;
- the ability to obtain funding under contractual and licensing agreements;
- the costs involved in obtaining and enforcing patents or any litigation by third parties regarding intellectual property; and
- our success in entering into collaborative relationships with other parties.

To finance our future activities, we may seek funds through additional rounds of financing, including private or public equity or debt offerings and collaborative arrangements with corporate partners. We cannot say with any certainty that we will be able to obtain the additional needed funds on reasonable terms, or at all. The sale of additional equity or convertible debt securities could result in additional dilution to our stockholders. If we issued preferred equity or debt securities, these securities could have rights superior to holders of our common stock, and could contain covenants that will restrict our operations. We might have to obtain funds through arrangements with collaborative partners or others that may require us to relinquish rights to our technologies, product candidates or products that we otherwise would not relinquish. As previously announced, in March 2009 we reduced our workforce in an effort to conserve our capital resources. If adequate funds are not available in the near term, we could lose our key employees and might have to further delay, scale back or eliminate one or more of our research and development programs, which would impair our future prospects. In addition, we may be unable to meet our research spending obligations under our existing licensing agreements and may be unable to continue our business operations.

Our products under development rely on licenses from The Regents of the University of California and The Governors of the University of Alberta, and if we lose access to these technologies or applications, our business would be substantially impaired.

Under our agreements with The Regents of the University of California, we have exclusive rights to AMPAKINE compounds for all applications for which the University has patent rights, other than endocrine modulation. Under our agreement with The Governors of the University of Alberta, we have exclusive rights to the use of AMPAKINE compounds to prevent and treat respiratory depression induced by opiate analgesics, barbiturates and anesthetic and sedative agents.

Our rights to certain of the AMPAKINE compounds are secured by patents or patent applications owned wholly by the University of California or by the University of California as a co-owner with us. Our existing agreements with the University of California require the University of California to prepare, file, prosecute and maintain patent applications related to our licensed rights at our expense. Such agreements also require us to make certain minimum annual payments, meet certain milestones or diligently seek to commercialize the underlying technology.

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Under such agreements with the University of California, we are required to make minimum annual royalty payments approximating $70,000. Separately, we are required to spend a minimum of $250,000 per year to advance the AMPAKINE compounds until we begin marketing an AMPAKINE compound. The commercialization efforts in the agreements require us to file for regulatory approval of an AMPAKINE compound before October 2012.

Our rights to the use of AMPAKINE compounds to prevent and treat respiratory depression induced by opiate analgesics, barbiturates and anesthetic and sedative agents include rights to a patent application owned wholly by The Governors of the University of Alberta. Our existing agreement with The University of Alberta requires us to file, prosecute and maintain patent applications related to our licensed rights in coordination with the University of Alberta. Such agreement also requires us to meet certain milestones and diligently seek to commercialize the underlying technology.

We currently are in compliance with our obligations under the agreements with each of The Regents of the University of California and The Governors of the University of Alberta, with respect to minimum annual payments and diligence milestones. We have reached a payment agreement with the University of California allowing us to delay certain payments for reimbursement of patent expenses, and are in compliance with that payment schedule. Our failure to meet any of these requirements, as modified could allow the respective university to terminate that particular agreement. Management believes that it maintains a strong relationship with each such university.

We are at an early stage of development and we may not be able to successfully develop and commercialize our products and technologies.

The development of AMPAKINE products is subject to the risks of failure commonly experienced in the development of products based upon innovative technologies and the expense and difficulty of obtaining approvals from regulatory agencies. Drug discovery and development is time consuming, expensive and unpredictable. On average, only one out of many thousands of chemical compounds discovered by researchers proves to be both medically effective and safe enough to become an approved medicine. In the fields that we target, approximately one in five compounds placed in clinical trials generally reaches the market. All of our proposed products are in the preclinical or early clinical stage of development and will require significant additional funding for research, development and clinical testing before we are able to submit them to any of the regulatory agencies for clearances for commercial use. Our trials that are subject to our collaborative research arrangements are being funded by third parties and do not involve financial commitments from us.

