

ADVENTRX PHARMACEUTICALS INC

Form S-3/A

September 02, 2005

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As filed with the Securities and Exchange Commission on September 1, 2005
Registration Statement No. 333-127857

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

AMENDMENT NO. 1
TO
FORM S-3
REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933

ADVENTRX Pharmaceuticals, Inc.
(Exact name of Registrant as specified in its charter)

Delaware **84-1318182**
(State or other jurisdiction of (I.R.S. Employer Identification Number)
incorporation or organization)

6725 Mesa Ridge Road, Suite 100
San Diego, California 92121
(Address, including zip code, and telephone number, including area code,
of Registrant's principal executive offices)

Carrie E. Carlander
Chief Financial Officer
ADVENTRX Pharmaceuticals, Inc.
6725 Mesa Ridge Road, Suite 100
San Diego, California 92121
(858) 552-0866
facsimile: (858) 552-0876
(Name, address, including zip code, and telephone number,
including area code, of agent for service)

Copies of all communications to:

Henry D. Evans, Esq.
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Bingham McCutchen LLP
Three Embarcadero Center
San Francisco, California 94111
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Approximate date of commencement of proposed sale to the public: as soon as practicable after the effective date of this registration statement.

If the only securities being registered on this form are being offered pursuant to dividend or interest reinvestment plans, please check the following box.

If any of the securities being registered on this Form are to be offered on a delayed or continuous basis pursuant to Rule 415 under the Securities Act of 1933, as amended, other than securities offered only in connection with dividend

or interest reinvestment plans, check the following box:

If this Form is filed to register additional securities for an offering pursuant to Rule 462(b) under the Securities Act of 1933, as amended, please check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering:

If this Form is a post-effective amendment filed pursuant to Rule 462(c) under the Securities Act of 1933, as amended, check the following box and list the Securities Act registration statement number of the earlier effective registration statement for the same offering:

If delivery of the prospectus is expected to be made pursuant to Rule 434, please check the following box:

CALCULATION OF REGISTRATION FEE

| Title of each class of securities to be registered (1) | Amount to be registered | Proposed maximum offering price per share (2) | Proposed maximum aggregate offering price (2) | Amount of registration fee |
|--|-------------------------|---|---|----------------------------|
| common stock, par value \$0.001 per share | 23,240,340 shares | \$3.82 | \$88,778,098.80 | \$10,449.18 |

(1) In addition to the common stock set forth in the table, the amount to be registered includes an indeterminate number of shares issuable pursuant to stock splits and stock dividends in accordance with Rule 416(b) under the Securities Act of 1933, as amended.

(2) Estimated solely for purposes of calculating the amount of the registration fee. The estimate is made pursuant to Rule 457(c) of the Securities Act of 1933, as amended.

THE REGISTRANT HEREBY AMENDS THIS REGISTRATION STATEMENT ON SUCH DATE OR DATES AS MAY BE NECESSARY TO DELAY ITS EFFECTIVE DATE UNTIL THE REGISTRANT SHALL FILE A FURTHER AMENDMENT WHICH SPECIFICALLY STATES THAT THIS REGISTRATION STATEMENT SHALL THEREAFTER BECOME EFFECTIVE IN ACCORDANCE WITH SECTION 8(A) OF THE SECURITIES ACT OF 1933, OR UNTIL THE REGISTRATION STATEMENT SHALL BECOME EFFECTIVE ON SUCH DATE AS THE SECURITIES AND EXCHANGE COMMISSION, ACTING PURSUANT TO SAID SECTION 8(A), MAY DETERMINE.

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The information in this prospectus is not complete and may be changed. No securities may be sold until the registration statement filed with the Securities and Exchange Commission is effective. This prospectus is not an offer to sell these securities and it is not soliciting an offer to buy these securities in any state where the offer or sale is not permitted.

**SUBJECT TO COMPLETION,
Dated: _____, 2005
PROSPECTUS
23,240,340 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 23,240,340 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 August 30, 2005, the last reported sale price of our common stock on the American Stock Exchange LLC was \$3.84 per share.

