

EPIX Pharmaceuticals, Inc.
Form POS AM
April 29, 2008

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As filed with the Securities and Exchange Commission on April 29, 2008

Registration No. 333-139625

**UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549**

POST-EFFECTIVE AMENDMENT NO. 1 TO

Form S-3

**REGISTRATION STATEMENT
UNDER
THE SECURITIES ACT OF 1933**

EPIX Pharmaceuticals, Inc.

(Exact name of registrant as specified in its charter)

Delaware

*(State or other jurisdiction of
incorporation or organization)*

04-3030815

*(I.R.S. Employer
Identification No.)*

**4 Maguire Road
Lexington, Massachusetts 02421
(781) 761-7600**

(Address, including zip code, and telephone number, including area code, of registrant's principal executive offices)

**Michael G. Kauffman, M.D., Ph.D.
Chief Executive Officer
EPIX Pharmaceuticals, Inc.
4 Maguire Road
Lexington, Massachusetts 02421
(781) 761-7600**

(Name, address, including zip code, and telephone number, including area code, of agent for service)

with copies to:

**Edward A. King, Esq.
Goodwin Procter LLP
Exchange Place
Boston, Massachusetts 02109
(617) 570-1000**

Approximate date of commencement of proposed sale to the public: From time to time after this Registration Statement becomes effective.

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, 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, 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, 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 registration statement pursuant to General Instruction I.D. or a post-effective amendment thereto that shall become effective upon filing with the Commission pursuant to Rule 462(e) under the Securities Act, check the following box:

If this Form is a post-effective amendment to a registration statement filed pursuant to General Instruction I.D. filed to register additional securities or additional classes of securities pursuant to Rule 413(b) under the Securities Act, check the following box:

Indicate by check mark whether the registrant is a large accelerated filer, an accelerated filer, a non-accelerated filer, or a smaller reporting company. See the definitions of large accelerated filer, accelerated filer and smaller reporting company in Rule 12b-2 of the Exchange Act.

Large accelerated filer Accelerated filer Non-accelerated filer Smaller reporting company
(Do not check if a smaller reporting company)

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 this Registration Statement shall become effective on such date as the Commission, acting pursuant to said Section 8(a), may determine.

This Registration Statement amends the Registration Statement on Form S-3 (No. 333-139625) of EPIX Pharmaceuticals, Inc. filed with the Commission on December 22, 2006. As a registration fee was paid on the shares registered hereby in connection with their original registration, no registration fee is being paid in connection herewith.

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This Post-Effective Amendment No. 1 to Form S-3 is being filed to update EPIX Pharmaceuticals, Inc.'s registration statement on Form S-3 (Registration No. 333-139625) following the registrant's regained eligibility to use Form S-3.

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The information contained in this preliminary prospectus is not complete and may be changed. We may not sell these securities until the registration statement filed with the Securities and Exchange Commission is effective. This preliminary prospectus is not an offer to sell 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 APRIL 29, 2008

PROSPECTUS

EPIX PHARMACEUTICALS, INC.

\$75,000,000

**Common Stock
Preferred Stock
Warrants**

This prospectus relates to common stock, preferred stock and warrants that we may sell from time to time in one or more offerings up to a total public offering price of \$75,000,000 (or its equivalent in foreign or composite currencies) on terms to be determined at the time of sale. We will provide specific terms of these securities in supplements to this prospectus. You should read this prospectus and any supplement carefully before you invest. This prospectus may not be used to offer and sell securities unless accompanied by a prospectus supplement for those securities.

Our common stock is traded on The NASDAQ Global Market under the symbol EPIX. On April 28, 2008, the closing price of our common stock on the NASDAQ Global Market was \$1.77 per share. The market value of our outstanding common equity held by non-affiliates on April 28, 2008 was \$72,650,080. We have not offered any securities pursuant to General Instruction I.B.6 of Form S-3 during the 12 calendar months prior to and including the date hereof. Each prospectus supplement to this prospectus will contain information, where applicable, as to any other listing on any national securities exchange or The NASDAQ Global Market of the securities covered by such prospectus supplement.

These securities may be sold directly by us, through dealers or agents designated from time to time, to or through underwriters or through a combination of these methods. See **Plan of Distribution** in this prospectus. We may also describe the plan of distribution for any particular offering of these securities in any applicable prospectus supplement. If any agents, underwriters or dealers are involved in the sale of any securities in respect of which this prospectus is being delivered, we will disclose their names and the nature of our arrangements with them in a prospectus supplement. The net proceeds we expect to receive from any such sale will also be included in a prospectus supplement.

Investing in our securities involves a high degree of risk. See **Risk Factors on page 3 of this prospectus. We may include specific risk factors in an applicable prospectus supplement under the heading **Risk Factors**. You should review that section of the prospectus supplement for a discussion of matters that investors in our securities should consider.**

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

The date of this prospectus is April 29, 2008.

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YOU SHOULD RELY ONLY ON THE INFORMATION CONTAINED IN THIS PROSPECTUS, ANY PROSPECTUS SUPPLEMENT OR ANY DOCUMENT TO WHICH WE HAVE REFERRED YOU. WE HAVE NOT AUTHORIZED ANYONE ELSE TO PROVIDE YOU WITH INFORMATION THAT IS DIFFERENT. THIS PROSPECTUS AND ANY PROSPECTUS SUPPLEMENT MAY BE USED ONLY WHERE IT IS LEGAL TO SELL THESE SECURITIES. THE INFORMATION IN THIS PROSPECTUS OR ANY PROSPECTUS SUPPLEMENT IS CURRENT ONLY AS OF THE DATE ON THE FRONT OF THESE DOCUMENTS.

