ADVENTRX PHARMACEUTICALS INC
Form 424B3
June 16, 2006

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**Filed pursuant to Rule 424(b)(3)**
**Registration No. 333 - 133824**

**PROSPECTUS**
**2,391,996 Shares**
**Common Stock**
**ADVENTRX Pharmaceuticals, Inc.**
**6725 Mesa Ridge Road, Suite 100**
**San Diego, California 92121**
**(858) 558-0866**

The security holders of ADVENTRX Pharmaceuticals, Inc. (the Company ) listed in this prospectus are offering an aggregate of 2,391,996 shares of common stock, including shares issuable upon exercise of outstanding warrants.

The shares and warrants were sold to the selling security holders in transactions exempt from registration under the Securities Act of 1933, as amended (the Securities Act ). We will not receive any of the proceeds from the sale of the shares of common stock offered hereby although we will receive the proceeds of sales of shares of common stock to the selling security holders upon exercise of their warrants (except to the extent warrants are exercised on a net exercise basis).

The selling security holders may sell the shares covered by this prospectus from time to time in transactions on the American Stock Exchange LLC, in the over-the-counter market or in negotiated transactions. The selling security holders directly, or through agents or dealers designated from time to time, may sell the shares of common stock offered by them at fixed prices, at prevailing market prices at the time of sale, at varying prices determined at the time of sale or at negotiated prices.

Our common stock is listed on the American Stock Exchange LLC under the symbol ANX. On June 8, 2006, the last reported sale price of our common stock on the American Stock Exchange LLC was $4.02 per share.

**INVESTING IN THE COMMON STOCK INVOLVES RISKS.**
**SEE RISK FACTORS BEGINNING ON PAGE 5.**

**Neither the Securities and Exchange Commission nor any state securities regulator has approved or disapproved the shares of common stock covered by this prospectus, or determined if this prospectus is truthful or complete. Any representation to the contrary is a criminal offense.**

The date of this prospectus is June 8, 2006

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In this prospectus, ADVENTRX, the company, we, us, and our refer to ADVENTRX Pharmaceuticals, Inc.

You should rely only on the information contained or incorporated by reference in this prospectus and any prospectus supplement. We have not authorized any other person to provide you with different information. If anyone provides you with different or inconsistent information, you should not rely on it. We will not make an offer to sell our common stock in any jurisdiction where the offer or sale is not permitted. The information in this prospectus and any prospectus supplement is accurate as of the date on the front cover of this prospectus or any prospectus supplement, and the information in documents we file with the SEC and incorporate by reference into this prospectus or any prospectus supplement, is accurate as of the date on those documents.

## Special Note Regarding Forward-Looking Statements

Some of the statements under Our Company, Risk Factors and elsewhere in this prospectus constitute forward-looking statements. These statements involve known and unknown risks, uncertainties, and other factors that may cause our actual results to be materially different from projected results expressed or implied by the forward-looking statements. These factors include, among others, those listed under Risk Factors and elsewhere in this prospectus.

In some cases, you can identify forward-looking statements by terms such as may, will, should, expects, plans, anticipates, believes, estimates, predicts, potential, or continue or similar terms.

Although we believe that the expectations reflected in the forward-looking statements are reasonable, we cannot guarantee future results, levels of activity, performance, or achievements. Our actual results could differ materially from those expressed or implied by these forward-looking statements as a result of various factors, including the risk factors described under the heading Risk Factors and elsewhere in this prospectus. We undertake no obligation to update publicly any forward-looking statements for any reason, except as required by law, even as new information becomes available or other events occur in the future.

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## Where You Can Find More Information About Us

We file annual, quarterly and current reports, proxy statements and other information with the Securities and Exchange Commission. You may read and copy any document we file with the Commission at the Public Reference Room at the Commission, 100 F Street, N.E., Washington, D.C. 20549. Please call 1-800-SEC-0330 for further information concerning the Public Reference Room. The Commission also makes these documents and other information available on its website at http://www.sec.gov. We also maintain a website at http://www.adventrx.com. The material on our website is not a part of this prospectus or any prospectus supplement.

We have filed with the Commission a registration statement under the Securities Act on Form S-3 relating to the common stock offered by this prospectus. This prospectus and any prospectus supplement constitute a part of the registration statement but do not contain all of the information set forth in the registration statement and its exhibits. For further information, we refer you to the registration statement and its exhibits.

The Commission allows us to incorporate by reference the information we file with it, which means that we can disclose certain information to you by referring you to another document we have filed with the Commission. We may furnish other information to the Commission which is not considered to be filed and is therefore not incorporated by reference into or otherwise a part of this prospectus, unless we indicate to the contrary. The information incorporated by reference is an important part of this prospectus and information that we file later with the Commission will automatically update this prospectus and replace any outdated information. We incorporate by reference the following:

(a) the section entitled Description of Registrant s Securities contained in the Registrant s Registration Statement on Form 8-A (file No. 001-32157) filed with the Commission on April 27, 2004;

(b) our Annual Report on Form 10-K for the fiscal year ended December 31, 2005 filed with the Commission on March 16, 2006;

(c) our Current Report on Form 8-K filed with the Commission on January 30, 2006;

(d) our Current Report on Form 8-K filed with the Commission on January 31, 2006;

(e) our Current Report on Form 8-K filed with the Commission on February 6, 2006;

(f) our Current Report on Form 8-K filed with the Commission on February 15, 2006;

(g) our Current Report on Form 8-K filed with the Commission on March 1, 2006;

(h) our Current Report on Form 8-K filed with the Commission on March 20, 2006 (Items 4.02, 8.01 and 9.01), as amended by Amendment No. 1 filed with the Commission on March 27, 2006;

(i) our Current Report on Form 8-K filed with the Commission on March 20, 2006 (Items 8.01 and 9.01);

(j) our Current Report on Form 8-K filed with the Commission on April 6, 2006;

(k) our Current Report on Form 8-K filed with the Commission on April 11, 2006 as amended by Amendment No. 1 filed with the Commission on May 1, 2006;

(l) our Current Report on Form 8-K filed with the Commission on May 16, 2006;

(m) our Current Report on Form 8-K filed with the Commission on May 22, 2006;

(n) our Current Report on Form 8-K filed with the Commission on June 5, 2006;

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(o) our Quarterly Report on Form 10-Q for the quarter ended March 31, 2006 filed with the Commission on May 10, 2006 as amended by Amendment No. 1 filed with the Commission on May 22, 2006; and

(p) any future filings we make with the Commission under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act after the date of the initial registration statement and prior to effectiveness of the registration statement, and until we file a post-effective amendment which indicates the termination of the offering of the securities made by this prospectus.

You may request a copy of these filings, at no cost, by writing or telephoning:

Carrie E. Carlander
Chief Financial Officer
ADVENTRX Pharmaceuticals, Inc.
6725 Mesa Ridge Road, Suite 100
San Diego, California 92121
(858) 552-0866

We will provide exhibits to these filings at no cost only if they are specifically incorporated into those filings.

## Our Company

We are a biopharmaceutical research and development company focused on developing treatments for cancer and infectious diseases. We seek to develop compounds which surpass the performance and safety of existing drugs by addressing significant problems such as drug metabolism, toxicity, bioavailability and resistance. We do not manufacture, market, sell or distribute any product. Pursuant to license agreements with University of Southern California and the acquisition described below, we have rights to drug candidates in varying stages of development. Our current drug candidates are CoFactor, ANX-530, Selone and Thiovir. All of these drug candidates are described in our Annual Report on Form 10-K for the fiscal year ended December 31, 2005.

On May 30, 2003, we merged our wholly-owned subsidiary, Biokeys, Inc., into the Company and changed our name from Biokeys Pharmaceuticals, Inc. to ADVENTRX Pharmaceuticals, Inc. The merger had no effect on our financial statements.

In July 2004, we formed a wholly-owned subsidiary, ADVENTRX (Europe) Ltd., in the United Kingdom for the purpose of conducting drug trials in the European Union.