The process from discovery to development to regulatory approval can take several years and drug candidates can fail at any stage of the process. Late stage clinical trials often fail to replicate results achieved in earlier studies. Historically, in our industry more than half of all compounds in development failed during Phase II trials and 30% failed during Phase III trials. We cannot assure you that we will be able to complete successfully any of our research and development activities. Even if we do complete them, we may not be able to market successfully any of the products or be able to obtain the necessary regulatory approvals or assure that healthcare providers and payors will accept our products. We also face the risk that any or all of our products will not work as intended or that they will be unsafe, or that, even if they do work and are safe, that our products will be uneconomical to manufacture and market on a large scale. Due to the extended testing and regulatory review process required before we can obtain marketing clearance, we do not expect to be able to commercialize any therapeutic drug for several years, either directly or through our corporate partners or licensees.

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We may not be able to enter into the strategic alliances necessary to fully develop and commercialize our products and technologies, and we will be dependent on our corporate partners if we do.

In addition to our agreements with Organon and Servier, we are seeking other pharmaceutical company partners to develop other major indications for the AMPAKINE compounds. These agreements would potentially provide us with additional funds in exchange for exclusive or non-exclusive license or other rights to the technologies and products that we are currently developing. Competition between biopharmaceutical companies for these types of arrangements is intense. Although we have been engaged in discussions with candidate companies for some time, we cannot give any assurance that these discussions will result in an agreement or agreements in a timely manner, or at all. Additionally, we cannot assure you that any resulting agreement will generate sufficient revenues to offset our operating expenses and longer-term funding requirements.

If we are unable to maintain our relationships with academic consultants and the University of California, Irvine, our business could suffer.

We depend upon our relationships with academic consultants, particularly Dr. Gary S. Lynch of the University of California, Irvine. In addition, we sponsor preclinical research in Dr. Lynch s laboratories at the University of California, Irvine that is part of our product development and corporate partnering profile. We are not current in our payment obligation under certain research arrangements with the University. If our relationship with Dr. Lynch or the University of California, Irvine, is disrupted, our AMPA- receptor research program could be adversely affected. The term of our consulting agreement with Dr. Lynch commenced in November 1987 and will continue until terminated by either party to the agreement upon at least 60 days prior written notice to the other party. Our agreements with our other consultants are generally also terminable by the consultant on short notice.

Risks related to our industry

If we fail to secure adequate intellectual property protection, it could significantly harm our financial results and ability to compete.

Our success will depend, in part, on our ability to get patent protection for our products and processes in the U.S. and elsewhere. We have filed and intend to continue to file patent applications as we need them. However, additional patents that may issue from any of these applications may not be sufficiently broad to protect our technology. Also, any patents issued to us or licensed by us may be designed around or challenged by others, and if such challenge is successful, it may diminish our rights.

If we are unable to obtain sufficient protection of our proprietary rights in our products or processes prior to or after obtaining regulatory clearances, our competitors may be able to obtain regulatory clearance and market competing products by demonstrating the equivalency of their products to our products. If they are successful at demonstrating the equivalency between the products, our competitors would not have to conduct the same lengthy clinical tests that we have conducted.

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We also rely on trade secrets and confidential information that we try to protect by entering into confidentiality agreements with other parties. Those confidentiality agreements may be breached, and our remedies may be insufficient to protect the confidential information. Further, our competitors may independently learn our trade secrets or develop similar or superior technologies. To the extent that our consultants, key employees or others apply technological information independently developed by them or by others to our projects, disputes may arise regarding the proprietary rights to such information. We cannot assure you that such disputes will be resolved in our favor.

We may be subject to potential product liability claims. One or more successful claims brought against us could materially impact our business and financial condition.