**INVESTING IN THE COMMON STOCK INVOLVES RISKS.
SEE RISK FACTORS BEGINNING ON PAGE 4.**

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 _____, 2005

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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 in this prospectus. We have not authorized anyone to provide you with information different from that contained in this prospectus. This prospectus is offering to sell, and is seeking offers to buy, shares of common stock only in jurisdictions where such offers and sales are permitted. The information contained in this prospectus is accurate only as of the date of this prospectus.

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 or our industry's actual results, levels of activity, performance, or achievements to be materially different from any future results, levels of activity, performance, or achievements expressed or implied by such 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.

Moreover, neither we nor any other person assumes responsibility for the accuracy and completeness of these statements. We undertake no obligation to update or revise any of the forward-looking statements, whether as a result of new information, future events or otherwise. In light of these risks, uncertainties and assumptions, the forward-looking events discussed in this prospectus may not occur.

Where You Can Find More Information About Us

We file annual, quarterly and special reports and other information with the Securities and Exchange Commission (the **Commission**). You may read and copy any document we file with the Commission at the Public Reference Room at the Commission, at 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

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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.

We have filed with the Commission a registration statement on Form S-3 under the Securities Act relating to the common stock offered by this prospectus. This prospectus constitutes a part of the registration statement but does 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 important information to you by referring you to another document we have filed with the Commission. The information incorporated by reference is an important part of this prospectus and information that we file later with the Commission will automatically update and supersede this 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, pursuant to Section 12(b) of the Securities Exchange Act of 1934, as amended (the "Exchange Act"), including any amendment or report filed for the purpose of updating such description.
- (b) our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2004 filed with the Commission on March 31, 2005;
- (c) our Amendment No. 1 to our Annual Report on Form 10-KSB for the fiscal year ended December 31, 2004 filed with the Commission on August 11, 2005;
- (d) our Quarterly Report on Form 10-Q for the quarterly period ended March 31, 2005 filed with the Commission on May 16, 2005;
- (e) our Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2005 filed with the Commission on August 12, 2005;
- (f) our Current Report on Form 8-K filed with the Commission on June 10, 2005;
- (g) our Current Report on Form 8-K filed with the Commission on July 27, 2005;
- (h) our Current Report on Form 8-K filed with the Commission on August 12, 2005;
- (i) our Current Report on Form 8-K filed with the Commission on August 30, 2005; and
- (j) any future filings we make with the Commission under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act, until we file a post-effective amendment which indicates the termination of the offering of the securities made by this prospectus.

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

You may request a copy of these filings, at no cost, by writing or telephoning us at the following address or telephone number:

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

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Our Company

We are a biopharmaceutical research and development company focused on introducing new technologies for anticancer and antiviral treatments that improve the performance and safety of existing drugs by addressing significant problems such as drug metabolism, toxicity, bioavailability or resistance. The Company currently does not manufacture, market, sell or distribute any product. Through our license agreements with University of Southern California (USC), and the National Institutes of Health (NIH), the Company has rights to drug candidates in varying early stages of development.

We were initially organized as a corporation under the Delaware General Corporation Law in December 1995. On May 30, 2003, the Company merged our wholly owned subsidiary, Biokeys, Inc., into itself and changed the name of the Company from Biokeys Pharmaceuticals, Inc. to ADVENTRX Pharmaceuticals, Inc. The merger had no effect on the financial statements of the Company.

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

Risk Factors

You should carefully consider the risks described below before making an investment decision. The risks described below are not the only ones facing our company. Additional risks not presently known to us or that we currently deem immaterial may also impair our business operations.

Our business, financial condition or results of operations could be materially adversely affected by any of these risks. The trading price of our common stock could decline due to any of these risks and you may lose all or part of your investment.

We have a substantial accumulated deficit and limited working capital.

We had an accumulated deficit of \$41 million as of June 30, 2005. 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 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.

It is not expected that we will 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 such equity financing 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, will most likely involve restrictive covenants that preclude us from making distributions to stockholders and taking other actions beneficial to stockholders. If adequate funds are not available, we may be required to delay or reduce the scope of our drug development program or attempt to

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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 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 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 immediately 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 any 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 new 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 competitors such as Merck 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

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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, GlaxoSmithKline all have drugs in various stages of development that could become competitors. Accordingly, competitors may succeed in commercializing products more rapidly or effectively than us, which would have a material adverse effect on us.