ABOUT THIS PROSPECTUS

This prospectus is part of a registration statement that we filed with the Securities and Exchange Commission, or the SEC, using a shelf registration process. Under this shelf process, we may sell any combination of the securities described in this prospectus in one or more offerings up to a total public offering price of \$75,000,000 (or its equivalent in foreign or composite currencies). This prospectus provides you with a general description of the securities we may offer. Each time we sell securities, we will provide a prospectus supplement that will contain specific information about the securities being offered and the terms of that offering. The prospectus supplement may also add to, update or change information contained in this prospectus. You should read both this prospectus and any prospectus supplement together with the additional information described under the heading **Where You Can Find More Information** carefully before making an investment decision.

Unless the context otherwise requires, in this prospectus, **EPIX**, **the Company**, **we**, **us**, **our** and similar names refer to **EPIX Pharmaceuticals, Inc.** and its subsidiaries.

ABOUT EPIX PHARMACEUTICALS, INC.

We are a biopharmaceutical company focused on discovering, developing and commercializing novel pharmaceutical products through the use of proprietary technology to better diagnose, treat and manage patients. We have three internally discovered therapeutic product candidates in clinical trials. These drug candidates are targeting conditions such as Alzheimer's disease, cardiovascular disease and cognitive impairment. Our blood-pool imaging agent, Vasovist, is approved for marketing in more than 30 countries outside of the United States. We also have

collaborations with SmithKline Beecham Corporation (GlaxoSmithKline), Amgen Inc., Cystic Fibrosis Foundation Therapeutics, Incorporated, and Bayer Schering Pharma AG, Germany. Our business strategy is to develop our internally discovered, novel pharmaceutical products through the point of proof of clinical concept, typically completion of Phase 2 clinical trials and then to seek pharmaceutical partnerships for the continued development, regulatory approvals and world-wide

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commercialization of the product candidates. In certain disease areas, such as pulmonary hypertension, where we believe we can efficiently obtain regulatory approval and effectively market the product through a specialty sales force, we may seek to retain commercialization rights in the United States.

The focus of our therapeutic drug discovery and development efforts is on the two classes of drug targets known as G-protein Coupled Receptors, or GPCRs, and ion channels. GPCRs and ion channels are classes of proteins embedded in the surface membrane of all cells and are responsible for mediating much of the biological signaling at the cellular level. We believe that our proprietary drug discovery technology and approach addresses many of the inefficiencies associated with traditional GPCR and ion channel-targeted drug discovery. By integrating computer-based, or in silico, technology with in-house medicinal chemistry, we believe that we can rapidly identify and optimize highly selective drug candidates. We focus on GPCR and ion channel drug targets whose role in disease has already been demonstrated in clinical trials or in preclinical studies. In each of our three clinical-stage therapeutic programs, we used our drug discovery technology and approach to optimize a lead compound into a clinical drug candidate in less than ten months, synthesizing fewer than 80 compounds per program. We moved each of these drug candidates into clinical trials in less than 18 months from lead identification. We believe our drug discovery technology and approach enables us to efficiently and cost-effectively discover and develop GPCR and ion channel-targeted drugs.

CORPORATE INFORMATION

We were organized as a Delaware corporation 1988 and commenced operations in 1992. Our principal executive offices are located at 4 Maguire Road, Lexington, Massachusetts 02421. Our telephone number at that location is (781) 761-7600. Our website is located at www.epixpharma.com. We make available on our website free of charge a link to our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and amendments to those reports as soon as practicable after we electronically file such material with the Securities and Exchange Commission (SEC). The information contained on our website is not part of this prospectus.

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RISK FACTORS

Investing in our securities involves risk. The prospectus supplement applicable to each type or series of securities we offer will contain a discussion of the risks applicable to an investment in EPIX and to the particular types of securities that we are offering under that prospectus supplement. Prior to making a decision about investing in our securities, you should carefully consider the specific factors discussed under the heading **Risk Factors** in the applicable prospectus supplement, together with all of the other information contained or incorporated by reference in the prospectus supplement or appearing or incorporated by reference in this prospectus. You should also consider the risks, uncertainties and assumptions discussed under the heading **Risk Factors** included in our most recent annual report on Form 10-K, as revised or supplemented by our most recent quarterly report on Form 10-Q, each of which are on file with the SEC and are incorporated herein by reference, and which may be amended, supplemented or superseded from time to time by other reports we file with the SEC in the future.

