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 29, 2010**

ZIOPHARM Oncology, Inc.

(Exact Name of Registrant as Specified in Charter)

Delaware	**001-33038**	**84-1475642**
(State or Other Jurisdiction of Incorporation)	(Commission File Number)	(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)

Not applicable
(Former Name or Former Address, if Changed Since Last Report)

Check the appropriate box below if the Form 8-K 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)).

Item 8.01 Other Events.

On December 29, 2010, the Company issued a press release announcing that the first patient has been dosed in a Phase I, single arm, dose escalation study at the Indiana University Cancer Center of intravenous (IV) palifosfamide (ZIO-201) in combination with etoposide (VP-16) and cisplatin/carboplatin (platinum) in the treatment of small cell lung cancer (SCLC) and other cancers. A copy of the above referenced press release is filed as Exhibit 99.1 to this Current Report on Form 8-K and incorporated herein by reference.

Item 9.01 Financial Statements and Exhibits.

(d) Exhibits

Exhibit No.	Description
99.1	Press Release dated December 29, 2010

SIGNATURES

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

ZIOPHARM Oncology, Inc.

By: /s/ Richard Bagley
Name: Richard Bagley
Title: President, Chief Operating Officer and Chief Financial Officer

Date: January 5, 2011

INDEX OF EXHIBITS

Exhibit No.	Description
99.1	Press Release dated December 29, 2010

Exhibit 99.1

ZIOPHARM Oncology Announces First Patient Dosed in Phase I Study of Palifosfamide in Small Cell Lung and Other Cancers

NEW YORK, NY (December 29, 2010) – ZIOPHARM Oncology, Inc. (Nasdaq: ZIOP), announced today that the first patient has been dosed in a Phase I, single arm, dose escalation study at the Indiana University Cancer Center of intravenous (IV) palifosfamide (ZIO-201) in combination with etoposide (VP-16) and cisplatin/carboplatin (platinum) in the treatment of small cell lung cancer (SCLC) and other cancers.

The Phase I study is expected to enroll 12 to 15 patients and will assess the safety of the palifosfamide/etoposide/platinum regimen for the planned randomized Phase II study in SCLC patients with extensive disease where the etoposide/platinum combination is standard of care.

Palifosfamide is a novel, bi-functional DNA alkylator and cross-linker, currently in a Phase III trial for soft tissue sarcoma, and comprises the functional active metabolite of ifosfamide (IFOS). IFOS is a pro-drug and must be metabolized in order to be active. The clinical utility of IFOS is often limited by toxicities associated with IFOS metabolites unrelated to DNA-alkylation and by development of resistance conferred by decreased pro-drug activation. IFOS was formally studied in SCLC by the Indiana group where it was added to etoposide and platinum with evidence of significantly enhanced efficacy as measured by the endpoints of progression free survival and survival but with the added toxicity of IFOS negating benefit (Journal of Clinical Oncology, Vol 13, 2594-2599).

“The efficacy data and low toxicities observed with palifosfamide in clinical and preclinical studies together with the known activity of ifosfamide in SCLC provide strong rationale for studying palifosfamide in combination with the standard of care for this extraordinarily difficult to treat cancer,” said Lawrence Einhorn, MD, Distinguished Professor at the Simon Cancer Center of Indiana University Medical Center, Lance Armstrong Foundation Chair in Oncology, former President of ASCO and a member of ZIOPHARM's Medical Advisory Board. “Small cell lung cancer in particular is a disease in urgent need of more effective and better tolerated treatment options.”

According to the American Cancer society approximately 15 percent of lung cancers are SCLC, or approximately 33,400 patients yearly in the U.S. SCLC is almost exclusively associated with cigarette smoking and the majority of patients with extensive disease are treated front-line but relapse with a very high mortality within one year.

For more details about this trial, please see www.clinicaltrials.gov.

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 (Zymafos™ or ZIO-201) is a novel DNA cross-linker in class with bendamustine, ifosfamide, and cyclophosphamide. ZIOPHARM is currently enrolling patients in a randomized, double-blinded, placebo-controlled Phase III trial with palifosfamide administered intravenously for the treatment of metastatic soft tissue sarcoma in the front-line setting. The Company is also currently conducting a Phase I intravenous study of palifosfamide in combination with standard of care addressing small cell lung cancer and expects to initiate an additional study with drug in the oral form treating solid tumors.

Darinaparsin (Zinapar™ or ZIO-101) is a novel mitochondrial-targeted agent (organic arsenic) being developed intravenously for the treatment of peripheral T-cell lymphoma with a pivotal study expected to begin in late 2011. An oral form is in a Phase I trial in solid tumors.

Indibulin (Zybulin™ or ZIO-301) is a novel, oral tubulin binding agent that is expected to have several potential benefits including oral dosing, application in multi-drug resistant tumors, no neuropathy and minimal overall toxicity. It is currently being studied in Phase I/II in metastatic breast cancer.

ZIOPHARM's operations are located in Boston, MA with an executive office in New York City. 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, the risk that pre-clinical or clinical trials will proceed on schedules that are consistent with the Company's current expectations or at all, risks related to the Company's ability to protect its intellectual property and its reliance on third parties to develop its product candidates, risks related to the sufficiency of existing capital reserves to fund continued operations for a particular amount of time and uncertainties regarding the Company's ability to obtain additional financing to support its operations thereafter, as well as other risks regarding the Company that are discussed under the heading "Risk Factors" in the Company's filings with the United States Securities and Exchange Commission. Forward-looking statements can be identified by the use of words such as "may," "will," "intend," " should," "could," "can," "would," "expect," "believe," "estimate," " predict," "potential," "plan," "is designed to," "target" and similar expressions. The Company assumes no obligation to update these forward-looking statements, except as required by law.

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