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, once approved, 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.

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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.

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, and (iii) 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.

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 license and patent protection with respect to their drug products, (ii) defend patents and licenses once obtained, (iii) maintain trade secrets, (iv) operate without infringing upon the patents and proprietary rights of others and (v) 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. We have obtained licenses to patents and other proprietary rights from University of Southern California, and the National Institutes of Health.

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, or that the rights granted thereunder will provide competitive disadvantages 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. U.S. patents carry a presumption of validity and generally can be invalidated only through clear and convincing evidence. There can be no assurance that our licensed patents would be held valid by a court or administrative body or that an alleged infringer would be found to be infringing. The mere uncertainty resulting from the 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 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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Our license agreements can be terminated in the event of a breach.

The license agreements pursuant to which we license our core technologies for our potential drug products permit the licensors, respectively National Institutes of Health, and the University of Southern California, to terminate the agreement 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.

Protecting our proprietary rights is 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.

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. These individuals are employed under offer letters, rather than employment agreements.

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 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.

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 the Common 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 implement Section 404 of the Sarbanes-Oxley Act, which requires

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management to report on, and our independent registered public accounting firm to attest to, our internal controls. For example, we expect to incur significant expenses in connection with the 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 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.

Under the supervision of our Chief Executive Officer and our Chief Financial Officer, we evaluated the effectiveness of our disclosure controls and procedures as of December 31, 2004 and again as of June 30, 2005. Based upon that evaluation, our Chief Executive Officer and Chief Financial Officer concluded that as of both these dates, our disclosure controls and procedures were not effective to ensure that management is alerted to material information required to be disclosed by us in the reports we file with the SEC and that such material information is recorded and reported within the time periods specified in the SEC's rules and forms. Since December 31, 2004, management has implemented changes intended to improve certain aspects of our disclosure controls and procedures. If we fail to implement effective disclosure controls and procedures, we may be unable to make timely disclosure of material information, which could subject us to regulatory sanctions, loss of public confidence and stockholder lawsuits.

Pursuant to Section 404 of the Sarbanes-Oxley Act, beginning with our year ending December 31, 2005, if we are an accelerated filer as of December 31, 2005, or December 31, 2006, if we are not an accelerated filer as of December 31, 2005, we will be required to include in our annual report our assessment of the effectiveness of our internal control over financial reporting and our audited financial statements as of the end of that fiscal year. Furthermore, our independent registered public accounting firm will be required to attest to 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 as of December 31, 2005, if we are an accelerated filer as of December 31, 2005, or December 31, 2006, we are not an accelerated filer as of December 31, 2005.

In connection with its audit of our financial statements for the fiscal year ended December 31, 2004, J.H. Cohn LLP, our independent registered public accounting firm, advised our Audit Committee that it had identified material weaknesses in our accounting function that we need to re-evaluate and strengthen. We are taking steps intended to remedy these material weaknesses. However, if we fail to remedy these material weaknesses, 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.

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 12,048,042 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 common stock and shares of common stock issuable upon exercise of warrants registered for sale under this prospectus (the Registered Shares) are owned (or capable of being owned upon exercise of warrants as described herein), as of the date of this prospectus, by

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the selling security holders listed in the table below. We issued the Registered Shares (or the warrants exercisable for Registered Shares, as the case may be) in the ordinary course of business in transactions exempt from the registration requirements of the Securities Act. We are registering the Registered Shares for the selling security holders. At the time of the issuance of the Registered Shares (or the warrants exercisable for Registered Shares, as the case may be) we had no agreement or understanding with any selling security holder to distribute any of our securities.