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus and any accompanying prospectus supplement (including any document incorporated by reference herein or therein) contain statements with respect to the Company which constitute forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended, and of the safe harbor provisions of the United States Private Securities Litigation Reform Act of 1995. Words such as anticipate, believes, budget, continue, could, estimate, expect, forecast, in, potential, predicts, project, should, will and similar expressions are intended to identify such forward-looking statements. Forward-looking statements involve inherent risks and uncertainties, which are difficult to predict and many of which are beyond our control. A number of important factors could cause actual results to differ materially from those in the forward-looking statements, including those factors discussed in **Risk Factors** in any prospectus supplement and in the documents incorporated by reference herein or therein. Factors that could cause actual results to differ from those reflected in forward-looking statements relating to our operations and business include:

difficulties encountered in integrating merged businesses;

the competitive environment in the life sciences industry;

whether we can successfully develop new products and the degree to which these gain market acceptance;

the success and timing of our pre-clinical studies and clinical trials;

our ability to obtain and maintain regulatory approval for our product candidates and the timing of such approvals;

our ability to research, develop and commercialize our product candidates;

regulatory developments in the United States and foreign countries; and

our ability to obtain and maintain intellectual property protection for our product candidates.

We caution readers not to place undue reliance on any such forward-looking statements, which speak only as of the date they are made. We disclaim any obligation, except as specifically required by law and the rules of the SEC, to publicly update or revise any such statements to reflect any change in company expectations or in events, conditions

or circumstances on which any such statements may be based, or that may affect the likelihood that actual results will differ from those set forth in the forward-looking statements.

You should read this prospectus and any accompanying prospectus supplement and the documents that we reference herein and therein and have filed as exhibits to the registration statement, of which this prospectus is part, completely and with the understanding that our actual future results may be materially different from what we expect. You should assume that the information appearing in this

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prospectus and any accompanying prospectus supplement is accurate as of the date on the front cover of this prospectus or such prospectus supplement only. Our business, financial condition, results of operations and prospects may change. We may not update these forward-looking statements, even though our situation may change in the future, unless we have obligations under the Federal securities laws to update and disclose material developments related to previously disclosed information. We qualify all of the information presented in this prospectus and any accompanying prospectus supplement, and particularly our forward-looking statements, by these cautionary statements.

USE OF PROCEEDS

Unless we tell you otherwise in a prospectus supplement, we will use the net proceeds from the sale of these securities for general corporate purposes, which may include funding clinical trials, research and development, regulatory activities and product marketing, including acquisitions of companies, products, intellectual property or other technology, repayment or refinancing of existing indebtedness, investments, capital expenditures, repurchase of our capital stock and for any other purposes that we may specify in any prospectus supplement. We may also invest the net proceeds temporarily in short-term or marketable securities until we use them for their stated purpose.

DESCRIPTION OF COMMON STOCK AND PREFERRED STOCK

The following description of our common stock and preferred stock, together with the additional information included in any applicable prospectus supplements, summarizes the material terms and provisions of these types of securities but is not complete. For the complete terms of our common stock and preferred stock, please refer to our Restated Certificate of Incorporation, as amended to date, which we refer to as our Certificate of Incorporation, and our Amended and Restated By-laws, which we refer to as our By-laws, each of which is incorporated by reference into the registration statement of which this prospectus is a part and, with respect to any new shares of preferred stock, the certificate of designation which will be filed with the SEC for each new series of preferred stock we may designate, if any.

General

We will describe in a prospectus supplement the specific terms of any common stock or preferred stock we may offer pursuant to this prospectus. If indicated in a prospectus supplement, the terms of such common stock or preferred stock may differ from the terms described below.

We have 101,000,000 shares of capital stock authorized under our Certificate of Incorporation, consisting of 100,000,000 shares of common stock, par value \$0.01 per share and 1,000,000 shares of preferred stock, par value \$0.01 per share. The authorized shares of common stock and the authorized and undesignated shares of preferred stock are available for issuance without further action by our stockholders, unless such action is required by applicable law or the rules of any stock exchange or automated quotation system on which our securities may be listed or traded. If the approval of our stockholders is not so required, our board of directors may determine not to seek stockholder approval.

Common Stock

As of April 28, 2008, we have approximately 41,357,586 shares of common stock outstanding. Holders of our common stock are entitled to one vote for each share held of record on all matters voted upon by our stockholders and may not cumulate votes. Subject to the rights of holders of any future series of undesignated preferred stock which may be designated, each share of the outstanding common stock is entitled to participate ratably in any distribution of net assets made to the stockholders in the liquidation, dissolution or winding up of the Company and is entitled to

participate equally in dividends if and when declared by our board of directors. There are no redemption, sinking fund, conversion or preemptive rights with respect to shares of our common stock. All shares of our common stock have equal rights and preferences.

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Our common stock is listed on The NASDAQ Global Market under the symbol EPIX. The Computershare Trust Company is the transfer agent and registrar for our common stock. Its address is 250 Royall Street, Canton, Massachusetts, 02021, and its telephone number is (781) 575-2000.

Preferred Stock

Our Certificate of Incorporation permits us to issue up to 1,000,000 shares of preferred stock in one or more series and with rights and preferences that may be fixed or designated by our board of directors without any further action by our stockholders. The designation, powers, preferences, rights and qualifications, limitations and restrictions of the preferred stock of each series will be fixed by the certificate of designation relating to such series, which will specify the terms of the preferred stock, including:

the designation of the series, which may be by distinguishing number, letter or title;

the number of shares of the series, which number the board of directors may thereafter (except where otherwise provided in the preferred stock designation) increase or decrease (but not below the number of shares thereof then outstanding);

whether dividends, if any, shall be cumulative or noncumulative and the dividend rate of the series;

the dates on which dividends, if any, shall be payable;

the redemption rights and price or prices, if any, for shares of the series;

the terms and amount of any sinking fund provided for the purchase or redemption of shares of the series;

the amounts payable on shares of the series in the event of any voluntary or involuntary liquidation, dissolution or winding up of the affairs of EPIX;

whether the shares of the series shall be convertible into shares of any other class or series, or any other security, of EPIX or any other corporation, and, if so, the specification of such other class or series or such other security, the conversion price or prices or rate or rates, any adjustments thereof, the date or dates as of which such shares shall be convertible and all other terms and conditions upon which such conversion may be made;

restrictions on the issuance of shares of the same series or of any other class or series; and

the voting rights, if any, of the holders of shares of the series, provided that no share of preferred stock of any series will be entitled to more than one vote per share of preferred stock.

