February 12, 2018

Ziopharm Oncology Presents Data on Very Rapid Production of CAR T Cells at Keystone Symposia Emerging Cellular Therapies: T Cells and Beyond

Human CAR+ T cells with membrane-bound IL-15 manufactured in less than two days exhibited anti-tumor activity and persistence in pre-clinical studies

BOSTON, Feb. 12, 2018 (GLOBE NEWSWIRE) -- Ziopharm Oncology, Inc. (Nasdaq:ZIOP), a biotechnology company focused on development of next generation immunotherapies utilizing gene- and cell-based therapies to treat patients with cancer, today announced data demonstrating point-of-care (P-O-C) manufacturing of human T cells expressing chimeric antigen receptor (CAR) that persist and have an anti-tumor effect in preclinical models were presented at the Keystone Symposia Emerging Cellular Therapies: T Cells and Beyond in Keystone, Colorado.

The data presented showed T cells expressing CD19-specific CAR with membrane-bound IL-15 (mbIL15) were generated with the non-viral *Sleeping Beauty* system in less than two days and did not require *ex vivo* activation or propagation. T cells designed to express mbIL15 showed greater persistence and more potent antitumor activity than comparator T cells without mbIL15 in these studies.

Lenka V. Hurton, Ph.D., a researcher in the Division of Pediatrics at the University of Texas MD Anderson Cancer Center, presented the findings in a talk entitled, "Rapid production of T cells co-expressing CAR and membrane-bound IL-15 potentiates antitumor activity and promotes *in vivo* memory." She also presented a poster under the same title during the Keystone Symposia.

Ziopharm is advancing its non-viral *Sleeping Beauty* platform towards using its point-of-care, or P-O-C, technology, a very rapid manufacturing process of genetically modified CAR^+ T cells co-expressing mbIL15, with the first in-human trial utilizing this approach expected to commence in 2018. Ziopharm believes that manufacturing under P-O-C has the potential to reduce the costs associated with T-cell therapies and the potential to broaden application based on avoiding the need for centralized manufacturing as is the case when using a virus to genetically modify T cells.

Dr. Hurton's poster and presentation slides are based on research conducted in collaboration with The University of Texas MD Anderson Cancer Center and Precigen Inc., a wholly-owned subsidiary of Intrexon Corporation (NYSE:XON). The poster is available in the Presentations and Publications section of the Company's website, www.ziopharm.com.

About Ziopharm Oncology, Inc.

Ziopharm Oncology is a Boston-based biotechnology company focused on development of next-generation immunotherapies utilizing gene- and cell-based therapies to treat patients with cancer. In partnership with Precigen Inc., a wholly-owned subsidiary of Intrexon Corporation (NYSE:XON), Ziopharm is focused on the development of two platform technologies designed to deliver safe, effective and scalable cell- and viral-based therapies for the treatment of multiple cancer types: Controlled IL-12 and *Sleeping Beauty* for genetically modifying T cells. The Company's lead asset, Ad-RTS-hIL-12 plus veledimex, has demonstrated in clinical trials the potential to control interleukin-12, leading to an infiltration of T cells that fight brain cancer. The Company also is advancing therapies using *Sleeping Beauty*, a non-viral approach to genetically modify chimeric antigen receptor (CAR^+) and T-cell receptor (TCR^+) T cells, which target specific antigens in blood cancers and neoantigens solid tumors. *Sleeping Beauty* is designed using the Company's point-of-care technology, a shortened manufacturing process which potentially can be developed as a decentralized manufacturing process based in hospitals. These programs are being advanced in collaboration with Precigen and with MD Anderson Cancer Center, the National Cancer Institute and Merck KGaA, Darmstadt, Germany.

Forward-Looking Disclaimer

This press release contains certain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended. Forward-looking statements are statements that are not historical facts, and in some cases can be identified by terms such as "may," "will," "could," "expects," "plans," "anticipates," and "believes." These statements include, but are not limited to, statements regarding the Company's business and strategic plans, the Company's ability to establish a commercially-viable manufacturing approach as well as the progress and timing of the development of the Company's research and development programs, including its potential initiation of a first in-human trial

using its P-O-C manufacturing process. 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 by, the forward-looking statements. These risks and uncertainties include, but are not limited to: changes in the Company's financial condition and cash needs, funding or other strategic opportunities that become available to the Company, the Company's ability to finance its operations and business initiatives and obtain funding for such activities; whether chimeric antigen receptor T cell (CAR-T) approaches, Ad-RTS-hIL-12, TCR and NK cell-based therapies, or any of other product candidates will advance further in the preclinical research or clinical trial 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 chimeric antigen receptor T cell (CAR-T) approaches, Ad-RTS-hIL-12, TCR and NK cell-based therapies, and the Company's other therapeutic products it develops will be successfully marketed if approved; the strength and enforceability of the Company's intellectual property rights; competition from other pharmaceutical and biotechnology companies; as well as other risk factors contained in the Company's periodic and interim reports filed from time to time with the Securities and Exchange Commission, including but not limited to, the risks and uncertainties set forth in the "Risk Factors" section of the Company's Quarterly Report on Form 10-Q for the quarter ended September 30, 2017 and subsequent reports that the Company may file with the Securities and Exchange Commission. Readers are cautioned not to place undue reliance on these forward-looking statements that speak only as of the date hereof, and the Company does 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.

Contact:
David Connolly, ZIOPHARM Oncology
617-502-1881
dconnolly@ziopharm.com