The following table sets forth information as of August 30, 2005 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. Except as otherwise noted in this prospectus, for purposes of computing the number and percentage of shares beneficially owned by a selling security holder on August 30, 2005, 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(2) |
|---|--|---|-----------------------------|---|--|
| Andrew J. Maffey | 188,000(3) | * | 63,000 | 125,000 | * |
| Caroline A. Levine | 11,250 | * | 11,250 | 0 | 0 |
| Centrum Bank AG | 91,500(4) | * | 46,500 | 45,000 | * |
| Charles and Leslie Close | 65,000(5) | * | 15,000 | 50,000 | * |
| Clifford Ross | 65,000(6) | * | 15,000 | 50,000 | * |
| Delaware Charter Guarantee and Trust Co. FBO Michael Kooper IRA | 77,865(7) | * | 17,969 | 59,896 | * |
| Elaine Dines | 65,000(8) | * | 15,000 | 50,000 | * |
| Franco Merlo | 2,989 | * | 2,989 | 0 | 0 |
| High River Limited Partnership | 1,729,730(9) | 2.5% | 1,729,730 | 0 | 0 |
| Icahn Partners LP | 3,321,080(10) | 4.8% | 3,321,080 | 0 | 0 |
| Icahn Partners Master Fund LP | 3,597,838(11) | 5.2% | 3,597,838 | 0 | 0 |
| James Simpson | 7,500(12) | * | 7,500 | 0 | 0 |
| Jay Silberman | 97,500(13) | * | 22,500 | 75,000 | * |
| John J. Kissane | 13,000 | * | 3,000 | 10,000 | * |
| Legend Merchant Group, Inc. | 1,500(14) | * | 1,500 | 0 | 0 |
| Michael Kooper | 308,750 | * | 71,250 | 237,500 | * |
| North Sound Legacy Institutional Fund LLC | 1,005,756(15) | 1.5%(15) | 807,756 | 198,000(16) | * |
| North Sound Legacy International Ltd. | 2,396,946(17) | 3.5%(17) | 2,012,946 | 384,000(18) | * |
| Paul Mezei | 2,600(19) | * | 600 | 2,000 | * |
| Richard Melnick | 201,000 | * | 201,000 | 0 | 0 |
| Robert J. Neborsky MD Combination Retirement Trust | 670,641(20) | * | 320,414 | 350,227(21) | * |
| Royal Bank of Canada | 2,702,702(22) | | 2,702,702 | 0 | 0 |
| Schenk Family Trust Carl Schenk Trustee | 32,500(23) | * | 7,500 | 25,000 | * |
| The Prudent Bear Fund | 375,000(24) | * | 375,000 | 0 | 0 |
| Thomas DePetrillo | 300,000(25) | * | 300,000 | 0 | 0 |

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| | | | | | |
|---------------------------|---------------|------|-----------|--------|---|
| VGE III Portfolio Ltd. | 3,902,600(26) | 5.6% | 3,902,600 | 0 | 0 |
| Viking Global Equities LP | 3,664,966(27) | 5.3% | 3,664,966 | 0 | 0 |
| Steve Salovitch | 13,000 | * | 3,000 | 10,000 | * |
| EFG Private Bank S.A. | 23,250(28) | * | 750 | 22,500 | * |

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* Less than 1.0%.

- (1) Options and warrants to purchase our common stock that are presently exercisable or exercisable within 60 days of August 30, 2005, 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 67,346,575 shares of common stock outstanding as of August 30, 2005 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 August 30,
2005, even if
such options or
warrants may
otherwise be
subject to
restriction on
exercise.

- (3) Includes 16,000 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered.
- (4) Includes 16,500 shares of common stock issuable upon exercise of warrants held by this person, all of which will be

offered.

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

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

(7) Includes 17,969 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered.

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

(9) Includes 864,865 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered. All of

the shares
issuable upon
exercise of
warrants held by
this person have
been included in
the total number
of shares
beneficially
owned for this
person
notwithstanding
the fact that the
warrants are not
exercisable until
January 27,
2006. Based on
our review of a
Schedule 13D
filed with the
Commission on
August 5, 2005
(the Icahn 13D)
by High River
Limited
Partnership
(High River),
Hopper
Investments,
LLC (Hopper),
Barberry Corp.
(Barberry),
Icahn Partners
Master Fund LP
(Icahn Master),
Icahn Offshore
LP (Icahn
Offshore), CCI
Offshore Corp.
(CCI Offshore),
Icahn Partners
LP (Icahn
Partners), Icahn
Onshore LP
(Icahn Onshore),
CCI Onshore
Corp. (CCI
Onshore) and
Carl C. Icahn,
we believe that
as of the date of

this prospectus
each of
Barberry,
Hopper and Mr.
Icahn may be
deemed to
beneficially own
(as that term is
defined in
Rule 13d-3
under the
Exchange Act)
the shares
(including
warrant shares)
directly held by
High River
because such
persons are in a
position to
directly or
indirectly
determine the
investment and
voting decisions
of High River.
Barberry,
Hopper and
Mr. Icahn each
disclaim
beneficial
ownership of
such shares for
all other
purposes.