If our board of directors elects to exercise this authority, the rights and privileges of holders of shares of our common stock could be made subject to the rights and privileges of such series of preferred stock.

Although our board of directors has no intention at the present time of doing so, it could issue a series of preferred stock that could, depending on the terms of such series, impede the completion of a merger, tender offer or other takeover attempt.

Certain Provisions in our Certificate of Incorporation and By-laws

The following is a summary of certain provisions of Delaware law, our certificate of incorporation and our by-laws. This summary does not purport to be complete and is qualified in its entirety by reference to the corporate law of Delaware and our certificate of incorporation and by-laws.

Our certificate of incorporation and by-laws contain various provisions intended to promote the stability of our stockholder base and render more difficult certain unsolicited or hostile attempts to take us over that could disrupt EPIX, divert the attention of our directors, officers and employees and adversely affect the independence and integrity of our business.

Pursuant to our certificate of incorporation, the number of directors is fixed by our board of directors. Our directors are divided into three classes, each class to serve a three year term and to consist as nearly as

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possible of one third of the directors. Pursuant to our by-laws, directors elected by stockholders at an annual meeting of stockholders will be elected by a plurality of all votes cast.

Our by-laws provide that a special meeting of stockholders may be called by a majority of the entire board of directors or the president. Stockholders are not permitted to call, or to require that the board of directors call, a special meeting of stockholders. Moreover, the business permitted to be conducted at any special meeting of stockholders is limited to the business brought before the meeting pursuant to the notice of the meeting given. In addition, our certificate of incorporation provides that any action taken by our stockholders must be effected at an annual or special meeting of stockholders and may not be taken by written consent instead of a meeting. Our by-laws establish an advance notice procedure for stockholders to nominate candidates for election as directors or to bring other business before meetings of our stockholders.

Delaware law provides generally that the affirmative vote of a majority of the shares entitled to vote on any matter is required to amend a corporation's certificate of incorporation or by-laws, unless a corporation's certificate of incorporation or by-laws requires a greater percentage. We have provisions in our certificate which require 66 $\frac{2}{3}$ % of the voting power of all of the then outstanding shares of our capital stock to amend or repeal certain provisions in our certificate of incorporation which include, but is not limited to provisions which would reduce or eliminate the number of authorized common or preferred shares and all indemnification provisions. Our by-laws may be altered, amended or repealed or new by-laws may be adopted by the affirmative vote of the holders of a majority of the shares of capital stock entitled to vote at any regular meeting of stockholders, or at any special meeting of stockholders provided that notice of such alteration, amendment, repeal or adoption of new by-laws shall have been stated in the notice of such meeting; or by the affirmative vote of a majority of the directors present at any regular or special meeting of our board of directors at which a quorum is present.

We are also subject to the provisions of Section 203 of the Delaware General Corporation Law. Subject to certain exceptions, Section 203 of the Delaware General Corporation Law prohibits a publicly-held Delaware corporation from engaging in a business combination with an interested stockholder for a period of three years after the date of the transaction in which the person became an interested stockholder, unless the interested stockholder attained such status with the approval of our board of directors or unless the business combination is approved in a prescribed manner. A business combination is defined as a merger, asset sale or other transaction resulting in a financial benefit to the interested stockholder. Subject to various exceptions, an interested stockholder is a person who, together with affiliates and associates, owns, or within the past three years did own, 15% or more of a corporation's voting stock. This statute could prohibit or delay the accomplishment of mergers or other takeover or change in control attempts with respect to us and, accordingly, may discourage attempts to acquire us.

DESCRIPTION OF WARRANTS

We may issue securities warrants for the purchase of preferred stock or common stock. Securities warrants may be issued independently or together with preferred stock or common stock and may be attached to or separate from any offered securities. Each series of securities warrants will be issued under a separate warrant agreement to be entered into between us and a warrant agent. The securities warrant agent will act solely as our agent in connection with the securities warrants and will not assume any obligation or relationship of agency or trust for or with any registered holders of securities warrants or beneficial owners of securities warrants. This summary of some provisions of the securities warrants is not complete. You should refer to the securities warrant agreement, including the forms of securities warrant certificate representing the securities warrants, relating to the specific securities warrants being offered for the complete terms of the securities warrant agreement and the securities warrants. That securities warrant agreement, together with the terms of securities warrant certificate and securities warrants, will be filed with the SEC in connection with the offering of the specific securities warrants.