The clinical testing, manufacturing and marketing of our products may expose us to product liability claims. We maintain liability insurance with coverage limits of $10 million per occurrence and $10 million in the annual aggregate. We have never been subject to a product liability claim, and we require each patient in our clinical trials to sign an informed consent agreement that describes the risks related to the trials, but we cannot assure you that the coverage limits of our insurance policies will be adequate or that one or more successful claims brought against us would not have a material adverse effect on our business, financial condition and result of operations. Further, if one of our AMPAKINE compounds is approved by the FDA for marketing, we cannot assure you that adequate product liability insurance will be available, or if available, that it will be available at a reasonable cost. Any adverse outcome resulting from a product liability claim could have a material adverse effect on our business, financial condition and results of operations.

We face intense competition that could result in products that are superior to the products that we are developing.

Our business is characterized by intensive research efforts. Our competitors include many companies, research institutes and universities that are working in a number of pharmaceutical or biotechnology disciplines to develop therapeutic products similar to those we are currently investigating. For example, the Pharmaceutical Research and Manufacturers of America recently estimated that more than 100 pharmaceutical and biotechnology companies are conducting research in the field of neurological disorders, with over 25 drugs under clinical investigation in the U.S. for the treatment of Alzheimer s disease. Virtually all of the major multinational pharmaceutical companies have active projects in these areas. Most of these competitors have substantially greater financial, technical, manufacturing, marketing, distribution and/or other resources than we do. In addition, many of our competitors have experience in performing human clinical trials of new or improved therapeutic products and obtaining approvals from the FDA and other regulatory agencies. We have no experience in conducting and managing later-stage clinical testing or in preparing applications necessary to obtain regulatory approvals. Accordingly, it is possible that our competitors may succeed in developing products that are safer or more effective than those that we are developing and may obtain FDA approvals for their products faster than we can. We expect that competition in this field will continue to intensify.

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We may be unable to recruit and retain our senior management and other key technical personnel on whom we are dependent.

We are highly dependent upon senior management and key technical personnel and currently do not carry any insurance policies on such persons. In particular, we are highly dependent on our Executive Chairman, Roger G. Stoll, Ph.D.; our President and Chief Executive Officer, Mark A. Varney, Ph.D.; and our Chief Medical Officer, Pierre V. Trân, M.D., M.M.M., all of whom have entered into employment agreements with us. Competition for qualified employees among pharmaceutical and biotechnology companies is intense. As previously announced, in early March 2009 we reduced our workforce in an effort to conserve our capital resources, which reduction included certain of our technical personnel. The loss of any of our senior management or additional loss of our technical personnel, or our inability to attract, retain and motivate the additional highly-skilled employees and consultants that our business requires, could substantially hurt our business and prospects.

The regulatory approval process is expensive, time consuming, uncertain and may prevent us from obtaining required approvals for the commercialization of some of our products.

The FDA and other similar agencies in foreign countries have substantial requirements for therapeutic products. Such requirements often involve lengthy and detailed laboratory, clinical and post-clinical testing procedures and are expensive to complete. It often takes companies many years to satisfy these requirements, depending on the complexity and novelty of the product. The review process is also extensive, which may delay the approval process even more. According to the Pharmaceutical Research and Manufacturers of America, historically the cost of developing a new pharmaceutical from discovery to approval was approximately $800 million, and this amount is expected to increase annually.

As of yet, we have not obtained any approvals to market our products. Further, we cannot assure you that the FDA or other regulatory agency will grant us approval for any of our products on a timely basis, if at all. Even if regulatory clearances are obtained, a marketed product is subject to continual review, and later discovery of previously unknown problems may result in restrictions on marketing or withdrawal of the product from the market.

Risks related to this offering

Our stock price may be volatile and our common stock could decline in value.

The market price of securities of life sciences companies in general has been very unpredictable. The range of sales prices of our common stock for the fiscal years ended December 31, 2008, 2007 and 2006, as quoted on the NYSE Amex Equities Market (formerly The American Stock Exchange), was $0.41 to $1.24, $0.44 to $3.47 and $1.19 to $5.94, respectively. The following factors, in addition to factors that affect that market generally, could significantly impact our business, and the market price of our common stock could decline:

- competitors announcing technological innovations or new commercial products;
- competitors publicity regarding actual or potential products under development;
- regulatory developments in the United States and foreign countries;
- developments concerning proprietary rights, including patent litigation;

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public concern over the safety of therapeutic products; and

changes in healthcare reimbursement policies and healthcare regulations.

