



ZIOPHARM Announces ZIO-101 Anti-Cancer Activity at AACR

-- Mechanism and Toxicity Profile of Arsenic Important in Treating Myeloma --

WASHINGTON, D.C. - April 5, 2006 - ZIOPHARM Oncology, Inc. (OTC BB: ZIOP) announced today the results of a preclinical study that show ZIO-101, a new organic arsenic drug, kills myeloma cells. The data, presented during the Annual Meeting of the American Association of Cancer Research, suggest ZIO-101 might be active in cancers where arsenic trioxide (ATO) is ineffective or too toxic.

"Our data suggest that differences in chemical structure of ZIO-101 and arsenic trioxide are reflected in the different sensitivities of human multiple myeloma cell lines," said Lawrence Boise, Ph.D., University of Miami, senior author of the study. "Therefore, cancers resistant to one arsenic may respond to another."

"We are now enrolling patients with advanced myeloma in a phase I/II trial at doses of ZIO-101 much higher than we could safely achieve with arsenic trioxide," said James Berenson, M.D., of Berenson Oncology. "We are encouraged by these results, and will further evaluate ZIO-101 as we move forward with our trial."

In the study presented, activity of ZIO-101 was compared to ATO in four human myeloma cell lines. The extent of cell-kill was similar for both compounds; however, the effect on killing of ascorbic acid, a glutathione-(GSH) depleting agent, was different for the two arsenics as was response to adding extra-cellular GSH. These data indicate ZIO-101 and ATO kill myeloma cells, but sometimes operate through different mechanisms. The Company believes ZIO-101 may be effective in cancers where ATO is ineffective or too toxic.

ZIO-101 is a small molecule licensed from The University of Texas M. D. Anderson Cancer Center and Texas A&M University. ZIO-101 is currently in phase I/II studies in patients with advanced myeloma. The Company has a second organic arsenic, ZIO-102, in preclinical development. Under a sponsored research agreement with Texas A&M University, several other organic arsenic compounds have been identified as potential preclinical candidates.

About ZIOPHARM Oncology, Inc.

ZIOPHARM Oncology, Inc. is a biopharmaceutical company engaged in the development and commercialization of a diverse, risk-sensitive portfolio of in-licensed cancer drugs to address unmet medical needs. The Company applies new insights from molecular and cancer biology to understand the efficacy and safety limitations of approved and developmental cancer therapies and identifies proprietary and related molecules for better patient treatment. For more information, visit www.ziopharm.com.

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 the Company's 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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