We have incurred net losses since our inception. As of March 31, 2006, our accumulated deficit was approximately $81 million. We expect to incur substantial and increasing losses for the next several years as we continue development and possible commercialization of new products.

To date, we have funded our operations primarily through sales of equity securities.

Our business is subject to significant risks, including risks inherent in our ongoing clinical trials, the regulatory approval processes, the results of our research and development efforts, commercialization, and competition from other pharmaceutical companies.

## Recent Developments

On April 7, 2006, we entered into an Agreement and Plan of Merger (the Merger Agreement ) among the Company, SD Pharmaceuticals, Inc., a Delaware corporation ( SDP ), Speed Acquisition, Inc., a Delaware corporation and a wholly-owned subsidiary of the Company ( Merger Sub ), Paul Marangos and Dr. Andrew X. Chen, each as stockholders of SDP and Paul Marangos, as an individual acting as the stockholder representative. Pursuant to the Merger Agreement, we acquired SDP through the merger of Merger Sub into SDP and SDP will continue as the surviving corporation and as a wholly-owned subsidiary of the Company (the Merger ).

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Upon the closing of the transaction on April 26, 2006, ADVENTRX acquired certain intellectual property rights to eight oncology and infectious disease product candidates, including certain ex-US rights to SDP-012 (ANX-530, vinorelbine emulsion). In October 2005, ADVENTRX announced it had licensed US development and marketing rights to SDP-012 (ANX-530) from SDP. Certain product candidates that ADVENTRX acquired as a result of the merger are based on a nano-emulsion technology for both soluble and insoluble parenteral drugs. The nano-emulsion technology was developed by Dr. Andrew X. Chen and is designed to enable the delivery of vein irritating or difficult to dissolve drugs without excipient-induced adverse effects. Many of the product candidates are based on currently approved drugs and may qualify for the 505(b)(2) regulatory process. Certain product candidates obtained in the transaction are being evaluated by ADVENTRX as possible out-licensing opportunities.

The SDP product portfolio consists of five anticancer and three anti-infective therapies which are listed below:

SDP-013 A non-allergenic, non cremophor-containing emulsion formulation of paclitaxel (Taxol ) designed to eliminate the need for immunosuppressant premedication, which is recommended for paclitaxel therapy to reduce the incidence and severity of severe hypersensitivity reaction. Paclitaxel is approved to treat breast, ovarian and non-small cell lung cancers. Taxol worldwide sales were approximately $750 million in 2005. (Source: Bristol-Myers Squibb).

SDP-014 A novel docetaxel (Taxotere ) formulation not containing polysorbate 80 or other detergents, intended to eliminate the need for multiday immunosuppressant premedication, which is recommended for docetaxel therapy to reduce the incidence and severity of allergic reaction. Taxotere is approved to treat breast, non-small cell lung, prostate and gastric cancers. Worldwide Taxotere sales were approximately $1.6 billion in 2005. (Source: Sanofi-Aventis)

SDP-012 (vinorelbine emulsion) A novel emulsion formulation of vinorelbine tartrate designed to reduce vein irritation associated with the drug. Vinorelbine is approved to treat non-small cell lung cancer. According to IMS Health, worldwide sales of vinorelbine in 2005 were over $150 million.

SDP-111 A novel formulation of beta-elemene, a small molecule anticancer agent belonging to the triterpene family and currently approved in China for a variety of cancers.

SDP-112 An emulsion formulation of alpha-tocopheryl succinate, a form of vitamin E which has been shown to selectively facilitate apoptosis, or cell death, in cancer cells.

SDP-015 A proprietary intravenous formulation of an approved antibiotic in the macrolide family known as clarithromycin. Clarithromycin is approved for mild to moderate bacterial infections such as in community-acquired pneumonia. Only oral formulations of clarithromycin are currently available in the US.

SDP-011 A broad spectrum intranasal/topical anti-viral gel intended for use in cold and flu and other viral indications as an over-the-counter (OTC) product.

SDP-016 A novel formulation of vancomycin, a parenteral glycopeptide antibiotic approved to treat gram-positive bacterial infections. SDP-016 is designed to reduce the vein irritation and phlebitis associated with the IV-delivered drug.

## Risk Factors

An investment in our common stock involves a high degree of risk. Prospective investors in our common stock should carefully consider the following risk factors as well as the other information contained or incorporated by reference in this prospectus and any accompanying prospectus supplement. The risks and uncertainties described below are not the only ones facing us. Additional risks and uncertainties that we are not aware of or focused on or we currently deem immaterial may also impair our business operations. All information contained in this prospectus or any accompanying prospectus supplement and the documents incorporated by reference is qualified in its entirety by these

risk factors.

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If any of the following risks actually occur, our financial condition and results of operations could be materially and adversely affected. If this were to happen, the value of our common stock could decline significantly, and you could lose all or part of your investment.

**RISKS RELATING TO THE COMPANY**

**We have a substantial accumulated deficit and limited working capital.**

We had an accumulated deficit of $81 million as of March 31, 2006. We have had losses from operations and negative cash flow from operations in each year since our inception. We had losses from operations of $2.3 million, $6.7 million and $13.2 million in the years ended December 31, 2003, 2004 and 2005, respectively, and a loss from operations of $4.0 million in the three months ended March 31, 2006. We used cash from operations of $2.2 million, $5.1 million, $11.6 million and $3.0 million during these same periods. Since we presently have no source of revenues and are committed to continuing our product research and development program, significant expenditures and losses will continue until development of new products is completed and such products have been clinically tested, approved by the FDA or other regulatory agencies and successfully marketed. In addition, we fund our operations primarily through the sale of equity securities, and have had limited working capital for our product development and other activities. We do not believe that debt financing from financial institutions will be available until at least the time that one of our products is approved for commercial production.

**We have no current product sales revenues or profits.**

We have devoted our resources to developing a new generation of therapeutic drug products, but such products cannot be marketed until clinical testing is completed and governmental approvals have been obtained. Accordingly, there is no current source of revenues, much less profits, to sustain our present activities, and no revenues will likely be available until, and unless, the new products are clinically tested, approved by the FDA or other regulatory agencies and successfully marketed, either by us or a marketing partner, an outcome which we are not able to guarantee.

**It is uncertain that we will have access to future capital.**

We do not expect to generate positive cash flow from operations for at least the next several years. As a result, substantial additional equity or debt financing for research and development or clinical development will be required to fund our activities. Although we have raised equity financing in the past, including in April 2004 and July 2005, we cannot be certain that we will be able to continue to obtain such financing on favorable or satisfactory terms, if at all, or that it will be sufficient to meet our cash requirements. Any additional equity financing could result in substantial dilution to stockholders, and debt financing, if available, would likely involve restrictive covenants that preclude us from making distributions to stockholders and taking other actions beneficial to stockholders. In connection with certain past warrant issuances by us, we have provided the warrant holders with anti-dilution protections that, among other things, protect them against subsequent issuances by us of common stock at a price per share that is less than the exercise price of the warrants. You could experience additional significant dilution in the future as a result of these provisions if we are required to issue common stock or other equity securities below the exercise prices contained in the warrants. Our ability to raise capital would most likely be impaired if we became ineligible to file shelf registration statements on Form S-3.

If adequate funds are not available, we may be required to delay or reduce the scope of our drug development program or attempt to continue development by entering into arrangements with collaborative partners or others that may require us to relinquish some or all of our rights to proprietary drugs. The inability to adequately and timely fund our capital requirements would have a material adverse effect on us.