There is a large number of shares of common stock that may be sold, which may depress the market price of our stock.

As of July 31, 2009, we had approximately 56.3 million shares of common stock outstanding. Additionally, if all warrants and options outstanding as of such date are exercised prior to their expiration, approximately 33 million additional shares of common stock could become freely tradable without restriction. Sales of substantial amounts of common stock in the public market could adversely affect the prevailing market price of our common stock and could also make it more difficult for us to raise funds through future offerings of common stock.

Our charter document and shareholder rights plan may prevent or delay an attempt by our stockholders to replace or remove management.

Certain provisions of our restated certificate of incorporation, as amended, could make it more difficult for a third party to acquire control of our business, even if such change in control would be beneficial to our stockholders. Our restated certificate of incorporation, as amended, allows our Board of Directors to issue up to approximately 509,000 shares of preferred stock without stockholder approval. Pursuant to this authority, in February 2002 our Board of Directors adopted a shareholder rights plan and declared a dividend of a right to purchase one one-thousandth of a share of preferred stock for each outstanding share of our common stock. The ability of our Board of Directors to issue additional preferred stock and our shareholder rights plan may have the effect of delaying or preventing an attempt by our stockholders to replace or remove existing directors and management.

We may be unable to maintain the standards for listing on the NYSE Amex Equities Market, which could adversely affect the liquidity of our common stock.

Our common stock is currently listed on the NYSE Amex Equities Market. There are several requirements that we must satisfy in order for our common stock to continue to be listed on the NYSE Amex Equities Market. We may not comply with all of these listing requirements, which may result in the delisting of our common stock. In May 2009, we received a notice from the NYSE Amex LLC indicating that we were not in compliance with certain of the exchange s continued listing requirements. In response to such notice, we submitted a plan of compliance to the exchange on June 18, 2009. On August 20, 2009, we received a written determination from the NYSE Amex LLC that our common stock would be delisted unless we appeal the delisting determination before August 27, 2009. We intend to appeal the decision at a hearing before a listings qualification panel; however, there is no assurance that such panel will grant our request for continued listing. During the appeal process, our common stock will continue to trade on the NYSE Amex Equities Market. Delisting from the NYSE Amex Equities Market could adversely affect the liquidity and the price of our common stock and could have a long-term adverse impact on our ability to raise future capital through a sale of shares of our common stock. If our common stock were delisted it would be traded on an electronic bulletin board established for securities that are not traded on a national securities exchange or traded in quotations published by the Pink OTC Markets, Inc., commonly referred to as the pink sheets. If this occurs, it could be difficult to sell our securities or obtain the same level of market information as to the price of shares of our common stock as is currently available.

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If our common stock were delisted and determined to be a penny stock, a broker-dealer may find it more difficult to trade our common stock and an investor may find it more difficult to acquire or dispose of our common stock in the secondary market.

In addition, if our common stock were delisted, it may be subject to the so-called penny stock rules. The SEC has adopted regulations that define a penny stock to be any equity security that has a market price per share of less than $5.00, subject to certain exceptions, such as any securities listed on a national securities exchange. For any transaction involving a penny stock, unless exempt, the rules impose additional sales practice requirements on broker-dealers, subject to certain exceptions. If our common stock were delisted and determined to be a penny stock, a broker-dealer may find it more difficult to trade our common stock and an investor may find it more difficult to acquire or dispose of our common stock on the secondary market.

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FORWARD-LOOKING STATEMENTS

This prospectus and the documents incorporated by reference herein include 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. Forward-looking statements are those that predict or describe future events or trends and that do not relate solely to historical matters. You can generally identify forward-looking statements as statements containing the words believe, expect, will, anticipate, intend, estimate, project, plan, assume or other similar expressions, or negatives of those expressions, although not all forward-looking statements contain these identifying words. All statements contained or incorporated by reference in this prospectus regarding our future strategy, future operations, projected financial position, estimated future revenues, projected costs, future prospects, the future of our industries and results that might be obtained by pursuing management s current plans and objectives are forward-looking statements.