- (10) Includes
1,660,540 shares
of common
stock issuable
upon exercise of
warrants held by
this person, all
of which will be
offered. All of
the shares
issuable upon
exercise of
warrants held by
this person have
been included in

the total number of shares beneficially owned for this person notwithstanding the fact that the warrants are not exercisable until January 27, 2006. Based on our review of the Icahn 13D, we believe that as of the date of this prospectus each of CCI Onshore, Icahn Onshore and Mr. Icahn may be deemed to beneficially own (as that term is defined in Rule 13d-3 under the Exchange Act) the shares (including warrant shares) directly held by Icahn Partners because such persons are in a position to directly or indirectly determine the investment and voting decisions of Icahn Partners. CCI Onshore, Icahn Onshore and Mr. Icahn each disclaim beneficial ownership of such shares for all other purposes. Based

on our review of
a Form 3 filed
with the
Commission on
August 16, 2005
(the Form 3) by
Keith Meister, a
member of our
board of
directors, and
the information
disclosed in the
Icahn 13D, we
believe that
because
Mr. Meister is a
limited partner
of Icahn
Onshore and has
an interest in the

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fees, including the performance fees, relating to Icahn Onshore and Icahn Offshore he may be deemed to beneficially own (as that term is defined in Rule 13d-3 under the Exchange Act) the shares (including warrant shares) beneficially owned by Icahn Partners. Mr. Meister disclaims beneficial ownership of all such shares (including warrant shares) in the Form 3.

- (11) Includes 1,798,919 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered. All of the shares issuable upon exercise of warrants held by this person have been included in the total number of shares beneficially owned for this person notwithstanding

the fact that the warrants are not exercisable until January 27, 2006. Based on our review of the Icahn 13D, we believe that as of the date of this prospectus each of CCI Offshore, Icahn Offshore and Mr. Icahn may be deemed to beneficially own (as that term is defined in Rule 13d-3 under the Exchange Act) the shares (including warrant shares) directly held by Icahn Master because such persons are in a position to directly or indirectly determine the investment and voting decisions of Icahn Master. CCI Offshore, Icahn Offshore and Mr. Icahn each disclaim beneficial ownership of such shares for all other purposes. Based on our review of the Form 3 and the information disclosed in the Icahn 13D, we believe that because

Mr. Meister is a limited partner of Icahn

Onshore and has an interest in the fees, including the performance fees, relating to Icahn Onshore and Icahn

Offshore he may be deemed to beneficially own (as that term is defined in Rule 13d-3 under the Exchange Act) the shares (including warrant shares) beneficially owned by Icahn Master.

Mr. Meister disclaims beneficial ownership of all such shares (including warrant shares) in the Form 3.

(12) Includes 7,500 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered.

(13) Includes 22,500 shares of common stock issuable upon exercise of warrants held by this person, all of which will be

offered.

(14) Includes 1,500 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered.

(15) Includes 483,378 shares of common stock issuable upon exercise of warrants held by this person, 417,378 of which will be offered. All of the shares issuable upon exercise of warrants held by this person have been included in the total number of shares beneficially owned for this person notwithstanding the fact that warrants to purchase 378,378 shares are not exercisable until January 27, 2006. We have been advised by this person that North Sound Capital LLC (North Sound Capital) may be deemed the beneficial owner of the shares

beneficially owned by this person because North Sound Capital is the managing member of this person and the investment advisor of North Sounds Legacy International Ltd. As the managing member or investment advisor, respectively, of such entities, North Sound Capital has voting and investment control with respect to the shares of common stock held thereby. The ultimate managing member of North Sound Capital is Thomas McAuley. This person holds warrants to purchase 105,000 shares and a warrant to purchase 378,378 shares of common stock that contain provisions that would prohibit this person from exercising these warrants to the extent that upon

such exercise
this person
would
beneficially hold
more than
9.99% or 4.9%,
respectively, of
the total number
of shares of
common stock
then issued and
outstanding
(determined in

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accordance with
Section 13(d) of
the Securities
Exchange Act of
1934, as amended)
unless this person
shall have
provided us with
61-days notice of
this person's waiver
of this provision.