**We are not certain that we will be successful in the development of our drug candidates.**

The successful development of any new drug is highly uncertain and is subject to a number of significant risks. Our drug candidates, all of which are in a development stage, require significant, time-consuming and costly development, testing and regulatory clearance. This process typically takes several years and can require substantially more time. Risks include, among others, the possibility that a drug candidate will (i) be found to be ineffective or unacceptably toxic, (ii) have unacceptable side effects, (iii) fail to receive necessary regulatory

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clearances, (iv) not achieve broad market acceptance, (v) be subject to competition from third parties who may market equivalent or superior products, (vi) be affected by third parties holding proprietary rights that will preclude us from marketing a drug product, or (vii) not be able to be manufactured by manufacturers in a timely manner in accordance with required standards of quality. There can be no assurance that the development of our drug candidates will demonstrate the efficacy and safety of our drug candidates as therapeutic drugs, or, even if demonstrated, that there will be sufficient advantages to their use over other drugs or treatments so as to render the drug product commercially viable. In the past, we have been faced with limiting the scope and/or delaying the launch of preclinical and clinical drug trials due to limited cash and personnel resources. We have also chosen to terminate licenses of some drug candidates that were not showing sufficient promise to justify continued expense and development. In the event that we are not successful in developing and commercializing one or more drug candidates, investors are likely to realize a loss of their entire investment.

We have been delayed at certain times in the past in the development of our drug products by limited funding. In addition, if certain of our scientific and technical personnel resigned at or about the same time, the development of our drug products would probably be delayed until new personnel were hired and became familiar with the development programs.

**Positive results in preclinical and clinical trials do not ensure that future clinical trials will be successful or that drug candidates will receive all necessary regulatory approvals for the marketing, distribution or sale of such drug candidates.**

Success in preclinical and clinical trials does not ensure that large-scale clinical trials will be successful. Clinical results are frequently susceptible to varying interpretations that may delay, limit or prevent regulatory approvals. The length of time necessary to complete clinical trials and to submit an application for marketing approval for a final decision by a regulatory authority varies significantly and may be difficult to predict. In the past, we have terminated licenses of drug candidates when our preclinical trials did not support or verify earlier preclinical data. There is a significant risk that any of our drug candidates could fail to show satisfactory results in continued trials, and would not justify further development.

**We will face intense competition from other companies in the pharmaceutical industry.**

We are engaged in a segment of the pharmaceutical industry that is highly competitive and rapidly changing. If successfully developed and approved, any of our drug candidates will likely compete with several existing therapies. CoFactor, our leading drug candidate, would likely compete against a well- established product, leucovorin. In addition, there are numerous companies with a focus in oncology and/or anti-viral therapeutics that are pursuing the development of pharmaceuticals that target the same diseases as are targeted by the drugs being developed by us. We anticipate that we will face intense and increasing competition in the future as new products enter the market and advanced technologies become available. We cannot assure that existing products or new products developed by competitors will not be more effective, or more effectively marketed and sold than those we may market and sell. Competitive products may render our drugs obsolete or noncompetitive prior to our recovery of development and commercialization expenses.

Many of our likely competitors, such as Merck, Wyeth and Pfizer, will also have significantly greater financial, technical and human resources and will likely be better equipped to develop, manufacture and market products. In addition, many of these competitors have extensive experience in preclinical testing and clinical trials, obtaining FDA and other regulatory approvals and manufacturing and marketing pharmaceutical products. A number of these competitors also have products that have been approved or are in late-stage development and operate large, well-funded research and development programs. Smaller companies may also prove to be significant competitors, particularly through collaborative arrangements with large pharmaceutical and biotechnology companies. Furthermore, academic institutions, government agencies and other public and private research organizations are becoming increasingly aware of the commercial value of their inventions and are actively seeking to commercialize the technology they have developed. Companies such as Gilead, Roche and GlaxoSmithKline all have drugs in various stages of development that could become competitors. Other companies, such as Merck Eprova, with which we had a Co-Operation Agreement (2001-2003), may be developing products which could compete with CoFactor. Accordingly, competitors may succeed in commercializing products more rapidly or effectively than us, which would

have a material adverse effect on us.

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**There is no assurance that our products will have market acceptance.**

Our success will depend in substantial part on the extent to which a drug product, if eventually approved for commercial distribution, achieves market acceptance. The degree of market acceptance will depend upon a number of factors, including (i) the receipt and scope of regulatory approvals, (ii) the establishment and demonstration in the medical community of the safety and efficacy of a drug product, (iii) the product s potential advantages over existing treatment methods and (iv) reimbursement policies of government and third party payors. We cannot predict or guarantee that physicians, patients, healthcare insurers or maintenance organizations, or the medical community in general, will accept or utilize any of our drug products.

**The unavailability of health care reimbursement for any of our products will likely adversely impact our ability to effectively market such products and whether health care reimbursement will be available for any of our products is uncertain.**

Our ability to commercialize our technology successfully will depend in part on the extent to which reimbursement for the costs of such products and related treatments will be available from government health administration authorities, private health insurers and other third-party payors. Significant uncertainty exists as to the reimbursement status of newly approved medical products. We cannot guarantee that adequate third-party insurance coverage will be available for us to establish and maintain price levels sufficient for realization of an appropriate return on our investments in developing new therapies. If we are successful in getting FDA approval for CoFactor, we will be competing against a generic drug, leucovorin, which has a lower cost and a long, established history of reimbursement. Receiving sufficient reimbursement for purchase costs of CoFactor will be necessary to make it cost effective and competitive versus the established drug, leucovorin. Government, private health insurers, and other third-party payors are increasingly attempting to contain health care costs by limiting both coverage and the level of reimbursement for new therapeutic products approved for marketing by the FDA. Accordingly, even if coverage and reimbursement are provided by government, private health insurers, and third-party payors for use of our products, the market acceptance of these products would be adversely affected if the amount of reimbursement available for the use of our therapies proved to be unprofitable for health care providers.

**Uncertainties related to health care reform measures may affect our success.**

There have been some federal and state proposals in the past to subject the pricing of health care goods and services, including prescription drugs, to government control and to make other changes to the U.S. health care system. None of the proposals seems to have affected any of the drugs in our programs. However, it is uncertain if future legislative proposals would be adopted that might affect the drugs in our programs or what actions federal, state, or private payors for health care treatment and services may take in response to any such health care reform proposals or legislation. Any such health care reforms could have a material adverse effect on the marketability of any drugs for which we ultimately require FDA approval.

**Further testing of our drug candidates will be required and there is no assurance of FDA approval.**

The FDA and comparable agencies in foreign countries impose substantial requirements upon the introduction of medical products, through lengthy and detailed laboratory and clinical testing procedures, sampling activities and other costly and time-consuming procedures. Satisfaction of these requirements typically takes several years or more and varies substantially based upon the type, complexity, and novelty of the product.

The effect of government regulation and the need for FDA approval will delay marketing of new products for a considerable period of time, impose costly procedures upon our activities, and provide an advantage to larger companies that compete with us. There can be no assurance that the FDA or other regulatory approval for any products developed by us will be granted on a timely basis or at all. Any such delay in obtaining or failure to obtain, such approvals would materially and adversely affect the marketing of any contemplated products and the ability to earn product revenue. Further, regulation of manufacturing facilities by state, local, and other authorities is subject to change. Any additional regulation could result in limitations or restrictions on our ability to utilize any of our technologies, thereby adversely affecting our operations.

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Human pharmaceutical products are subject to rigorous preclinical testing and clinical trials and other approval procedures mandated by the FDA and foreign regulatory authorities. Various federal and foreign statutes and regulations also govern or influence the manufacturing, safety, labeling, storage, record keeping and marketing of pharmaceutical products. The process of obtaining these approvals and the subsequent compliance with appropriate U.S. and foreign statutes and regulations are time-consuming and require the expenditure of substantial resources. In addition, these requirements and processes vary widely from country to country.