You should not place undue reliance on our forward-looking statements because the matters they describe are subject to known and unknown risks, uncertainties and other unpredictable factors, many of which are beyond our control. Our forward-looking statements are based on the information currently available to us and speak only as of the date on the cover of this prospectus, or, in the case of forward-looking statements incorporated by reference, as of the date of the filing that includes the statement. New risks and uncertainties arise from time to time, and it is impossible for us to predict these matters or how they may affect us. Over time, our actual results, performance or achievements will likely differ from the anticipated results, performance or achievements that are expressed or implied by our forward-looking statements, and such difference might be significant and materially adverse to our security holders. We do not undertake and specifically decline any obligation to update any forward-looking statements or to publicly announce the results of any revisions to any statements to reflect new information or future events or developments.

We have identified some of the important factors that could cause future events to differ from our current expectations and they are described in this prospectus under the caption Risk Factors above and in other documents that we may file with the SEC, all of which you should review carefully. Please consider our forward-looking statements in light of those risks as you read this prospectus.

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USE OF PROCEEDS

The proceeds from the sale of each selling security holder s common stock will belong to that selling security holder. We will not receive any proceeds from such sales.

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SELLING SECURITY HOLDERS

We issued 4,029 shares of newly designated Series F Preferred Stock convertible into 12,120,939 shares of our common stock on July 31, 2009 in a private placement to a certain security holder who is an accredited investor. Pursuant to a Registration Rights Agreement dated July 31, 2009, we agreed to file a registration statement, of which this prospectus is a part, with the SEC to register the resale of the shares of our common stock which we will issue to that security holder upon conversion of the Series F Preferred Stock and to keep the registration statement effective until the date when all of the shares registered hereunder are sold or the date on which the shares registered hereunder can be sold without registration and without restriction as to the number of shares that may be sold.

In addition, on July 31, 2009 we issued warrants to purchase an additional 6,060,470 shares of common stock to the investor as well as warrants to purchase 606,047 shares of common stock to a placement agent in connection with the aforementioned private placement. Under these warrant agreements, we are not required to include the shares underlying the warrants in the registration statement of which this prospectus is a part.

The following table sets forth: (1) the name of the selling security holder for whom we are registering the resale of shares under this registration statement; (2) the number of shares of our common stock beneficially owned by such selling security holder prior to this offering; (3) the number of shares of our common stock being offered pursuant to this prospectus; and (4) the number of shares, and the percentage of the total of the outstanding shares, of our common stock to be beneficially owned by such selling security holder after this offering. The selling security holder does not have any position, office or material relationship with the Company.

Beneficial ownership is determined in accordance with Rule 13d-3 promulgated by the SEC under the Exchange Act. Percentage ownership is based on approximately 56,291,680 shares of common stock outstanding as of July 31, 2009.

Name	Common Stock Owned Prior to the Offering	Common Stock Being Offered Pursuant to this Prospectus	Common Stock Owned Upon Completion of this Offering	Percentage of Common Stock Owned Upon Completion of this Offering
BAM Opportunity Fund, L.P.	25,629,900	12,120,939	13,508,961	4.99%

The table above assumes the sale by the selling security holder of all 12,120,939 shares of common stock available for resale under this prospectus. The table above also (i) includes 507,315 shares of common stock held by the selling security holder as of July 29, 2009 (but not included for resale under this prospectus), (ii) includes 13,001,646 shares of common stock subject to warrants currently held by the selling security holder (but not included for resale under this prospectus), of which warrants to purchase 6,941,176 shares of common stock are initially exercisable as of October 17, 2009 and warrants to purchase 6,060,470 shares of common stock are initially exercisable as of January 31, 2010, and (iii) reflects the contractual limitations on exercisability of the above-referenced warrants such that the warrants may not be exercised to the extent that the selling security holder s percentage ownership after such exercise would exceed 4.99% of the common stock outstanding after giving effect to the exercise (and excluding any unexercised or nonconverted portion of any securities of the Company beneficially owned by the selling security holder or its affiliates that are also subject to such ownership limitations). Hal Mintz and Ross Berman, whose business address is 44 Wall Street, Suite 1603, New York, New York 10005, serve as managing members of the general partner of, and the investment manager to, the selling security holder and, as such, have voting control and investment discretion over the shares owned by the selling security holder. Messrs. Mintz and Berman disclaim beneficial ownership of such shares except to the extent of their pecuniary interest therein.

