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ZIOPHARM Presents Preclinical Data at AACR Annual Meeting Supporting Controlled DNA-based IL-12 Therapy for Brain Cancer

NEW YORK, April 8, 2014 (GLOBE NEWSWIRE) -- ZIOPHARM Oncology, Inc. (Nasdaq:ZIOP), a biopharmaceutical company focused on the development and commercialization of new cancer therapies, announced today the presentation of data from a study demonstrating the anti-tumor effects and tolerability of Ad-RTS-mIL-12 in a glioblastoma (brain cancer) murine model. Ad-RTS-IL-12 is a novel DNA-based therapeutic candidate for the controlled, local expression of IL-12, an important protein for stimulating an anti-cancer T cell immune response.

The study, titled "Treatment of glioblastoma through the controlled localized production of IL-12 by the RheoSwitch Therapeutic System[®] Platform" (abstract 3647), was presented at the American Association for Cancer Research 2014 Annual Meeting (AACR 2014) taking place April 5-9, 2014 in San Diego, California. It was conducted jointly by ZIOPHARM and Intrexon Corporation (NYSE:XON), ZIOPHARM's exclusive channel partner for the development of synthetic biology therapeutics in oncology.

For the study, intratumoral administration of Ad-RTS-mIL-12 was examined in an orthotopic murine glioma model, with production of IL-12 controlled using Intrexon's RheoSwitch Therapeutic System[®] (RTS[®]) platform and oral administration of the activator ligand veledimex. The primary goals of this preclinical study were to examine how Veledimex crosses the blood brain barrier, and to compare dose-related effects on survival. Veledimex was found to effectively cross the blood brain barrier, with dose-related increases in plasma and brain tissue exposure, and no accumulation in brain tissue following repeat dosing.

The study data demonstrated that administration of Ad-RTS-mIL-12 + veledimex resulted in dose-related increases in survival of four- to five-fold, without exhibiting an adverse safety profile, when compared to median survival in vehicle control groups that included temozolomide, bevacizumab (Avastin[®]) and dexamethasone.

"The activation of a T-cell immune response by Ad-RTS-IL-12 is a promising approach to treating glioblastoma, which is a very challenging and aggressive form of brain cancer," said Francois Lebel, M.D., senior vice president, clinical development and medical operations at ZIOPHARM. "We have now demonstrated in multiple preclinical studies that Ad-RTS-mIL-12 enables localized, controlled delivery of IL-12 in the brain and can produce a dose-dependent reduction in tumor growth with prolonged survival. We are very excited to start the clinical translation of Ad-RTS-IL-12 in glioblastoma."

About ZIOPHARM Oncology, Inc.:

ZIOPHARM Oncology is a Boston, Massachusetts-based biotechnology company employing novel gene expression and control technology to deliver DNA for the treatment of cancer. ZIOPHARM's technology platform employs Intrexon Corporation's RheoSwitch Therapeutic System[®] technology to turn on and off, and precisely modulate, gene expression at the cancer site in order to improve the therapeutic index. This technology is currently being evaluated in Phase 2 clinical studies of the immune system cytokine interleukin-12 for the treatment of breast cancer and advanced melanoma. Multiple new Investigational New Drug applications for new targets using synthetic biology technology are expected through 2015. ZIOPHARM is also developing novel small molecules as potential cancer therapeutics.

Forward-Looking Safe Harbor Statement:

This press release contains certain forward-looking information about ZIOPHARM Oncology, Inc. that is intended to be covered by the safe harbor for "forward-looking statements" provided by the Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements are statements that are not historical facts. Words such as "expect(s)," "feel(s)," "believe(s)," "will," "may," "anticipate(s)" and similar expressions are intended to identify forward-looking statements. These statements include, but are not limited to, statements regarding our ability to successfully develop and commercialize our therapeutic products; our ability to expand our long-term business opportunities; financial projections and estimates and their underlying assumptions; and future performance. All of such statements are subject to certain risks and uncertainties, many of which are difficult to predict and generally beyond the control of the company, that could cause actual results to differ materially from those expressed in, or implied or projected by, the forward-looking information and statements. These risks and uncertainties include, but are not limited to: whether Ad-RTS-IL-12, palifosfamide, darinaparsin, indibulin, or any of our other

therapeutic products will advance further in the clinical trials process and whether and when, if at all, they will receive final approval from the U.S. Food and Drug Administration or equivalent foreign regulatory agencies and for which indications; whether Ad-RTS-IL-12, palifosfamide, darinaparsin, indibulin, and our other therapeutic products will be successfully marketed if approved; whether any of our other therapeutic product discovery and development efforts will be successful; our ability to achieve the results contemplated by our collaboration agreements; the strength and enforceability of our intellectual property rights; competition from other pharmaceutical and biotechnology companies; the development of, and our ability to take advantage of, the market for our therapeutic products; our ability to raise additional capital to fund our operations on terms acceptable to us; general economic conditions; and the other risk factors contained in our periodic and interim SEC reports filed from time to time with the Securities and Exchange Commission, including but not limited to, our Annual Report on Form 10-K for the fiscal year ended December 31, 2013. Readers are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and we do not undertake any obligation to revise and disseminate forward-looking statements to reflect events or circumstances after the date hereof, or to reflect the occurrence of or non-occurrence of any events.

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