Among the uncertainties and risks of the FDA approval process are the following: (i) the possibility that studies and clinical trials will fail to prove the safety and efficacy of the drug, or that any demonstrated efficacy will be so limited as to significantly reduce or altogether eliminate the acceptability of the drug in the marketplace, (ii) the possibility that the costs of development, which can far exceed the best of estimates, may render commercialization of the drug marginally profitable or altogether unprofitable, (iii) the possibility of additional delays in the development of CoFactor, despite the fact that we expect that the FDA will approve our SPA for our proposed Phase III clinical and that we will be able to commence the trial in the second quarter of 2006, and (iv) the possibility that the amount of time required for FDA approval of a drug may extend for years beyond that which is originally estimated. In addition, the FDA or similar foreign regulatory authorities may require additional clinical trials, which could result in increased costs and significant development delays. Delays or rejections may also be encountered based upon changes in FDA policy and the establishment of additional regulations during the period of product development and FDA review. Similar delays or rejections may be encountered in other countries.

**We may not achieve our projected development goals in the time frames we announce and expect.**

We set goals for and make public statements regarding timing of the accomplishment of objectives material to our success, such as the commencement and completion of clinical trials. The actual timing of these events can vary dramatically due to factors such as delays or failures in our clinical trials, and the uncertainties inherent in the regulatory approval process. There can be no assurance that our clinical trials will commence or be completed, that we will make regulatory submissions or receive regulatory approvals as planned or that we will be able to adhere to our current schedule for the launch of any of our products. If we fail to achieve one or more of these milestones as planned, the market price of our shares could decline.

**Our success will depend on licenses and proprietary rights we receive from other parties, and on any patents we may obtain.**

Our success will depend in large part on our ability and our licensors ability to (i) maintain patent protection with respect to drug products, (ii) our ability to maintain our licenses, (iii) defend patents and licenses once obtained, (iv) maintain trade secrets, (v) operate without infringing upon the patents and proprietary rights of others and (vi) obtain appropriate licenses to patents or proprietary rights held by third parties if infringement would otherwise occur, both in the U.S. and in foreign countries.

The patent positions of pharmaceutical companies, including ours, are uncertain and involve complex legal and factual questions. There is no guarantee that we or our licensors have or will develop or obtain the rights to products or processes that are patentable, that patents will issue from any of the pending applications or that claims allowed will be sufficient to protect the technology licensed to us. In addition, we cannot be certain that any patents issued to or licensed by us will not be challenged, invalidated, infringed or circumvented, including by our competitors, or that the rights granted thereunder will provide competitive advantages to us.

Litigation, which could result in substantial cost, may also be necessary to enforce any patents to which we have rights, or to determine the scope, validity and unenforceability of other parties proprietary rights, which may affect our rights. There can be no assurance that our owned or licensed patents would be held valid by a court or administrative body or that an alleged infringer would be found to be infringing. The uncertainty resulting from the mere institution and continuation of any technology-related litigation or interference proceeding could have a material adverse effect on us pending resolution of the disputed matters.

We may also rely on unpatented trade secrets and know-how to maintain our competitive position, which we seek to protect, in part, by confidentiality agreements with employees, consultants and others. There can be no assurance that these agreements will not be breached, invalidated or terminated, that we will have adequate remedies for any breach, or that trade secrets will not otherwise become known or be independently discovered by competitors.

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**A third party may have an interest in two issued U.S. patents licensed to us by the University of Southern California (USC), which could adversely affect our intellectual property position with respect to CoFactor.**

We have recently become aware of the possibility that Mr. Goran Carlsson, a named inventor in the Canadian patent pertaining to CoFactor licensed to us by USC, may also be a co-inventor of the two corresponding U.S. patents licensed to us by USC. The facts are currently under investigation. We believe that if Mr. Carlsson is found to be a proper co-inventor of the U.S. patents, he may be under contractual obligation to assign to USC his ownership rights in these U.S. patents.

USC may not be successful in acquiring ownership rights, if any, that Mr. Carlsson may have in the patents. In such case, we will consider all our alternatives, including seeking remedies from the courts. Any such action is likely to be expensive and consume management s attention, and we may not be successful. Although we believe Mr. Carlsson s possible ownership rights do not limit our ability to make use of our technology, Mr. Carlsson may attempt to license any rights he may have to third parties, including our competitors. While we believe our other intellectual property is sufficient to preclude others from making, using, or selling aspects of our CoFactor (ANX-510) technology, if Mr. Carlsson is able to establish inventorship rights in the relevant patents, and if his rights are not licensed to us through USC, the value of our current intellectual property could be materially diminished.

**Our license agreements can be terminated in the event of a breach.**

The license agreements pursuant to which we license our core technologies for CoFactor and Thiovir permit the licensor, the University of Southern California, to terminate the agreements under certain circumstances, such as the failure by us to use our reasonable best efforts to commercialize the subject drug or the occurrence of any other uncured material breach by us. The license agreements also provide that the licensor is primarily responsible for obtaining patent protection for the technology licensed, and we are required to reimburse the licensor for the costs it incurs in performing these activities. The license agreements also require the payment of specified royalties. Any inability or failure to observe these terms or pay these costs or royalties could result in the termination of the applicable license agreement in certain cases. In the past, we have let lapse certain licenses for drug candidates when we determined that the expense and risk of continued development outweighed the likely benefits of that continued development. The termination of any license agreement could have a material adverse effect on us.

**The United States government and the University of Southern California retain certain rights in the technologies we have licensed from them.**

The technologies developed by the University of Southern California were developed in part through funding provided by the United States government. Therefore, in addition to the University of Southern California s termination rights described above, our licenses are subject to a non-exclusive, non- transferable, royalty-free right of the United States government and the University of Southern California to practice the licensed technologies for research and, in the case of the United States government, other governmental purposes on behalf of the United States and on behalf of any foreign government or international organization pursuant to any existing or future treaty or agreement with the United States, but only to the extent the government funded the research. The government also reserves the right to require us to grant sublicenses to third parties when necessary to fulfill public health and safety needs or if we do not reasonably satisfy government requirements for public use of the technology. Although we are currently the only parties licensed to actively develop the technology, we cannot assure you that the government will not in the future require us to sublicense the technology. Any action by the government to force us to issue such sublicenses or development activities pursuant to its reserved rights in the technology would erode our ability to exclusively develop products based on the technology and could materially harm our financial condition and operating results.

Licenses of technology developed through funding provided by the United States government, including the University of Southern California licenses, require that licensees in this case, us and our affiliates and sub-licensees agree that products covered by the licenses will be manufactured substantially in the United States. We cannot assure you that we will be able to contract for manufacturing facilities in the United States on favorable terms or obtain waivers of such requirement, or that such requirement will not impede our ability to license our products to

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others. If we are unable to contract for management facilities in the United States or obtain an appropriate waiver, we risk losing our rights under the University of Southern California licenses, which could materially harm our financial condition and operating results.

**Protecting our proprietary rights may be difficult and costly.**

The patent positions of pharmaceutical and biotechnology companies can be highly uncertain and involve complex legal and factual questions. Accordingly, we cannot predict the breadth of claims allowed in these companies patents or whether we may infringe or be infringing these claims. Although we have not been notified of any patent infringement, nor notified others of patent infringement, such patent disputes are common and could preclude the commercialization of our products. Patent litigation is costly in its own right and could subject us to significant liabilities to third parties. In addition, an adverse decision could force us to either obtain third-party licenses at a material cost or cease using the technology or product in dispute.

**If a trademark infringement action is commenced against us regarding the use of our corporate name, we could be required to pay monetary damages and/or change our name.**

In March of 2005, we received correspondence from Aventis Pharmaceuticals, Inc. and its parent, Sanofi-Aventis (collectively, Sanofi ) in which Sanofi asserted that our use of the word ADVENTRX infringes upon their trademark AVENTIS and demanded that we discontinue use of the word ADVENTRX. In May of 2005, we responded with a letter in which we outlined reasons why we do not believe that our name, ADVENTRX, infringes on Sanofi s trademark, AVENTIS. Since our response, counsel for both parties have exchanged further communications and Sanofi has made further inquiries regarding our use of the ADVENTRX mark. These communications are continuing. Sanofi may take legal action in the future, including proceeding with an action for trademark infringement. Depending upon the circumstances, an adverse result in a trademark infringement action could require the payment of monetary damages by us and/or changing our corporate name.