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The particular terms of any issue of securities warrants will be described in the prospectus supplement relating to the issue. Those terms may include:

the title of such warrants;

the aggregate number of such warrants;

the price or prices at which such warrants will be issued;

the currency or currencies (including composite currencies) in which the price of such warrants may be payable;

the terms of the securities purchasable upon exercise of such warrants and the procedures and conditions relating to the exercise of such warrants;

the price at which the securities purchasable upon exercise of such warrants may be purchased;

the date on which the right to exercise such warrants will commence and the date on which such right shall expire;

any provisions for adjustment of the number or amount of securities receivable upon exercise of the warrants or the exercise price of the warrants;

if applicable, the minimum or maximum amount of such warrants that may be exercised at any one time;

if applicable, the designation and terms of the securities with which such warrants are issued and the number of such warrants issued with each such security;

if applicable, the date on and after which such warrants and the related securities will be separately transferable;

information with respect to book-entry procedures, if any; and

any other terms of such warrants, including terms, procedures and limitations relating to the exchange or exercise of such warrants.

The prospectus supplement relating to any warrants to purchase equity securities may also include, if applicable, a discussion of certain U.S. federal income tax and ERISA considerations.

Securities warrants for the purchase of preferred stock and common stock will be offered and exercisable for U.S. dollars only. Securities warrants will be issued in registered form only.

Each securities warrant will entitle its holder to purchase the number of shares of preferred stock or common stock at the exercise price set forth in, or calculable as set forth in, the applicable prospectus supplement.

After the close of business on the expiration date, unexercised securities warrants will become void. We will specify the place or places where, and the manner in which, securities warrants may be exercised in the applicable prospectus supplement.

Upon receipt of payment and the warrant certificate properly completed and duly executed at the corporate trust office of the warrant agent or any other office indicated in the applicable prospectus supplement, we will, as soon as practicable, forward the purchased securities. If less than all of the warrants represented by the warrant certificate are exercised, a new warrant certificate will be issued for the remaining warrants.

Prior to the exercise of any securities warrants to purchase preferred stock or common stock, holders of the securities warrants will not have any of the rights of holders of preferred stock or common stock purchasable upon exercise, including the right to vote or to receive any payments of dividends on the preferred stock or common stock purchasable upon exercise.

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PLAN OF DISTRIBUTION

We may sell the securities being offered pursuant to this prospectus directly to purchasers, to or through underwriters, through dealers or agents, or through a combination of such methods. The prospectus supplement with respect to the securities being offered will set forth the terms of the offering of those securities, including the names of the underwriters, dealers or agents, if any, the purchase price, the net proceeds to us, any underwriting discounts and other items constituting underwriters' compensation, the initial public offering price, any discounts or concessions allowed or reallocated or paid to dealers and any securities exchanges on which such securities may be listed.

If underwriters are used in an offering, we will execute an underwriting agreement with such underwriters and will specify the name of each underwriter and the terms of the transaction (including any underwriting discounts and other terms constituting compensation of the underwriters and any dealers) in a prospectus supplement. The securities may be offered to the public either through underwriting syndicates represented by managing underwriters or directly by one or more investment banking firms or others, as designated. If an underwriting syndicate is used, the managing underwriter(s) will be specified on the cover of the prospectus supplement. If underwriters are used in the sale, the offered securities will be acquired by the underwriters for their own accounts and may be resold from time to time in one or more transactions, including negotiated transactions, at a fixed public offering price or at varying prices determined at the time of sale. Any public offering price and any discounts or concessions allowed or reallocated or paid to dealers may be changed from time to time. Unless otherwise set forth in the prospectus supplement, the obligations of the underwriters to purchase the offered securities will be subject to conditions precedent and the underwriters will be obligated to purchase all of the offered securities if any are purchased.

We may grant to the underwriters options to purchase additional securities to cover over-allotments, if any, at the public offering price, with additional underwriting commissions or discounts, as may be set forth in a related prospectus supplement. The terms of any over-allotment option will be set forth in the prospectus supplement for those securities.

If any underwriters are involved in the offer and sale, they will be permitted to engage in transactions that maintain or otherwise affect the price of the securities. These transactions may include over-allotment transactions, purchases to cover short positions created by the underwriter in connection with the offering and the imposition of penalty bids. If an underwriter creates a short position in the securities in connection with the offering, i.e., if it sells more securities than set forth on the cover page of the applicable prospectus supplement, the underwriter may reduce that short position by purchasing the securities in the open market. In general, purchases of a security to reduce a short position could cause the price of the security to be higher than it might be in the absence of such purchases. As noted above, underwriters may also choose to impose penalty bids on other underwriters and/or selling group members. This means that if underwriters purchase securities on the open market to reduce their short position or to stabilize the price of the securities, they may reclaim the amount of the selling concession from those underwriters and/or selling group members who sold such securities as part of the offering.

Neither we nor any underwriter make any representation or prediction as to the direction or magnitude of any effect that the transactions described above may have on the price of such securities. In addition, neither we nor any underwriter make any representation that such underwriter will engage in such transactions or that such transactions, once commenced, will be discontinued without notice.

If dealers are used in an offering, we will sell the securities to the dealers as principals. The dealers then may resell the securities to the public at varying prices which they determine at the time of resale. The names of the dealers and the terms of the transaction will be specified in a prospectus supplement.

The securities may be sold directly by us or through agents we designate from time to time at a fixed price or prices, which may be changed, or at varying prices determined at the time of sale. If agents are used in an offering, the names of the agents and the terms of the agency will be specified in a prospectus supplement. Unless otherwise indicated in a prospectus supplement, the agents will act on a best-efforts basis for the period of their appointment.

