

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

FORM 8-A

**FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES
PURSUANT TO SECTION 12(b) OR 12(g) OF THE
SECURITIES EXCHANGE ACT OF 1934**

ZIOPHARM Oncology, Inc.

(Exact Name of Registrant as Specified in Its Charter)

Delaware

(State of Incorporation or Organization)

84-1475642

(I.R.S. Employer Identification no.)

1180 Avenue of the Americas, 19th Floor
New York, New York

(Address of Principal Executive Offices)

10036

(Zip Code)

If this form relates to the registration of a class of securities pursuant to Section 12(b) of the Exchange Act and is effective pursuant to General Instruction A.(c), please check the following box. :

If this form relates to the registration of a class of securities pursuant to Section 12(g) of the Exchange Act and is effective pursuant to General Instruction A.(d), please check the following box: **9**

Securities Act registration statement file number to which this form relates:

N/A
(If applicable)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of Each Class
to be so Registered

Name of Each Exchange on Which
Each Class is to be Registered

Common Stock, par value \$.001 per share

The NASDAQ Stock Market, LLC

Securities to be registered pursuant to Section 12(g) of the Act:

(Title of Class)

Item 1. Description of Registrant's Securities to be Registered.

Common Stock

Pursuant to the registrant's certificate of incorporation, as amended and restated to date (the "Certificate of Incorporation"), the registrant's authorized capital stock consists of 280,000,000 shares, comprised of 250,000,000 shares of common stock, par value \$.001 per share, and 30,000,000 shares of preferred stock, par value \$.001 per share. As of August 14, 2006, there were 15,264,248 shares of the registrant's common stock and no shares of the registrant's preferred stock issued and outstanding.

Voting. The holders of the registrant's common stock are entitled to one vote for each outstanding share of common stock owned by such stockholder on every matter properly submitted to the stockholders for their vote. Stockholders are not entitled to vote cumulatively for the election of directors.

Dividend Rights. Holders of the registrant's common stock are entitled to receive ratably dividends and other distributions of cash or any other right or property as may be declared by the registrant's Board of Directors out of our assets or funds legally available for such dividends or distributions. The dividend rights of holders of common stock are subject to the dividend rights of the holders of any series of preferred stock that may be issued and outstanding from time to time.

Liquidation Rights. In the event of any voluntary or involuntary liquidation, dissolution or winding up of our affairs, holders of the registrant's common stock would be entitled to share ratably in the registrant's assets that are legally available for distribution to stockholders after payment of liabilities. If the registrant has any preferred stock outstanding at such time, the holders of such preferred stock may be entitled to distribution and/or liquidation preferences that require the registrant to pay the applicable distribution to the holders of preferred stock before paying distributions to the holders of common stock.

Conversion, Redemption and Preemptive Rights. Holders of the registrant's common stock have no conversion, redemption, preemptive, subscription or similar rights.

Preferred Stock

Under the Certificate of Incorporation, the registrant's Board of Directors is authorized, subject to limitations prescribed by law, to issue up to 30,000,000 shares of preferred stock in one or more series without further stockholder approval. The Board of Directors has discretion to determine the rights, preferences, privileges and restrictions of, including, without limitation, voting rights, dividend rights, conversion rights, redemption privileges and liquidation preferences of, and to fix the number of shares of, each series of our preferred stock.

Limitations on Directors' Liability

The Certificate of Incorporation and the registrant's bylaws contain provisions indemnifying the registrant's directors and officers to the fullest extent permitted by law. In addition, as permitted by Delaware law, the Certificate of Incorporation provides that no director will be liable to the registrant or its stockholders for monetary damages for breach of certain fiduciary duties as a director. The effect of this provision is to restrict the registrant's rights and the rights of its stockholders in derivative suits to recover monetary damages against a director for breach of certain fiduciary duties as a director, except that a director will be personally liable for:

- any breach of his or her duty of loyalty to the registrant or its stockholders;
- acts or omissions not in good faith which involve intentional misconduct or a knowing violation of law;
- the payment of dividends or the redemption or purchase of stock in violation of Delaware law; or
- any transaction from which the director derived an improper personal benefit.

This provision does not affect a director's liability under the federal securities laws.

To the extent that the registrant's directors, officers and controlling persons are indemnified under the provisions contained in the Certificate of Incorporation, Delaware law or contractual arrangements against liabilities arising under the Securities Act, 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, as amended, and is therefore unenforceable.