**We may be unable to retain skilled personnel and maintain key relationships.**

The success of our business depends, in large part, on our ability to attract and retain highly qualified management, scientific and other personnel, and on our ability to develop and maintain important relationships with leading research institutions and consultants and advisors. Competition for these types of personnel and relationships is intense from numerous pharmaceutical and biotechnology companies, universities and other research institutions. We are currently dependent upon our scientific staff, which has a deep background in our drug candidates and the ongoing preclinical and clinical trials. Recruiting and retaining senior employees with relevant drug development experience in oncology and anti-viral therapeutics is costly and time-consuming. There can be no assurance that we will be able to attract and retain such individuals on an uninterrupted basis and on commercially acceptable terms, and the failure to do so could have a material adverse effect on us by significantly delaying one or more of our drug development programs. The loss of any of our senior executive officers, including our chief executive officer and chief financial officer, in particular, could have a material adverse effect on the company and the market for our common stock, particularly if such loss was abrupt or unexpected. All of our employees are employed on an at-will basis under offer letters. We do not have non-competition agreements with any of our employees.

**We currently have no sales capability, and limited marketing capability.**

We currently do not have sales personnel. We have limited marketing and business development personnel. We will have to develop a sales force, or rely on marketing partners or other arrangements with third parties for the marketing, distribution and sale of any drug product which is ready for distribution. There is no guarantee that we will be able to establish marketing, distribution or sales capabilities or make arrangements with third parties to perform those activities on terms satisfactory to us, or that any internal capabilities or third party arrangements will be cost-effective. In addition, any third parties with which we may establish marketing, distribution or sales arrangements may have significant control over important aspects of the commercialization of a drug product, including market identification, marketing methods, pricing, composition of sales force and promotional activities. There can be no assurance that we will be able to control the amount and timing of resources that any third party may devote to our products or prevent any third party from pursuing alternative technologies or products that could result in the development of products that compete with, or the withdrawal of support for, our products.

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**We do not have manufacturing capabilities and may not be able to efficiently develop manufacturing capabilities or contract for such services from third parties on commercially acceptable terms.**

We do not have any manufacturing capacity. When and if required, we will seek to establish relationships with third-party manufacturers for the manufacture of clinical trial material and the commercial production of drug products as we have with our current manufacturing partners. There can be no assurance that we will be able to establish relationships with third-party manufacturers on commercially acceptable terms or that third-party manufacturers will be able to manufacture a drug product on a cost-effective basis in commercial quantities under good manufacturing practices mandated by the FDA or other regulatory matters.

The dependence upon third parties for the manufacture of products may adversely affect future costs and the ability to develop and commercialize a drug product on a timely and competitive basis. Further, there can be no assurance that manufacturing or quality control problems will not arise in connection with the manufacture of our drug products or that third party manufacturers will be able to maintain the necessary governmental licenses and approvals to continue manufacturing such products. Any failure to establish relationships with third parties for our manufacturing requirements on commercially acceptable terms would have a material adverse effect on us.

**We are dependent in part on third parties for drug development and research facilities.**

We do not possess research and development facilities necessary to conduct all of our drug development activities. We engage consultants and independent contract research organizations to design and conduct clinical trials in connection with the development of our drugs. As a result, these important aspects of a drug s development will be outside our direct control. In addition, there can be no assurance that such third parties will perform all of their obligations under arrangements with us or will perform those obligations satisfactorily.

**In the future, we anticipate that we will need to obtain additional or increased product liability insurance coverage and it is uncertain that such increased or additional insurance coverage can be obtained on commercially reasonable terms.**

Our business will expose us to potential product liability risks that are inherent in the testing, manufacturing and marketing of pharmaceutical products. There can be no assurance that product liability claims will not be asserted against us. We intend to obtain additional limited product liability insurance for our clinical trials, directly or through our marketing development partners or contract research organization (CRO) partners, when they begin in the U.S. and to expand our insurance coverage if and when we begin marketing commercial products. However, there can be no assurance that we will be able to obtain product liability insurance on commercially acceptable terms or that we will be able to maintain such insurance at a reasonable cost or in sufficient amounts to protect against potential losses. A successful product liability claim or series of claims brought against us could have a material adverse effect on us.

**The market price of our shares, like that of many biotechnology companies, is highly volatile.**

Market prices for our common stock and the securities of other medical and biomedical technology companies have been highly volatile and may continue to be highly volatile in the future. Factors such as announcements of technological innovations or new products by us or our competitors, government regulatory action, litigation, patent or proprietary rights developments, and market conditions for medical and high technology stocks in general can have a significant impact on any future market for our common stock.

**If we cannot satisfy AMEX s listing requirements, it may delist our common stock and we may not have an active public market for our common stock. The absence of an active trading market would likely make the common stock an illiquid investment.**

Our common stock is quoted on the American Stock Exchange. To continue to be listed, we are required to maintain shareholders equity of $6,000,000 among other requirements. We do not satisfy that requirement as of March 31, 2006.

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However, the Exchange will not normally consider suspending dealings in, or removing from the list, the securities of a company if the company has a total value of market capitalization of at least $50,000,000 and has at least 1,100,000 shares publicly held, with a market value of publicly held shares of at least $15,000,000 and 400 round lot shareholders. We currently meet these criteria. If the Exchange were to delist our common stock and suspend trading in our common stock, our common stock would likely trade in the over-the-counter market in the so-called pink sheets or, if available, the OTC Bulletin Board Service. As a result, an investor would likely find it significantly more difficult to dispose of, or to obtain accurate quotations as to the value of, our shares.

**If our common stock is delisted, it may become subject to the SEC s penny stock rules and more difficult to sell.**

SEC rules require brokers to provide information to purchasers of securities traded at less than $5.00 and not traded on a national securities exchange or quoted on the Nasdaq Stock Market. If our common stock becomes a penny stock that is not exempt from these SEC rules, these disclosure requirements may have the effect of reducing trading activity in our common stock and making it more difficult for investors to sell. The rules require a broker-dealer to deliver a standardized risk disclosure document prepared by the SEC that provides information about penny stocks and the nature and level of risks in the penny market. The broker must also give bid and offer quotations and broker and salesperson compensation information to the customer orally or in writing before or with the confirmation. The SEC rules also require a broker to make a special written determination that the penny stock is a suitable investment for the purchaser and receive the purchaser s written agreement to the transaction before a transaction in a penny stock.

**Changes in laws and regulations that affect the governance of public companies has increased our operating expenses and will continue to do so.**

Recently enacted changes in the laws and regulations affecting public companies, including the provisions of the Sarbanes-Oxley Act of 2002 and the listing requirements for American Stock Exchange, have imposed new duties on us and on our executives, directors, attorneys and independent accountants. In order to comply with these new rules, we have hired and expect to hire additional personnel and use additional outside legal, accounting and advisory services, which have increased and are likely to continue increasing our operating expenses. In particular, we expect to incur additional administrative expenses as we continue compliance with Section 404 of the Sarbanes-Oxley Act, which requires management to extensively evaluate and report on, and our independent registered public accounting firm to attest to, our internal controls. For example, we have incurred significant expenses, and expect to incur additional expenses, in connection with the evaluation, implementation, documentation and testing of our existing and newly implemented control systems. Management time associated with these compliance efforts necessarily reduces time available for other operating activities, which could adversely affect operating results. If we are unable to achieve full and timely compliance with these regulatory requirements, we could be required to incur additional costs, expend additional money and management time on additional remedial efforts which could adversely affect our results of operations.

**Failure to implement effective control systems, or failure to complete our assessment of the effectiveness of our internal control over financial reporting, may subject us to regulatory sanctions and could result in a loss of public confidence, which could harm our operating results.**

Pursuant to Section 404 of the Sarbanes-Oxley Act, beginning with our fiscal year ending December 31, 2005, we are required to include in our annual report our assessment of the effectiveness of our internal control over financial reporting. Furthermore, our independent registered public accounting firm is required to issue an opinion on whether our assessment of the effectiveness of our internal control over financial reporting is fairly stated in all material respects and separately report on whether it believes we maintained, in all material respects, effective internal control over financial reporting on an annual basis.