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Dealers and agents named in a prospectus supplement may be deemed to be underwriters (within the meaning of the Securities Act) of the securities described therein. In addition, we may sell the securities directly to institutional investors or others who may be deemed to be underwriters within the meaning of the Securities Act with respect to any resales thereof.

Underwriters, dealers and agents may be entitled to indemnification by us against specific civil liabilities, including liabilities under the Securities Act, or to contribution with respect to payments which the underwriters or agents may be required to make in respect thereof, under underwriting or other agreements. The terms of any indemnification provisions will be set forth in a prospectus supplement. Certain underwriters, dealers or agents and their associates may engage in transactions with and perform services for us in the ordinary course of business.

If so indicated in a prospectus supplement, we will authorize underwriters or other persons acting as our agents to solicit offers by institutional investors to purchase securities pursuant to contracts providing for payment and delivery on a future date. We may enter contracts with commercial and savings banks, insurance companies, pension funds, investment companies, educational and charitable institutions and other institutional investors. The obligations of any institutional investor will be subject to the condition that its purchase of the offered securities will not be illegal at the time of delivery. The underwriters and other agents will not be responsible for the validity or performance of such contracts.

Each series of securities will be a new issue of securities and will have no established trading market (other than our common stock). Any common stock sold pursuant to a prospectus supplement will be eligible for quotation and trading on NASDAQ, subject to official notice of issuance. Any underwriters to whom securities are sold by us for public offering and sale may make a market in the securities, but such underwriters will not be obligated to do so and may discontinue any market making at any time without notice. The securities, other than the common stock, may or may not be listed on a national securities exchange or eligible for quotation and trading on NASDAQ.

In order to comply with the securities laws of some states, if applicable, the securities offered hereby will be sold in those jurisdictions only through registered or licensed brokers or dealers. In addition, in some states securities may not be sold unless they have been registered or qualified for sale in the applicable state or an exemption from the registration or qualification requirement is available and complied with.

LEGAL MATTERS

The validity of the securities offered hereby will be passed upon for us by Goodwin Procter LLP, Boston, Massachusetts. If the securities are being distributed in an underwritten offering, certain legal matters will be passed upon for the underwriters by counsel identified in the applicable prospectus supplement.

EXPERTS

The consolidated financial statements of EPIX Pharmaceuticals, Inc. appearing in EPIX Pharmaceuticals, Inc.'s Annual Report (Form 10-K) for the year ended December 31, 2007, and the effectiveness of EPIX Pharmaceuticals, Inc.'s internal control over financial reporting as of December 31, 2007, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon included therein, and incorporated herein by reference. Such financial statements are, and audited financial statements to be included in subsequently filed documents will be, incorporated herein in reliance upon the reports of Ernst & Young LLP pertaining to such financial statements and the effectiveness of our internal control over financial reporting as of the respective dates (to the extent covered by consents filed with the Securities and Exchange Commission) given on the authority of such firm as experts in accounting and auditing.

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WHERE YOU CAN FIND MORE INFORMATION

We are a public company and 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 at the SEC's Public Reference Room at 100 F Street, N.E., Washington, D.C. 20549. You can request copies of these documents by writing to the SEC and paying a fee for the copying cost. Please call the SEC at 1-800-SEC-0330 for more information about the operation of the public reference room. Our SEC filings are also available to the public at the SEC's web site at <http://www.sec.gov>, or at our web site at <http://www.epixpharma.com>. In addition, our stock is listed for trading on The NASDAQ Global Market.

This prospectus is only part of a Registration Statement on Form S-3 that we have filed with the SEC under the Securities Act of 1933, as amended, and therefore omits certain information contained in the Registration Statement. We have also filed exhibits and schedules with the Registration Statement that are excluded from this prospectus, and you should refer to the applicable exhibit or schedule for a complete description of any statement referring to any contract or other document. You may:

- inspect a copy of this prospectus, including the exhibits and schedules, without charge at the public reference room;
- obtain a copy from the SEC upon payment of the fees prescribed by the SEC; or
- obtain a copy from the SEC website.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to incorporate by reference information from other documents that we file with them, which means that we can disclose important information in this prospectus by referring to those documents. The information incorporated by reference is considered to be part of this prospectus, and information that we file later with the SEC will automatically update and supersede the information in this prospectus. We incorporate by reference the documents listed below and any future filings made with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934, as amended. The documents we are incorporating by reference as of their respective dates of filing are:

Our Annual Report on Form 10-K for the fiscal year ended December 31, 2007;

Those portions of our Proxy Statement filed with the SEC on April 1, 2008 incorporated by reference into our Annual Report on Form 10-K for the year ended December 31, 2007;

Our Current Reports on Form 8-K filed with the SEC on February 22, 2008, March 20, 2008, March 28, 2008 and April 7, 2008; and

The description of our common stock contained in "Description of Capital Stock" in the registration statement on Form S-4 filed with the SEC on April 25, 2006 (File No. 333-33513) and any amendments or reports filed to update such description.