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PLAN OF DISTRIBUTION

We will not receive any part of the proceeds from the sale of common stock offered pursuant to this prospectus. The selling security holder listed in the preceding section and any of its pledgees, assignees and successors-in-interest may, from time to time, sell any or all of their shares of common stock covered by this prospectus on any stock exchange, market or trading facility on which the shares are traded or in private transactions. The selling security holder will act independently of us in making decisions with respect to the timing, manner and size of each sale. These sales may be at fixed or negotiated prices. The selling security holder may use any one or more of the following methods when selling shares:

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

The selling security holder may also sell shares under Rule 144 under the Securities Act, if available, rather than under this prospectus. The selling security holder is not obligated to, and there is no assurance that the selling security holder will, sell all or any of the shares we are registering. The selling security holder may transfer, devise, or gift such shares by other means not described in this prospectus.

Broker-dealers engaged by the selling security holder may arrange for other brokers-dealers to participate in sales. Broker-dealers may receive commissions or discounts from the selling security holder (or, if any broker-dealer acts as agent for the purchaser of shares, from the purchaser) in amounts to be negotiated, but, except as set forth in a supplement to this prospectus, in the case of an agency transaction not in excess of a customary brokerage commission in compliance with FINRA Rule 2440; and in the case of a principal transaction a markup or markdown in compliance with FINRA IM-2440.

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

The selling security holder and any broker dealers or agents that are involved in selling the shares may be deemed to be underwriters within the meaning of the Securities Act in connection with such sales. In such event, any commissions received by such broker dealers or agents and any profit on the resale of the shares purchased by them may be deemed to be underwriting commissions or discounts under the Securities Act. The selling security holder has informed us that it does not have any written or oral agreement or understanding, directly or indirectly, with any person to distribute the common stock. In no event shall any broker-dealer receive fees, commissions and markups which, in the aggregate, would exceed eight percent (8%).

We are required to pay certain fees and expenses incurred by the Company incident to the registration of the shares. We have agreed to indemnify the selling security holder against certain losses, claims, damages and liabilities, including liabilities under the Securities Act.

Because the selling security holder may be deemed to be an underwriter within the meaning of the Securities Act, it will be subject to the prospectus delivery requirements of the Securities Act including Rule 172 thereunder. The selling security holder has advised us that there is no underwriter or coordinating broker acting in connection with the proposed sale of the resale shares by the selling security holder.

We agreed to keep the registration statement of which this prospectus is part effective until the earlier of (i) the date on which the shares may be resold by the selling security holder without regard to any volume or manner-of-sale limitations by reason of Rule 144, without the requirement for the Company to be in compliance with the current public information under Rule 144 under the Securities Act or any other rule of similar effect or (ii) all of the shares have been sold pursuant to the registration statement of which this prospectus is part or Rule 144 under the Securities Act or any other rule of similar effect. The resale shares will be sold only through registered or licensed brokers or dealers if required under applicable state securities laws. In addition, in certain states, the resale shares may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and is complied with.

Under applicable rules and regulations under the Securities Exchange Act, any person engaged in the distribution of the resale shares may not simultaneously engage in market making activities with respect to our common stock for the applicable restricted period, as defined in Regulation M, prior to the commencement of the distribution. In addition, the selling security holder will be subject to applicable provisions of the Exchange Act and the rules and regulations thereunder, including Regulation M, which may limit the timing of purchases and sales of shares of our common stock by the selling security holder or any other person. We will make copies of this prospectus available to the selling security holder and have informed it of the need to deliver a copy of this prospectus to each purchaser at or prior to the time of the sale (including by compliance with Rule 172 under the Securities Act).

