

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

FORM 8-K

CURRENT REPORT
PURSUANT TO SECTION 13 OR 15(d) OF
THE SECURITIES EXCHANGE ACT OF 1934

Date of report (date of earliest event reported): December 8, 2008

ZIOPHARM Oncology, Inc.

(Exact Name of Registrant as Specified in its Charter)

Delaware
(State or Other Jurisdiction of
Incorporation)

0-32353
(Commission File Number)

84-1475642
(IRS Employer Identification No.)

1180 Avenue of the Americas, 19th Floor
New York, NY 10036
(Address of Principal Executive Offices) (Zip Code)

(646) 214-0700
(Registrant's telephone number, including area code)

(Former name or former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions:

- Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
 - Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
 - Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
 - Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))
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**ZIOPHARM Oncology, Inc.****ZIOPHARM PRESENTS POSITIVE DARINAPARSIN PHASE II DATA AT ASH MEETING**

Darinaparsin active and well tolerated for treatment of lymphoma

SAN FRANCISCO, CA – DECEMBER 08, 2008 - ZIOPHARM Oncology, Inc. (Nasdaq: ZIOP) announced today that on December 6th it presented positive data from a Phase II study of darinaparsin (ZinaparTM) for the treatment of advanced lymphomas at the 50th American Society of Hematology (ASH) Annual Meeting held in San Francisco, CA.

The ongoing Phase II study demonstrates that darinaparsin is clinically active in heavily pretreated, relapsed/refractory patients with lymphoma. Of 15 evaluable patients, 4 patients (27%) had objective responses (Complete Response + Partial Response) and 3 patients (20%) had stable disease. Of 4 evaluable patients with refractory peripheral T cell-lymphoma, 1 achieved a complete response and 2 had stable disease. One patient with marginal zone lymphoma and 1 with marginal zone lymphoma transformed to diffuse large B-cell lymphoma achieved partial responses. Of the 4 patients with relapsed/refractory Hodgkin's disease 1 achieved partial response and 1 had stable disease. The medium number of prior regimens of chemotherapy was 3; in addition 6 patients received prior radiation and 7 patients had previously undergone bone marrow transplantation. Darinaparsin was very well tolerated with possibly related adverse events including nausea/vomiting, fatigue/weakness and dizziness. The absence of bone marrow suppression in these heavily pretreated patients, together with activity suggest that this new drug will be easily combinable in treatment.

"These data indicate darinaparsin is active in lymphoma," stated Michael Craig M.D., Professor and Director of Blood and Marrow Transplantation of West Virginia University and a lead investigator of the study. "The drug is remarkably well tolerated and easily combinable for therapy. We look forward to further developing it in lymphoma."

To view the presentation please visit: http://www.ziopharm.com/docs/DEC08_ZIOPHARM_ASH.pdf

About ZIOPHARM Oncology, Inc.:

ZIOPHARM Oncology is a biopharmaceutical company engaged in the development and commercialization of a diverse portfolio of cancer drugs. The Company is currently focused on three clinical programs.

Palifosfamide (ZymafosTM or ZIO-201) is a novel molecule that is the functional active metabolite of ifosfamide, a standard of care for treating sarcoma, testicular and other cancers. Palifosfamide delivers only the cancer fighting component of ifosfamide. It is expected to overcome the resistance of ifosfamide and cyclophosphamide in certain cancers. It does not have the toxic metabolites of ifosfamide that cause the debilitating side effects of "fuzzy brain" (encephalopathy) and severe bladder inflammation. Intravenous (IV) palifosfamide is currently in a Phase II randomized trial to treat soft tissue sarcoma. An oral form of palifosfamide has been developed preclinically and is expected to enter clinical study in 2009.

Indibulin (ZybulinTM or ZIO-301) is a novel, oral tubulin binding agent that targets both mitosis and cancer cell migration. Indibulin is expected to have several potential benefits, including oral dosing, application in multi-drug resistant tumors, no neuropathy and minimal overall toxicity. Indibulin has shown early activity in Phase I study as a single agent in many types of solid tumors. Indibulin is also currently in the Phase I portion of Phase I/II trials in combination with Tarceva[®] and Xeloda[®]. Preclinical study continues with both dose density and metronomic administration.

Darinaparsin (ZinaparTM or ZIO-101) is a novel organic arsenic being developed for the treatment of various hematologic and solid cancers. Preclinical and Phase I and II results to date demonstrate that darinaparsin is much less toxic than other forms of arsenic. Intravenous darinaparsin continues to be studied in a Phase II hematology trial with favorable treatment activity in certain lymphomas and in Phase I study with oral administration. Darinaparsin has been well tolerated in all trials to date.

ZIOPHARM's operations are located in Boston, MA with an executive office in New York. Further information about ZIOPHARM may be found at www.ziopharm.com.

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Forward-Looking Safe Harbor Statement:

This press release contains forward-looking statements for ZIOPHARM Oncology, Inc. that involve risks and uncertainties that could cause the Company's actual results to differ materially from the anticipated results and expectations expressed in these forward-looking statements. These statements are based on current expectations, forecasts and assumptions that are subject to risks and uncertainties, which could cause actual outcomes and results to differ materially from these statements. Among other things, there can be no assurance that any of the Company's development efforts relating to its product candidates will be successful, or such product candidates will be successfully commercialized. Other risks that affect forward-looking information contained in this press release include the possibility of being unable to obtain regulatory approval of the Company's product candidates, the risk that the results of clinical trials may not support the Company's claims, and risks related to the Company's ability to protect its intellectual property and its reliance on third parties to develop its product candidates. The Company assumes no obligation to update these forward-looking statements, except as required by law.

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