All documents and reports filed by us with the SEC pursuant to Section 13(a), 13(c), 14 or 15(d) of the Exchange Act (other than those portions of our Current Reports on Form 8-K containing disclosure furnished under 2.02 or 7.01 of

Form 8-K, unless otherwise indicated therein) after the date of this prospectus and prior to the termination of the offering made hereby shall be deemed to be incorporated by reference into this prospectus and to be a part hereof from the date of filing of such documents. Any statement contained in a document incorporated or deemed to be incorporated by reference herein shall be deemed to be modified or superseded for purposes of this prospectus to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein or in any prospectus supplement modifies or supersedes such statement. Any statement so modified or superseded shall not be deemed, except as so modified or superseded, to constitute a part of this prospectus.

We will provide, without charge to each person, including any beneficial owner, to whom this prospectus is delivered, upon written or oral request of such person, a copy of any or all of the documents incorporated

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herein by reference other than exhibits, unless such exhibits specifically are incorporated by reference into such documents or this document. Requests for such documents should be addressed in writing or by telephone to:

EPIX Pharmaceuticals, Inc.
4 Maguire Road
Lexington, Massachusetts 02421
Attention: Kim Cobleigh Drapkin, Chief Financial Officer
(781) 761-7600

You should rely only on the information contained in this prospectus, any prospectus supplement or any document to which we have referred you. We have not authorized anyone else to provide you with information that is different. This prospectus and any prospectus supplement may be used only where it is legal to sell these securities. The information in this prospectus or any prospectus supplement is current only as of the date on the front of these documents.

Table of Contents**PART II****INFORMATION NOT REQUIRED IN PROSPECTUS****ITEM 14. OTHER EXPENSES OF ISSUANCE AND DISTRIBUTION**

The following table sets forth the costs and expenses payable by us in connection with the offerings described in this registration statement, other than underwriting discounts and commissions.

| | |
|----------------------------------|-------------------|
| SEC Registration Fee | \$ 8,025 |
| NASDAQ Global Market Listing Fee | *45,000 |
| Printing Expenses | *25,000 |
| Trustee Fees and Expenses | *10,000 |
| Accounting Fees and Expenses | *10,000 |
| Legal Fees and Expenses | *50,000 |
| TOTAL | \$ 148,025 |

* Estimated pursuant to Item 511 of Regulation S-K

ITEM 15. INDEMNIFICATION OF DIRECTORS AND OFFICERS

The Delaware General Corporation Law and the registrant's certificate of incorporation and by-laws provide for indemnification of the registrant's directors and officers for liabilities and expenses that they may incur in such capacities. In general directors and officers are indemnified with respect to actions taken in good faith in a manner reasonably believed to be in, or not opposed to, the best interests of the registrant and, with respect to any criminal action or proceeding, actions that the indemnitee had no reasonable cause to believe were unlawful.

Our certificate of incorporation provides that no director shall be personally liable to us or to our stockholders for monetary damages for breach of fiduciary duty as a director, except that the limitation shall not eliminate or limit liability to the extent that the elimination or limitation of such liability is not permitted by the Delaware General Corporation Law as the same exists or may hereafter be amended.

Our by-laws further provide for the indemnification of our directors and officers to the fullest extent permitted by Section 145 of the Delaware General Corporation Law, including circumstances in which indemnification is otherwise discretionary. A principal effect of these provisions is to limit or eliminate the potential liability of our directors for monetary damages arising from breaches of their duty of care, subject to certain exceptions. These provisions may also shield directors from liability under federal and state securities laws.

ITEM 16. EXHIBITS**Exhibit
No.****Description**

1.1*** Form of Underwriting Agreement

Edgar Filing: EPIX Pharmaceuticals, Inc. - Form POS AM

- 3.1 Restated Certificate of Incorporation of EPIX Pharmaceuticals, Inc., as amended to date. (filed as Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2006 and incorporated herein by reference).
- 3.2 Amended and Restated By-Laws of EPIX Pharmaceuticals, Inc. (filed as Exhibit 3.1 to the Company's Quarterly Report on Form 10-Q for the period ended March 31, 2007 and incorporated herein by reference).
- 4.1*** Form of Common Stock Warrant Agreement (together with form of Common Stock Warrant Certificate).
- 4.2*** Form of Preferred Stock Warrant Agreement (together with form of Preferred Stock Warrant Certificate).

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| Exhibit No. | Description |
|------------------------|---|
| 4.3*** | Form of Certificate of Designation for the Preferred Stock (together with Preferred Stock Certificate). |
| 4.4 | Specimen certificate representing EPIX's common stock (filed as Exhibit 4.1 to the Company's Quarterly Report on Form 10-Q for the period ended September 30, 2006 and incorporated herein by reference). |
| 5.1** | Legal Opinion of Goodwin Procter LLP. |
| 12.1 | Ratio of Earnings to Fixed Charges (filed as Exhibit 12.1 to the Company's Annual Report on Form 10-K for the year ended December 31, 2007 and incorporated herein by reference). |
| 23.1* | Consent of Ernst & Young LLP, Independent Registered Public Accounting Firm of EPIX Pharmaceuticals, Inc. |
| 23.3** | Consent of Goodwin Procter LLP (included in the opinion filed as Exhibit 5.1). |
| 24.1** | Power of Attorney (included on signature page to this Registration Statement). |

* Filed herewith.

** Previously filed.

*** To be subsequently filed by an amendment to the Registration Statement or by a Current Report on Form 8-K.

ITEM 17. UNDERTAKINGS

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 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 of 1933, 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 of 1933 and will be governed by the final adjudication of such issue.