In connection with their required assessment under Section 404 of the Sarbanes-Oxley Act of 2002, our management concluded that our internal controls over financial reporting were effective as of December 31, 2005, and our independent public accountants were able to attest to that assessment. However, in connection with the 2005 year-end audit, our independent public accountants identified certain internal control weaknesses that, although not rising to the level of material weaknesses, were significant deficiencies. Additionally, in prior years (most recently 2004),

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certain material weaknesses in our internal controls over financial reporting were identified in connection with our annual financial audits. While we believe we remediated the material weaknesses from prior years, including through adopting a new financial accounting system and adding a financial controller to our accounting staff, any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to meet our reporting obligations. Inferior internal controls could also cause investors to lose confidence.

If we fail to remedy any material weaknesses which are uncovered in the future, fail to timely complete our assessment, or if our independent registered public accounting firm cannot timely attest to our assessment, we could be subject to regulatory sanctions and a loss of public confidence in our internal control. In addition, any failure to implement required new or improved controls, or difficulties encountered in their implementation, could harm our operating results or cause us to fail to timely meet our regulatory reporting obligations.

**Our early corporate records are incomplete. As a result, we might have difficulty in assessing and defending against any claims relating to our common stock purportedly issued during, or corporate actions taken during, periods for which our records are incomplete.**

We were initially incorporated in 1995. All of our current senior management have joined our company since 2002 and our corporate records prior to 2002, including minutes of board meetings and stock transfer records, are incomplete. As a result, if claims were to be asserted against us relating to our common stock purportedly issued during, or corporate actions taken during, this time, we might have difficulty in assessing and defending them.

**We have engaged in and may continue to engage in further expansion through mergers and acquisitions, which could negatively affect our business and earnings.**

We have engaged in and may continue to engage in expansion through mergers and acquisitions. There are risks associated with such expansion. These risks include, among others, incorrectly assessing the asset quality of a prospective merger partner, encountering greater than anticipated costs in integrating acquired businesses, facing resistance from customers or employees, and being unable to profitably deploy assets acquired in the transaction. Additional country- and region-specific risks are associated with transactions outside the United States. To the extent we issue capital stock in connection with additional transactions, these transactions and related stock issuances may have a dilutive effect on earnings per share and share ownership.

Our earnings, financial condition, and prospects after a merger or acquisition depend in part on our ability to successfully integrate the operations of the acquired company. We may be unable to integrate operations successfully or to achieve expected cost savings. Any cost savings which are realized may be offset by losses in revenues or other charges to earnings.

**RISKS RELATED TO OUR COMMON STOCK AND THE OFFERING**

**The price of our common stock has been and is likely to continue to be volatile, and your investment could suffer a decline in value.**

The trading price of our common stock has been, and is likely to be, volatile and could be subject to wide fluctuations in price in response to various factors, many of which are beyond our control, including:

- the timing and the results from our clinical trial programs;
- FDA or international regulatory actions;
- failure of any of our product candidates, if approved, to achieve commercial success;
- announcements of clinical trial results or new product introductions by our competitors;
- market conditions in the pharmaceutical, biopharmaceutical and biotechnology sectors;

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- developments concerning intellectual property rights;
- litigation or public concern about the safety of our potential products;
- deviations in our business and the trading price of our common stock from the estimates of securities analysts;
- additions or departures of key personnel; and
- third party reimbursement policies.

As a result, you could lose all or part of your investment. In addition, the stock market in general experiences extreme price and volume fluctuations that are often unrelated and disproportionate to the operating performance of companies.

**Anti-takeover provisions in our charter documents and under Delaware law may make an acquisition of us, which may be beneficial to our stockholders, more difficult, which could depress our stock price.**

We are incorporated in Delaware. Certain anti-takeover provisions of Delaware law and our charter documents as currently in effect may make a change in control of our company more difficult, even if a change in control would be beneficial to the stockholders. Our charter documents provide that our board of directors may issue, without a vote of our stockholders, one or more series of preferred stock that has more than one vote per share. This could permit our board of directors to issue preferred stock to investors who support our management and give effective control of our business to our management.

Additionally, issuance of preferred stock could block an acquisition resulting in both a drop in the price of our common stock and a decline in interest in the stock, which could make it more difficult for stockholders to sell their shares. This could cause the market price of our common stock to drop significantly, even if our business is performing well.

Our bylaws also limit who may call a special meeting of stockholders and establish advance notice requirements for nomination for election to the board of directors or for proposing matters that can be acted upon at stockholder meetings.

Delaware law also prohibits corporations from engaging in a business combination with any holders of 15% or more of their capital stock until the holder has held the stock for three years unless, among other possibilities, the board of directors approves the transaction.

Our board of directors may use these provisions to prevent changes in the management and control of our company. Also, under applicable Delaware law, our board of directors may adopt additional anti-takeover measures in the future. In addition, provisions of certain contracts, such as employment agreements with our executive officers, may have an anti-takeover effect. In connection with a July 2005 private placement, we agreed with the investors in that transaction that we would not implement certain additional measures that would have an anti-takeover effect.

**Concentration of ownership of our common stock among our existing executive officers, directors and principal stockholders may prevent new investors from influencing significant corporate decisions.**

Our executive officers, directors and beneficial owners of 5% or more of our common stock and their affiliates, in aggregate, beneficially own a significant amount of our outstanding common stock. These persons, acting together, will be able to exercise significant influence over all matters requiring stockholder approval, including the election and removal of directors and any merger, consolidation or sale of all or substantially all of our assets. In addition, these persons, acting together, may have the ability to control the management and affairs of our company. This concentration of ownership

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**Because we do not expect to pay dividends in the foreseeable future, you must rely on stock appreciation for any return on your investment.**

We have paid no cash dividends on any of our capital stock to date, and we currently intend to retain our future earnings, if any, to fund the development and growth of our business. As a result, we do not expect to pay any cash dividends in the foreseeable future, and payment of cash dividends, if any, will also depend on our financial condition, results of operations, capital requirements and other factors and will be at the discretion of our board of directors. Furthermore, we may in the future become subject to contractual restrictions on, or prohibitions against, the payment of dividends. Accordingly, the success of your investment in our common stock will likely depend entirely upon any future appreciation. There is no guarantee that our common stock will appreciate in value after the offering or even maintain the price at which you purchased your shares, and you may not realize a return on your investment in our common stock.

## Description Of Capital Stock

Our authorized capital stock consists of 1,000,000 shares of Preferred Stock, $0.01 par value, and 200,000,000 shares of common stock, $0.001 par value.

**Common Stock**

Our common stock is quoted on the American Stock Exchange LLC under the symbol ANX.

We have never paid cash dividends on any of our securities and do not currently expect to pay any cash dividends on our securities in the foreseeable future. There are no restrictions that limit our ability to pay dividends on our common stock or that are likely to do so in the future other than restrictions under the Delaware General Corporation Law and other applicable law.

As of May 3, 2006, there were 71,649,833 shares of common stock issued and outstanding which were held of record by approximately 7,021 stockholders.

The holders of our common stock are entitled to one vote per share held of record on all matters submitted to a vote of the stockholders. Our certificate of incorporation does not provide for cumulative voting in the election of directors. Subject to preferences that may be applicable to any outstanding preferred stock, the holders of common stock are entitled to receive ratably such dividends, if any, as may be declared from time to time by our Board of Directors out of funds legally available for that purpose. In the event of our liquidation, dissolution or winding up, holders of our common stock are entitled to share ratably in all assets remaining after payment of liabilities, subject to prior distribution rights of preferred stock, if any, then outstanding. Holders of our common stock have no preemptive or other subscription or conversion rights. There are no redemption or sinking fund provisions applicable to our common stock.