Provisions that May Have an Anti-Takeover Effect

Certain provisions set forth in the Certificate of Incorporation, bylaws and in Delaware law, which are summarized below, are intended to enhance the likelihood of continuity and stability in the composition of the registrant's Board of Directors and in the policies formulated by the registrant's Board of Directors and to discourage certain types of transactions that may involve an actual or threatened change of control. In that regard, these provisions are designed to reduce the registrant's vulnerability to an unsolicited acquisition proposal. The provisions also are intended to discourage certain tactics that may be used in proxy fights. However, such provisions could have the effect of discouraging others from making tender offers for the registrant's shares and, as a consequence, they also may inhibit fluctuations in the market price of the registrant's common stock that could result from actual or rumored takeover attempts. Such provisions also may have the effect of preventing changes in the registrant's management.

Blank Check Preferred Stock. The Certificate of Incorporation contains provisions that permit the registrant's Board of Directors to issue, without any further vote or action by the stockholders, up to 30,000,000 shares of preferred stock in one or more series and, with respect to each such series, to fix the number of shares constituting the series and the designation of the series, the voting powers (if any) of the shares of the series, and the preferences and relative, participating, optional and other special rights, if any, and any qualifications, limitations or restrictions, of the shares of such series. As a result, the registrant's Board of Directors could authorize the issuance of shares of preferred stock with terms and conditions that could have the effect of delaying, deferring or preventing a transaction or a change in control that might involve a premium price for holders of the registrant's common stock or otherwise be in their best interest.

Special Meetings of Stockholders. The registrant's bylaws provide that special meetings of stockholders may be called only by the Board of Directors. Stockholders are not permitted to call a special meeting of stockholders or to require that the Board of Directors call such a special meeting.

Delaware Takeover Statute.

In general, Section 203 of the Delaware General Corporation Law prohibits a Delaware corporation that is a public company from engaging in any "business combination" (as defined below) with any "interested stockholder" (defined generally as an entity or person beneficially owning 15% or more of the outstanding voting stock of the corporation and any entity or person affiliated with such entity or person) for a period of three years following the date that such stockholder became an interested stockholder, unless: (1) prior to such date, the board of directors of the corporation approved either the business combination or the transaction that resulted in the stockholder becoming an interested stockholder; (2) on consummation of the transaction that resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding for purposes of determining the number of shares outstanding those shares owned (x) by persons who are directors and also officers and (y) by employee stock plans in which employee participants do not have the right to determine confidentially whether shares held subject to the plan will be tendered in a tender or exchange offer; or (3) on or subsequent to such date, the business combination is approved by the board of directors and authorized at an annual or special meeting of stockholders, and not by written consent, by the affirmative vote of at least 66^{2/3}% of the outstanding voting stock that is not owned by the interested stockholder.

Section 203 of the Delaware General Corporation Law defines "business combination" to include: (1) any merger or consolidation involving the corporation and the interested stockholder; (2) any sale, transfer, pledge or other disposition of 10% or more of the assets of the corporation involving the interested stockholder; (3) subject to certain exceptions, any transaction that results in the issuance or transfer by the corporation of any stock of the corporation to the interested stockholder; (4) any transaction involving the corporation that has the effect of increasing the proportionate share of the stock of any class or series of the corporation beneficially owned by the interested stockholder; or (5) the receipt by the interested stockholder of the benefit of any loans, advances, guarantees, pledges or other financial benefits provided by or through the corporation.

Item 2. Exhibits.

<u>Exhibit No.</u>	<u>Description Of Document</u>
3.1	Amended and Restated Certificate of Incorporation, as filed with the Delaware Secretary of State on April 26, 2006. ⁽¹⁾
3.2	Bylaws of ZIOPHARM Oncology, Inc. ⁽²⁾
4.1	Form of Specimen Stock Certificate. ⁽³⁾

⁽¹⁾ Incorporated by reference to Exhibit 3.1 to the registrant's Current Report on Form 8-K filed April 26, 2006.

⁽²⁾ Incorporated by reference to Exhibit 3.3 to the registrant's Current Report on Form 8-K filed September 19, 2005.

⁽³⁾ Incorporated by reference to Exhibit 4.1 to the registrant's Registration Statement on Form SB-2 (SEC File No. 333-129020) filed October 14, 2005.

SIGNATURE

Pursuant to the requirements of Section 12 of the Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized.

ZIOPHARM ONCOLOGY, INC.

Dated: September 20, 2006

By: /s/ Richard E. Bagley

Richard E. Bagley, *President,*
Chief Operating Officer and Chief Financial Officer