(16) All of the shares
this person will
beneficially own
upon completion
of this offering
(including shares
issuable upon the
exercise of
warrants) have
been registered on
the registration
statement on
Form S-3
(No. 333-117022),
as amended,
initially filed with
the Commission on
June 30, 2003.

(17) Includes 1,167,973
shares of common
stock issuable
upon exercise of
warrants held by
this person,
1,039,973 of which
will be offered. All
of the shares
issuable upon
exercise of
warrants held by
this person have
been included in
the total number of
shares beneficially
owned for this
person

notwithstanding the fact that warrants to purchase 972,973 shares are not exercisable until January 27, 2006. See also footnote 15 regarding North Sound Capital's beneficial ownership of shares owned by this person. This person holds warrants to purchase 195,000 shares and a warrant to purchase 972,973 shares of common stock that contain provisions that would prohibit this person from exercising these warrants to the extent that upon such exercise this person would beneficially hold more than 9.99% or 4.9%, respectively, of the total number of shares of common stock then issued and outstanding (determined in accordance with Section 13(d) of the Securities Exchange Act of 1934, as amended) unless this person shall have provided us with 61-days notice of this person's waiver of this provision.

- (18) All of the shares this person will beneficially own upon completion of this offering (including shares issuable upon the exercise of warrants) have been registered on the registration statement on Form S-3 (No. 333-117022), as amended, initially filed with the Commission on June 30, 2003.

- (19) Includes 600 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered.

- (20) Includes 320,414 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered.

- (21) Of the shares this person will beneficially own upon completion of this offering, 167,500 have been registered on the registration statement on Form S-3 (No. 333-117022), as amended, initially filed with the Commission on

June 30, 2003.

- (22) Includes 1,351,351 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered. All of the shares issuable upon exercise of warrants held by this person have been included in the total number of shares beneficially owned for this person notwithstanding the fact that the warrants are not exercisable until January 27, 2006.
- (23) Includes 7,500 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered.
- (24) Includes 375,000 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered.
- (25) Includes 300,000 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered.

(26) Includes 1,951,300 shares of common stock issuable upon exercise of warrants held by this person, all of which will be offered. All of the shares issuable upon exercise of warrants held by this person have been included in the total number of shares beneficially owned for this person notwithstanding the fact that the warrants are not

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exercisable until
January 27, 2006.
Based on our
review of a
Schedule 13G filed
with the
Commission on
August 5, 2005 (the
Viking 13G) by
Viking Global
Performance LLC
(VGP), Viking
Global Investors
LP (VGI), Viking
Global Equities LP
(VGE Global), O.
Andreas Halvorsen,
Brian T.Olson and
David C. Ott, we
believe that as of
the date of this
prospectus each of
VGP, VGI and
Messrs. Halvorsen,
Olson and Ott may
be deemed to
beneficially own
(as that term is
defined in
Rule 13d-3 under
the Exchange Act)
the shares
(including warrant
shares) directly
held by VGE III
Portfolio Ltd.
(VGE Portfolio)
because such
persons are in a
position to directly
or indirectly
determine the
investment and
voting decisions of
VGE Portfolio.

(27) Includes 1,832,483
shares of common
stock issuable upon

exercise of warrants held by this person, all of which will be offered. All of the shares issuable upon exercise of warrants held by this person have been included in the total number of shares beneficially owned for this person notwithstanding the fact that the warrants are not exercisable until January 27, 2006. Based on our review of the Viking 13G, we believe that as of the date of this prospectus each of VGP, VGI and Messrs. Halvorsen, Olson and Ott may be deemed to beneficially own (as that term is defined in Rule 13d-3 under the Exchange Act) the shares (including warrant shares) directly held by VGE Global because such persons are in a position to directly or indirectly determine the investment and voting decisions of VGE Global.

