



ZIOPHARM Oncology, Inc.

June 1, 2013

ZIOPHARM Announces Presentation of Updated Results From Ad-RTS-IL-12 Phase I Study in Advanced Melanoma at the 2013 ASCO Annual Meeting

BOSTON, June 1, 2013 (GLOBE NEWSWIRE) -- ZIOPHARM Oncology, Inc. (Nasdaq:ZIO) today announced updated results from the Phase 1 study in advanced melanoma using Ad-RTS-IL-12, a novel DNA-based therapeutic candidate. Findings were presented in a poster presentation at the 2013 American Society for Clinical Oncology (ASCO) Annual Meeting being held May 31 — June 4, 2013 at McCormick Place in Chicago, IL. A presentation of the poster, titled "A phase I open-label study of Ad-RTS-hIL-12, an adenoviral vector engineered to express hIL-12 under the control of an oral activator ligand, in subjects with unresectable stage III/IV melanoma," was delivered by Gerald P. Linette, MD, PhD, Associate Professor, Medicine and Neurosurgery, Division of Oncology, at the Washington University School of Medicine.

For the study, Ad-RTS-IL-12, an adenoviral vector engineered to express IL-12 utilizing the RheoSwitch Therapeutic System® (RTS®) technology, was injected intratumorally in patients with advanced melanoma (n=14). Expression of IL-12 was controlled through the administration of an oral activator ligand (INXN-1001), which was administered in four ascending dose cohorts. The Company previously reported that compelling clinical activity was observed in five of seven (71 percent) patients dosed at the two highest dose levels (Nemunaitis et al. ASGCT 2013). The study further demonstrated that treatment with Ad-RTS-IL-12 + INXN-1001 was shown to increase intratumoral IL-12 mRNA transcription. The mRNA level was very tightly controlled (on and off) by the biologic switch and oral activator ligand. Consequent on the increase in IL-12 expression there was a major increase in tumor-infiltrating lymphocytes (CD8⁺, CD45RO⁺) in the tumor microenvironment as measured in tumor biopsies. Subsequently clinical activity was observed in injected and non-injected lesions, primarily at the higher doses of INXN-1001 (100 and 160 mg), with inflammation, shrinkage, flattening, and depigmentation of lesions correlated with the highest serum levels of IFN-γ.

ZIOPHARM is currently conducting a Phase 2 multi-center, single-arm, open-label expansion study in up to 15 patients with unresectable Stage III or IV melanoma. The Phase 2 study will focus on optimization of the dosing schedule, guided by pharmacokinetics and tolerability, using every other day dosing of the oral activator ligand.

"The promise of immune stimulation in cancer treatment is now at the leading edge of oncology research, with Ad-RTS-IL-12, as a potent and highly controllable immune stimulator, demonstrating meaningful potential in this field," said Dr. Linette. "Being able to regulate the expression of IL-12 through a gene therapy strategy provides for the ability to optimize response and tolerability in ways that cannot be achieved with recombinant proteins or other drug delivery strategies. We look forward to taking advantage of this ability and our observations in Phase I to optimize the ongoing Phase 2 study of Ad-RTS-IL-12 in advanced melanoma."

About ZIOPHARM Oncology, Inc.:

ZIOPHARM Oncology is a biopharmaceutical company focused on the development and commercialization of new cancer therapies. The Company's clinical programs include:

Ad-RTS-IL-12 is currently being tested in two Phase 2 studies, the first for the treatment of advanced melanoma, and the second in combination with palifosfamide for the treatment of non-resectable recurrent or metastatic breast cancer. Ad-RTS-IL-12 uses synthetic biology to enable controlled delivery of therapeutic interleukin-12 (IL-12), a protein important for enhancing the development of an immune response to cancer. In partnership with Intrexon Corporation, ZIOPHARM's DNA synthetic biology platform employs an inducible gene-delivery system that enables controlled delivery of genes that produce therapeutic proteins to treat cancer. This controlled delivery is achieved by producing IL-12 under the control of Intrexon's proprietary biological "switch" (the RheoSwitch Therapeutic System® or RTS® platform) to turn on/off the therapeutic protein expression at the tumor site.

Palifosfamide (ZIO-201) is a potent, bi-functional DNA alkylating agent that has activity in multiple tumors by evading typical resistance pathways. Palifosfamide is in the same class as bendamustine, cyclophosphamide, and ifosfamide. It is currently being studied in an adaptive Phase 3 study in small cell lung cancer. Enrollment in this study was suspended with 188 subjects randomized, and being followed for overall survival. Data is expected in the first half of 2014.

Indibulin (ZIO-301) is a novel, tubulin binding agent that is expected to have several potential benefits, including oral dosing, application in multi-drug resistant tumors, no neuropathy and a tolerable toxicity profile. It is currently being studied in a Phase 1/2 trial in metastatic breast cancer.

Darinaparsin (ZIO-101) is a novel mitochondrial-and hedgehog-targeted agent (organic arsenic) currently in ongoing studies with Solasia Pharma K.K.

ZIOPHARM's operations are located in Boston, MA. Further information about ZIOPHARM may be found at www.ziopharm.com.

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 palifosfamide, Ad-RTS-IL-12, 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 palifosfamide, Ad-RTS-IL-12, 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, 2012, and our Quarterly Report on Form 10-Q for the quarter ended March 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.

Trademarks

RheoSwitch Therapeutic System[®] (RTS[®]) is a registered trademark of Intrexon Corporation.

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