The undersigned registrant hereby further undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement: (i) to include any prospectus required by Section 10(a)(3) of the Securities Act of 1933; (ii) to reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Securities and Exchange Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than 20 percent change in the maximum aggregate offering price set forth in the Calculation of Registration Fee table in the effective registration statement; and (iii) to include any material information with respect to the plan of distribution not previously disclosed in the registration statement or

any material change to such information in the registration statement; provided, however, that clauses (i), (ii) and (iii) of this paragraph (1) do not apply if the information required to be included in a post-effective amendment by such clauses is contained in reports filed with or furnished to the Securities and Exchange Commission by the registrant pursuant to Section 13 or Section 15(d) of the

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Securities Exchange Act of 1934 that are incorporated herein by reference, or is contained in a form of prospectus filed pursuant to Rule 424(b) that is part of the 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.

(4) That, for the purpose of determining liability under the Securities Act of 1933 to any purchaser:

(i) if the registrant is relying on Rule 430B: (A) each prospectus filed by the registrant pursuant to Rule 424(b)(3) shall be deemed to be part of the registration statement as of the date the filed prospectus was deemed part of and included in the registration statement; and (B) each prospectus required to be filed pursuant to Rule 424(b)(2), (b)(5), or (b)(7) as part of a registration statement in reliance on Rule 430B relating to an offering made pursuant to Rule 415(a)(1)(i), (vii), or (x) for the purpose of providing the information required by section 10(a) of the Securities Act of 1933 shall be deemed to be part of and included in the registration statement as of the earlier of the date such form of prospectus is first used after effectiveness or the date of the first contract of sale of securities in the offering described in the prospectus. As provided in Rule 430B, for liability purposes of the issuer and any person that is at that date an underwriter, such date shall be deemed to be a new effective date of the registration statement relating to the securities in the registration statement to which that prospectus relates, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such effective date, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such effective date; or

(ii) if the registrant is subject to Rule 430C, each prospectus filed pursuant to Rule 424(b) as part of a registration statement relating to an offering, other than registration statements relying on Rule 430B or other than prospectuses filed in reliance on Rule 430A, shall be deemed to be part of and included in the registration statement as of the date it is first used after effectiveness. Provided, however, that no statement made in a registration statement or prospectus that is part of the registration statement or made in a document incorporated or deemed incorporated by reference into the registration statement or prospectus that is part of the registration statement will, as to a purchaser with a time of contract of sale prior to such first use, supersede or modify any statement that was made in the registration statement or prospectus that was part of the registration statement or made in any such document immediately prior to such date of first use.

(5) That, for the purpose of determining liability of the registrant under the Securities Act of 1933 to any purchaser in the initial distribution of the securities: the undersigned registrant undertakes that in a primary offering of securities of the undersigned registrant pursuant to this registration statement, regardless of the underwriting method used to sell the securities to the purchaser, if the securities are offered or sold to such purchaser by means of any of the following communications, the undersigned registrant will be a seller to the purchaser and will be considered to offer or sell such securities to such purchaser: (i) any preliminary prospectus or prospectus of the undersigned registrant relating to the offering required to be filed pursuant to Rule 424; (ii) any free writing prospectus relating to the offering prepared by or on behalf of the undersigned registrant or used or referred to by the undersigned registrant; (iii) the portion of any other free writing prospectus relating to the offering containing material information about the undersigned registrant or its securities provided by or on behalf of the undersigned

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registrant; and (iv) any other communication that is an offer in the offering made by the undersigned registrant to the purchaser.

(6) 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 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.

(7) That, for purposes of determining any liability under the Securities Act of 1933, the information omitted from the form of prospectus filed as part of this registration statement in reliance upon Rule 430A and contained in a form of prospectus filed by the registrant pursuant to Rule 424(b)(1) or (4) or 497(h) under the Securities Act of 1933 shall be deemed to be part of this registration statement as of the time it was declared effective.

(8) That, for the purpose of determining any liability under the Securities Act of 1933, each post-effective amendment that contains a form of prospectus 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, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-3 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the Town of Lexington, Commonwealth of Massachusetts, on April 29, 2008.

EPIX PHARMACEUTICALS, INC.

By: /s/ Michael G. Kauffman

Name: Michael G. Kauffman, M.D., Ph.D.

Title: Chief Executive Officer

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed by the following persons in the capacities and on the dates indicated.

| Signature | Title | Date |
|---|---|----------------|
| /s/ Michael G. Kauffman Michael G. Kauffman, M.D., Ph.D. | Chief Executive Officer (Principal Executive Officer) and Director | April 29, 2008 |
| /s/ Kim Cobleigh Drapkin Kim Cobleigh Drapkin | Chief Financial Officer (Principal Financial Officer and Principal Accounting Officer) | April 29, 2008 |
| * | Chairman of the Board of Directors | April 29, 2008 |
| Frederick Frank | | |
| * | Director | April 29, 2008 |
| Michael Gilman | | |
| * | Director | April 29, 2008 |
| Mark Leuchtenberger | | |
| * | Director | April 29, 2008 |
| Robert J. Perez | | |
| * | Director | April 29, 2008 |
| Gregory D. Phelps | | |
| * | Director | April 29, 2008 |

Ian F. Smith

*By: /s/ Kim Cobleigh Drapkin

Kim Cobleigh Drapkin, Attorney-in-Fact

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EXHIBIT INDEX

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