(28) Includes 750 shares of common stock issuable upon exercise of

warrants held by
this person, all of
which will be
offered.

Within the past three years, none of the selling security holders had any position, office or other material relationship with us or, to our knowledge, any of our predecessors or affiliates.

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, in the over-the-counter market 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;

- 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.

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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, 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 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);

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.

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Legal Matters

The validity of the issuance of shares of common stock offered hereby will be passed upon for us by Bingham McCutchen LLP, San Francisco, California. To our knowledge, no attorney at Bingham McCutchen LLP who has worked on substantive matters for us owns any of our securities.

Experts

Our consolidated balance sheets as of December 31, 2004 and 2003, and the related consolidated statements of operations, shareholders' equity (deficit) and cash flows for the years then ended and for the period from June 12, 1996 (date of inception) through December 31, 2004, have been incorporated by reference in this prospectus and in the registration statement in reliance on the report of J.H. Cohn LLP, independent registered public accounting firm, given upon the authority of said 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 these other auditors.

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23,240,340 SHARES
ADVENTRX PHARMACEUTICALS, INC.
COMMON STOCK

PROSPECTUS

_____, 2005

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The estimated expenses in connection with the distribution of the securities being registered, all of which are to be paid by us, are as follows:

| | |
|---|------------------------|
| Securities and Exchange Commission Registration Fee | \$10,449 |
| Legal Fees and Expenses | 60,000 |
| Accounting Fees and Expenses | 10,000 |
| Miscellaneous Fees and Expenses | 5,000 |
| Total | <u>\$85,449</u> |

Item 15. Indemnification Of Directors And Officers

Section 145 of the Delaware General Corporation Law grants corporations the power to indemnify their directors, officers, employees and agents in accordance with the provisions thereof. Article VI of our by-laws provide for indemnification of our directors, officers, agents and employees to the full extent permissible under Section 145 of the Delaware General Corporation Law. Section 102(b)(7) of the Delaware General Corporation Law authorizes a corporation to eliminate the liability of directors for breach of fiduciary duty in certain cases. Article VI of our certificate of incorporation eliminates such liability to the full extent permitted by Section 145.

Pursuant to warrants issued by us and registration rights agreements entered into between us and certain selling security holders, we are obligated to indemnify certain of the selling security holders with respect to various matters.

We maintain directors and officers liability insurance coverage protecting our officers and directors against certain liabilities.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the registrant pursuant to the foregoing provisions described in Item 15 above, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Securities Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Securities Act and will be governed by the final adjudication of such issue.

Item 16. Exhibits And Financial Statement Schedules

(a) Exhibits

An Exhibit Index has been attached as part of this Registration Statement and is incorporated herein by reference.

(b) Financial Statement Schedules

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Schedules are omitted because they are either not required, are not applicable or because equivalent information has been included in the financial statements, the notes thereto or elsewhere herein.

Item 17. Undertakings

The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made pursuant to this registration statement, a post-effective amendment to this registration statement to include any material information with respect to the plan of distribution not previously disclosed in this registration statement or any material change to such information in this registration statement;

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Table of Contents**Signatures**

Pursuant to the requirements of the Securities Act of 1933, as amended, the Registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on a Form S-3 and has duly caused this Amendment No. 1 to the Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of San Diego, State of California, on September 1, 2005.

**ADVENTRX Pharmaceuticals,
Inc.**

By: /s/ Carrie E. Carlander

Name: Carrie E. Carlander
Title: Chief Financial Officer

Pursuant to the requirements of the Securities Act of 1933, as amended, this Amendment No. 1 to the Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title | Date |
|-------------------------------|---|-------------------|
| /s/ M. Ross Johnson* | Director, Chairman of the Board | September 1, 2005 |
| M. Ross Johnson, Ph.D. | | |
| /s/ Evan M. Levine | Director, Chief Executive Officer and President (Principal Executive Officer) | September 1, 2005 |
| Evan M. Levine | | |
| /s/ Carrie E. Carlander | Chief Financial Officer, Vice President Finance, Secretary and Treasurer (Principal Financial and Accounting Officer) | September 1, 2005 |
| Carrie E. Carlander | | |
| /s/ Michael M. Goldberg* | Director | September 1, 2005 |
| Michael M. Goldberg, M.D. | | |
| /s/ Mark J. Pykett* | Director | September 1, 2005 |
| Mark J. Pykett, V.M.D., Ph.D. | | |
| /s/ Mark Bagnall* | Director | September 1, 2005 |
| Mark Bagnall | | |
| /s/ Keith Meister* | Director | September 1, 2005 |
| Keith Meister | | |