In the event of our voluntary or involuntary liquidation, dissolution or winding up, the owners of shares of common stock will be entitled to share equally in any assets available for distribution after the payment in full of all debts and distributions and after the owners of any of our outstanding preferred stock have received their liquidation preferences in full.

American Stock Transfer & Trust Company is our stock transfer agent and it maintains all our stockholder records. If you have questions regarding ADVENTRX stock you own, stock transfers, address or name changes, lost stock certificates, or duplicate mailings, please contact American Stock Transfer & Trust Transfer Company directly at the address below. If your shares are held with a stockbroker, please contact your broker.

American Stock Transfer & Trust Company
59 Maiden Lane, Plaza Level
New York, NY 10038
(800) 937-5449
www.amstock.com
email address info@amstock.com

**Preferred Stock**

Our Board of Directors is authorized, without action by the stockholders, to issue preferred stock in one or more series and to fix the rights, preferences, privileges and restrictions thereof. These rights, preferences and privileges may include dividend rights, conversion rights, voting rights, terms of redemption, liquidation preferences, sinking

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fund terms and the number of shares constituting any series or the designation of any series, all or any of which may be greater than the rights of the common stock.

## Use of Proceeds

All of the shares of common stock and shares of common stock issuable upon exercise of warrants offered pursuant to this prospectus are being offered by the selling security holders listed under Selling Security Holders. We will not receive any proceeds from sales of shares of common stock by the selling security holders. The shares offered hereby include an aggregate of 194,500 shares issuable upon exercise of outstanding warrants held by security holders named in this prospectus. We will receive proceeds from any exercise of these warrants (except to the extent warrants are exercised on a net exercise basis). The proceeds, if any, will be added to our working capital and be available for general corporate purposes.

## Selling Security Holders

All of the shares of our common stock registered for sale under this prospectus (the Registered Shares ) are owned, as of the date of this prospectus, by the selling security holders listed in the table below. We issued the Registered Shares in transactions exempt from the registration requirements of the Securities Act. We are registering the Registered Shares for the selling security holders who acquired their holdings either directly from us in unregistered transactions or by transfer from an investor who acquired holdings directly from us in unregistered transactions.

The following table sets forth information as of May 1, 2006 with respect to the selling security holders and the respective number of shares of common stock beneficially owned by each selling security holder, all of which are offered pursuant to this prospectus. For purposes of computing the number and percentage of shares beneficially owned by a selling security holder on May 1, 2006, any shares which such person has the right to acquire within 60 days after such date are deemed to be outstanding, but those shares are not deemed to be outstanding for the purpose of computing the percentage ownership of any other selling security holder:

| Name | Shares Owned Before Offering (1) | Percent Owned Before Offering (2) | Shares Being Offered | Shares Owned Upon Completion Of Offering | Percent Owned After Offering (1) |
|---|---|---|---|---|---|
| Emisphere Technologies, Inc. | 50,000(3) | 0.07% | 50,000 | 0 | 0 |
| Jonathan Balk | 35,250 | 0.05% | 3,000(4) | 32,250 | 0.05% |
| LB (Swiss) Privatbank AG | 37,500 | 0.05% | 12,500(5) | 25,000 | 0.03% |
| North Sound Legacy Institutional Fund LLC | 1,005,756 | 1.39% | 20,000(6) | 985,756 | 1.37% |
| Robert J. and Sandra S. Neborsky JTWROS | 24,750 | 0.03% | 11,750(7) | 13,000 | 0.02% |
| Robert J. Neborsky | 12,250 | 0.02% | 12,250(8) | 0 | 0 |
| Robert J. Neborsky M.D. Inc. Combination Retirement Trust | 507,581 | 0.71% | 10,000(9) | 497,581 | 0.69% |
| SDS Capital Group SPC, Ltd. | 595,832 | 0.83% | 262,500(10) | 333,332 | 0.46% |
| Paul J. Marangos and/or Maia Marangos, as trustees of The Marangos Family Trust, dated July 21, 1995 | 962,860(11) | 1.34% | 914,717 | 48,143 | 0.07% |
| Andrew X. Chen and Eiko Junii, Trustees of The Chen | 962,860(11) | 1.34% | 914,717 | 48,143 | 0.07% |

| | | | | | |
|---|---|---|---|---|---|
| Family Trust dated May 8, 2000 | | | | | |
| DLA Piper Rudnick Gray Cary US LLP | 28,885(11) | 0.04% | 27,441 | 1,444 | 0 |
| SEED Intellectual Property Law Group, PLLC | 34,662(11) | 0.05% | 32,929 | 1,733 | 0 |

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| Name | Shares Owned Before Offering (1) | Percent Owned Before Offering (2) | Shares Being Offered | Shares Owned Upon Completion Of Offering | Percent Owned After Offering (1) |
|---|---|---|---|---|---|
| Costas Loullis | 9,628(11) | 0.01% | 9,147 | 481 | 0 |
| Gail Loullis | 9,628(11) | 0.01% | 9,147 | 481 | 0 |
| Wen Bo Hu | 19,257(11) | 0.03% | 18,295 | 962 | 0 |
| James A. Rock | 17,194(11) | 0.02% | 16,335 | 859 | 0 |
| Horace Hertz | 17,193(11) | 0 | 16,334 | 859 | 0 |
| Jack Luchese | 17,193(11) | 0 | 16,334 | 859 | 0 |
| James Ueberroth | 17,193(11) | 0 | 16,334 | 859 | 0 |
| Tzu-Ping Richard Lin | 1,891(11) | 0 | 1,797 | 94 | 0 |
| Thanh Nguyen | 1,203(11) | 0 | 1,143 | 60 | 0 |
| Dee Conger | 343(11) | 0 | 326 | 17 | 0 |
| Angeliki Frangou | 15,000 | 0.02% | 15,000(12) | 0 | 0 |

(1) Options and warrants to purchase our common stock that are presently exercisable or exercisable within 60 days of May 1, 2006, even if such options or warrants may otherwise be subject to restriction on exercise, are included in the total number of shares beneficially owned for the person holding those options or warrants and are considered outstanding for the purpose of calculating

percentage ownership of the particular holder.

(2) The percentage of ownership of common stock is based on 71,629,233 shares of common stock issued and outstanding as of May 1, 2006 and excludes all shares of common stock issuable upon the exercise of outstanding options or warrants to purchase common stock, other than the shares of common stock issuable upon the exercise of options or warrants to purchase common stock held by the named person to the extent such options or warrants are exercisable within 60 days of May 1, 2006, even if such options or warrants may otherwise be subject to restriction on exercise.

(3)

Consists of 50,000 shares of common stock issuable upon the exercise of warrants held by this entity, all of which will be offered.

(4) Selling security holder is offering 3,000 shares of common stock out of a total of 35,250 shares held of which the remainder are not being offered hereby.

(5) Consists of 12,500 shares of common stock issuable upon the exercise of warrants held by this entity, all of which will be offered.

(6) Includes 8,000 shares of common stock issuable upon the exercise of warrants held by this entity, all of which will be offered.

(7) Consists of 11,750 shares of common stock issuable upon the exercise of warrants held by this selling securityholder, all of which will

be offered.

(8) Consists of 12,250 shares of common stock issuable upon the exercise of warrants held by this person, all of which will be offered.

(9) Consists of 10,000 shares of common stock issuable upon the exercise of warrants held by this selling securityholder, all of which will be offered.

(10) Includes 75,000 shares of common stock issuable upon the exercise of warrants held by this entity, all of which will be offered.

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(11) These selling security holders acquired their common stock upon the closing of the merger of SDP described above under Recent Developments.

Under the Merger Agreement relating to that transaction, upon closing of the Merger, we issued an aggregate of approximately 2,099,990 shares of our common stock (the Merger Consideration Shares ) to the stockholders of SDP.

Within 35 days following closing of the Merger, we are required to file with the Securities and Exchange Commission the registration statement on Form S-3 (of which this prospectus is a part) covering the resale of the Merger Consideration Shares less 5%

of the Merger Consideration Shares (the Indemnity Withhold Shares ), or an aggregate of 1,994,996 shares to be registered. If the registration statement does not become effective under the Securities Act by June 12, 2006, we will be obligated to make an aggregate cash payment of $100,000 to the selling security holders on a pro rata basis.