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LEGAL MATTERS

The validity of the shares of common stock offered hereby will be passed on by Stradling Yocca Carlson & Rauth, a Professional Corporation, Newport Beach, California.

EXPERTS

Haskell & White LLP, independent registered public accounting firm, have audited our financial statements included in our Annual Report on Form 10-K, for the year ended December 31, 2008 as set forth in their report, which is incorporated by reference in this prospectus and elsewhere in the registration statement. Our financial statements are incorporated by reference in reliance on Haskell & White LLP s report, given on their authority as experts in accounting and auditing.

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WHERE YOU CAN FIND ADDITIONAL INFORMATION

We have filed a registration statement on Form S-3 with the SEC relating to the common stock offered by this prospectus. This prospectus does not contain all of the information set forth in the registration statement and the exhibits and schedules thereto. Statements contained in this prospectus as to the contents of any contract or other document referred to are not necessarily complete and in each instance reference is made to the copy of such contract or other document filed as an exhibit to the registration statement, each such statement being qualified in all respects by such reference. For further information with respect to us and the common stock offered hereby, reference is made to such registration statement, exhibits and schedules.

We are subject to the information and periodic reporting requirements of the Exchange Act and in accordance therewith file reports, proxy statements and other information with the SEC. Such reports, proxy statements, other information and a copy of the registration statement may be inspected by anyone without charge and copies of these materials may be obtained upon the payment of the fees prescribed by the SEC, at the Public Reference Room maintained by the SEC at 100 F Street, N.E., Washington, D.C. 20549. The public may obtain information on the operation of the Public Reference Room by calling the SEC at 1-800-SEC-0330. The registration statement and the reports, proxy statements and other information filed by us are also available through the SEC s Web site on the World Wide Web at the following address: http://www.sec.gov.

INCORPORATION BY REFERENCE

The SEC allows us to incorporate by reference into this prospectus the information we file with it. This means that we can disclose important information to you by referring you to those documents. The information we incorporate by reference is considered to be part of this prospectus, and later information we file with the SEC will automatically update and supersede this information.

We hereby incorporate by reference in the prospectus the following documents filed with the SEC (in each case, Commission File No. 1-16467):

1. Our Annual Report on Form 10-K for the fiscal year ended December 31, 2008 filed with the SEC on April 15, 2009;

2. Our Quarterly Report on Form 10-Q for the quarter ended March 31, 2009 filed with the SEC on May 15, 2009;

3. Our Quarterly Report on Form 10-Q for the quarter ended June 30, 2009 filed with the SEC on August 14, 2009;

4. Our Current Reports on Form 8-K as filed with the SEC on March 19, 2009, April 17, 2009, May 22, 2009 and July 30, 2009, respectively;

5. Our Proxy Statement dated May 7, 2009 relating to the Annual Meeting of Stockholders held on June 5, 2009;

6. The description of our common stock contained in our Registration Statement on Form 8-A, filed with the SEC under Section 12(b) of the Exchange Act on May 2, 2001, including any amendment or report filed for the purpose of updating such description; and

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7. The description of our preferred stock purchase rights contained in our Registration Statement on Form 8-A/A, filed with the SEC under Section 12(b) of the Exchange Act on February 15, 2002, including any amendment or report filed for the purpose of updating such description.

We are also incorporating by reference any future filings we make with the SEC under Section 13(a), 13(c), 14 or 15(d) of the Exchange Act until this offering is completed, including those made between the date of filing of the initial registration statement and prior to effectiveness of the registration statement, except for information furnished under Item 2.02 or Item 7.01 of our Current Reports on Form 8-K which is not deemed to be filed and not incorporated by reference herein.

You may request a copy of these filings (other than an exhibit to a filing unless that exhibit is specifically incorporated by reference into that filing), at no cost, by writing or calling us at Cortex Pharmaceuticals, Inc., 15241 Barranca Parkway, Irvine, California 92618, telephone number (949) 727-3157, Attention: Chief Financial Officer.