*By: /s/ Carrie E. Carlander
Carrie E. Carlander
Attorney-in-Fact

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Exhibit Index

| Exhibit Number | Description |
|---------------------|---|
| 3.1 ⁽¹⁾ | Certificate of Incorporation of Victoria Enterprises, Inc. |
| 3.2 ⁽¹⁾ | Certificate of Amendment of Certificate of Incorporation of Victoria Enterprises, Inc. |
| 3.3 ⁽¹⁾ | Certificate of Amendment of Certificate of Incorporation of BioQuest, Inc. |
| 3.4 ⁽¹⁾ | Certificate of Amendment of Certificate of Incorporation of BioQuest, Inc. |
| 3.5 ⁽¹⁾ | Certificate of Ownership and Merger Merging Biokeys, Inc. with and into Biokeys Pharmaceuticals, Inc. |
| 3.6 ⁽²⁾ | Amended and Restated Bylaws of Biokeys Pharmaceuticals, Inc. |
| 3.7 ⁽¹⁾ | Certificate of Amendment to the Certificate of Incorporation of ADVENTRX Pharmaceuticals, Inc. |
| 4.1* | Specimen common stock certificate for shares of Common Stock |
| 4.10 ⁽³⁾ | Registration Rights Agreement, dated as of April 5, 2004 , among the Registrant and the Investors named therein |
| 4.23 ⁽⁴⁾ | Securities Purchase Agreement, dated July 21, 2005, among the Registrant and the Purchasers named therein |
| 4.24 ⁽⁴⁾ | Rights Agreement, dated July 27, 2005, among the Registrant and the Purchasers named therein |
| 4.25* | Common Stock Warrants Nos. WP-1 to WP-5 and WP-8 |
| 4.26* | Common Stock Warrants Nos. WP-6 and WP-7 |
| 4.27 | A-1 Warrant to Purchase Common Stock issued to the persons named therein |
| 4.28 | A-2 Warrant to Purchase Common Stock issued to the persons named therein |
| 4.29 | Warrant to Purchase Common Stock issued to the persons named therein |
| 4.30 | Warrant to Purchase Common Stock issued to the persons named therein |
| 4.31* | Warrant to Purchase Common Stock, No. WC-290, issued to Robert J. Neborsky MD Inc Combination Retirement Trust |
| 4.32* | Warrant to Purchase Common Stock, No. WC-291, issued to S. Neborsky and R Neborsky TTEE Robert J. Neborsky MD Inc Comb Retirement Trust |
| 4.33* | Warrant to Purchase Common Stock, No. WC-292, issued to S. Neborsky and R Neborsky TTEE Robert J. Neborsky MD Inc Comb Retirement Trust |

- 4.34* Warrant to Purchase Common Stock, No. WC-287, issued to Thomas J. DePetrillo
- 5.1 Opinion of Bingham McCutchen LLP
- 23.1 Consent of J. H. Cohn LLP
- 23.2 Consent of Bingham McCutchen LLP (included in Exhibit 5.1)
- 24* Power of Attorney (filed as part of signature page to Registration Statement)
- (1) Incorporated by reference to the same-numbered exhibit to the Registrant's Registration Statement on Form 8-A filed April 27, 2004.
- (2) Incorporated by reference to the same-numbered exhibit to the Registrant's Registration Statement on Form 10-SB, filed October 2, 2001, as amended.
- (3) Incorporated by reference to the same-numbered exhibit to the Registrant's Registration Statement on Form S-3, filed June 30, 2004, as amended.
- (4) Incorporated by reference to the same-numbered exhibit to the Registrant's Quarterly Report on Form 10-Q filed

August 12,
2005.

* Previously filed.

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