Under the Merger Agreement, we are required to use commercially reasonable efforts to cause the registration statement to become effective as soon as reasonably practicable after the closing date of the Merger, and to remain effective until the first anniversary of the closing date, subject to certain exceptions.

The Company has no obligation to maintain the effectiveness and may terminate the effectiveness of the registration statement under the Securities Act at any time after the first anniversary of the closing date of the Merger.

The Marangos Family Trust, dated 1995, and Chen Family Trust, dated 2000, two of the selling security holders under this prospectus (the Founder Holders ), have agreed that on each of July 2, 2006, August 2, 2006 and September 1, 2006, a number of Merger Consideration Shares equal to 10% of the number of Merger Consideration Shares issued to each Founder Holder at the Closing shall be released from these resale restrictions and may be sold or disposed of at

any time thereafter. On September 30, 2006, these resale restrictions will expire with respect to all Merger Consideration Shares held by the Founding Holders.

(12) Consists of 15,000 shares of common stock issuable upon the exercise of warrants held by this person, all of which will be offered.

**Plan Of Distribution**

We are registering the shares of common stock covered by this prospectus on behalf of the selling security holders listed in this prospectus. Sales of shares may be made by selling security holders, including their respective donees or other successors-in-interest directly to purchasers or to or through underwriters, broker-dealers or through agents. Sales may be made from time to time on the American Stock Exchange, any other exchange or market upon which our shares may trade in the future or otherwise, at market prices prevailing at the time of sale, at prices related to market prices, or at negotiated or fixed prices. The shares may be sold by one or more of, or a combination of, the following:

a block trade in which the broker-dealer so engaged will attempt to sell the shares as agent but may position and resell a portion of the block as principal to facilitate the transaction (including crosses in which the same broker acts as agent for both sides of the transaction);

purchases by a broker-dealer as principal and resale by such broker-dealer, including resales for its account, pursuant to this prospectus;

ordinary brokerage transactions and transactions in which the broker-dealer solicits purchases;

through options, swaps or derivatives;

in privately negotiated transactions;

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in making short sales or in transactions to cover short sales entered into after the date of this prospectus;

put or call option transactions relating to the shares; or

any other method permitted by applicable law.

The selling security holders may effect these transactions by selling shares directly to purchasers or to or through broker-dealers, which may act as agents or principals. These broker-dealers may receive compensation in the form of discounts, concessions or commissions from the selling security holders or the purchasers of shares for whom such broker-dealers may act as agents or to whom they sell as principals, or both (which compensation as to a particular broker-dealer might be in excess of customary commissions). Each of the selling security holders has advised us that they have not entered into any agreements, understandings or arrangements with any underwriters or broker-dealers regarding the sale of their securities.

Each selling security holder will act independently of us in making decisions regarding the timing, manner and size of each sale of shares of common stock covered by this registration statement.

Each of the selling security holders may enter into hedging transactions with broker-dealers or other financial institutions. In connection with those transactions, the broker-dealers or other financial institutions may engage in short sales of the shares or of securities convertible into or exchangeable for the shares in the course of hedging positions they assume with the selling security holders. Each of the selling security holders may also enter into options or other transactions with broker-dealers or other financial institutions which require the delivery of shares offered by this prospectus to those broker-dealers or other financial institutions. The broker-dealer or other financial institution may then resell the shares pursuant to this prospectus (as amended or supplemented, if required by applicable law, to reflect those transactions).

Each of the selling security holders and any broker-dealers that act in connection with the sale of shares may be deemed to be underwriters within the meaning of Section 2(11) of the Securities Act of 1933, as amended (the Securities Act ), and any commissions received by broker-dealers or any profit on the resale of the shares sold by them while acting as principals may be deemed to be underwriting discounts or commissions under the Securities Act. Each of the selling security holders may agree to indemnify any agent, dealer or broker-dealer that participates in transactions involving sales of the shares against liabilities, including liabilities arising under the Securities Act. We have agreed to indemnify each of the selling security holders and each selling security holder has agreed, severally and not jointly, to indemnify us against some liabilities in connection with the offering of the shares, including liabilities arising under the Securities Act.

Each selling security holder and any other persons participating in a distribution of the securities covered by this registration statement will be subject to the prospectus delivery requirements of the Securities Act and will be subject to applicable provisions of the Securities Exchange Act of 1934, as amended (the Exchange Act ) and the rules and regulations thereunder, including, without limitation, Regulation M, which may restrict certain activities of, and limit the timing of purchases and sales of securities by, selling security holders and other persons participating in a distribution of securities. Furthermore, under Regulation M, persons engaged in a distribution of securities are prohibited from simultaneously engaging in market making and certain other activities with respect to such securities for a specified period of time prior to the commencement of such distribution, subject to specified exceptions or exemptions. All of the foregoing may affect the marketability of the securities offered hereby.

Each of the selling security holders also may resell all or a portion of the shares in open market transactions in reliance upon Rule 144 under the Securities Act rather than under this prospectus, provided they meet the criteria and conform to the requirements of Rule 144.

Upon being notified by a selling security holder that a material arrangement has been entered into with a broker-dealer for the sale of shares through a block trade, special offering, exchange distribution or secondary distribution or a purchase by a broker or dealer, we will file a supplement to this prospectus, if required pursuant to Rule 424(b) under the Securities Act, disclosing:

the name of each such selling security holder and of the participating broker-dealer(s);

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the number of shares involved;

the initial price at which the shares were sold;

the commissions paid or discounts or concessions allowed to the broker-dealer(s), where applicable;

that such broker-dealer(s) did not conduct any investigation to verify the information set out or incorporated by reference in this prospectus; and

other facts material to the transactions.

In addition, if required under applicable law or the rules or regulations of the Commission, we will file a supplement to this prospectus when a selling security holder notifies us that a donee intends to sell more than 500 shares of common stock.

We are paying all expenses and fees customarily paid by the issuer in connection with the registration of the shares. Each of the selling security holders will bear all brokerage or underwriting discounts or commissions paid to broker-dealers and any transfer agent fees in connection with the sale of the shares.

## Legal Matters

The validity of the issuance of shares of common stock we are offering under this prospectus will be passed upon for us by Bingham McCutchen LLP, San Francisco, California.

## Experts

Our consolidated balance sheets as of December 31, 2005 and 2004, and the related consolidated statements of operations, stockholders equity (deficit) and cash flows for each of the years in the three-year period ended December 31, 2005, and for the period from June 12, 1996 (date of inception) through December 31, 2005, and management s assessment of the effectiveness of internal control over financial reporting and the effectiveness of our internal control over financial reporting as of December 31, 2005, have been incorporated by reference in this prospectus and in the registration statement in reliance on the reports of J.H. Cohn LLP, independent registered public accounting firm, given upon the authority of that firm as experts in accounting and auditing. The report of J.H. Cohn LLP notes that the consolidated financial statements for the period from June 12, 1996 (date of inception) through December 31, 2001, were audited by other auditors. J.H. Cohn LLP s opinion insofar as it relates to the period from June 12, 1996 to December 31, 2001, is based solely on the report of such other auditors.

The financial statements of SD Pharmaceuticals, Inc. as of December 31, 2005 and 2004 and for the year ended December 31, 2005 and for the period from June 16, 2004 (date of inception) to December 31, 2004 have been incorporated by reference in this prospectus and in the registration statement in reliance on the report, which includes an explanatory paragraph relating to the ability of SD Pharmaceuticals, Inc. to continue as a going concern, of J.H. Cohn LLP, independent registered public accounting firm, given upon the authority of that firm as experts in accounting and auditing.

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**ADVENTRX PHARMACEUTICALS, INC.**
**2,391,996 Shares**
COMMON STOCK

**PROSPECTUS**

June 8, 2006