Ziopharm Oncology Provides Controlled IL-12 Update with Positive Data from Phase 1 Trial Presented at Annual Meeting of the Society for Neuro-Oncology

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Ad-RTS-hIL-12 plus 20mg veledimex (Controlled IL-12) determined to be preferred dosing with low-dose steroids to treat adult patients with recurrent glioblastoma

Median overall survival for Ad-RTS-hIL-12 plus veledimex in patients receiving low-dose steroids is 17.8 months

Controlled IL-12 monotherapy expansion cohort rapidly accruing; Enrollment to be completed in first quarter 2019

First dosing cohort of OPDIVO® combination trial completed

New Phase 2 combination trial with Regeneron's Libtayo ® to start 1H 2019

BOSTON, Nov. 16, 2018 (GLOBE NEWSWIRE) -- Ziopharm Oncology, Inc. (Nasdaq:ZIOP) today provided an update on its Controlled IL-12 platform following a presentation of positive data from its phase 1 clinical trial in recurrent glioblastoma (rGBM) at the Society for Neuro-Oncology (SNO) annual meeting in New Orleans.

Ziopharm is developing Controlled IL-12, or Ad-RTS-hIL-12 plus veledimex, a gene therapy that controls the expression of interleukin 12 (IL-12), for the treatment of rGBM as both a monotherapy and in combination with immune checkpoint inhibitors. The Company is driving this platform forward to secure a development partner in support of registrational trials.

Phase 1 data has shown that Ad-RTS-hIL-12 with a 20mg dose of veledimex and less than 20mg of the steroid dexamethasone is the preferred dosing regimen to treat patients with rGBM. When treating patients with Ad-RTS-hIL-12 plus veledimex, higher doses of steroids appear to suppress the immune response and negatively affect survival compared to low-dose steroids.

The Company has enrolled 15 patients in an expansion of its Phase 1 trial designed to further evaluate preferred dosing of Ad-RTS-hIL-12 with 20mg of veledimex as monotherapy with guidance on minimal dosing of steroids. This expansion cohort for this study, which was initiated in the third quarter 2018, is accruing rapidly and is expected to be fully enrolled with at least 25 patients in the first quarter of 2019.

Ziopharm is advancing Controlled IL-12 as a combination therapy with PD-1 inhibitors. The Company is enrolling the second dosing cohort in a Phase 1 trial to evaluate Controlled IL-12 in combination with the PD1 inhibitor OPDIVO® (nivolumab). The company is expected to begin a Phase 2 trial to evaluate Ad-RTS-hIL-12 plus veledimex in combination with Regeneron Pharmaceuticals' PD-1 antibody Libtayo ® (cemiplimab-rwlc) in the first half of 2019.

The Company has enrolled more than 100 patients with Ad-RTS-hIL-12 plus veledimex and administered more than 1,300 doses of veledimex across three types of solid tumors, building a significant safety profile and mechanistic dataset. Biopsy data demonstrated that Controlled IL-12 turns immunologically-cold tumors hot based on sustained infiltration of killer T cells which is likely responsible for the improved survival associated with Controlled IL-12 used as monotherapy in patients with rGBM. Biopsy data also revealed upregulation of immune checkpoints providing compelling rational for combining with PD-1 inhibitors. The immunologic mechanism of action of IL-12 is likely the reason elevated doses of steroids may reduce its activity.

SNO 2018 Presentation
Data presented at SNO 2018 were generated from the company's Phase 1 monotherapy trial which evaluates two methods of administration of Ad-RTS-hIL-12, intra-tumor injection during craniotomy or upon stereotactic administration, explores the dosing of veledimex, and evaluates the impact of steroids. Title of the presentation is "A Phase 1 study of Ad-RTS-hIL-12 + veledimex in adults with recurrent glioblastoma: Dose determination with updated overall survival."

Ad-RTS-hIL-12 plus veledimex continues to be well tolerated, with related adverse events reversible across all cohorts upon stopping the oral administration of veledimex. A sub-analysis of patient data in the 20mg veledimex craniotomy cohort shows that reduced dosing of the steroid dexamethasone had a positive impact on survival compared to higher doses in patients that received Controlled IL-12 via craniotomy or stereotactic injection. Six patients who received 20mg or less of dexamethasone cumulatively over 15 days had median overall survival (mOS) of 17.8 months compared to 6.4 months mOS for patients (n=9) who received more than 20mg of dexamethasone during the same observation period. The entire cohort of 15 patients that received 20mg veledimex had mOS of 12.7 months with a mean follow up of 13.1 months. These data support continued development of Controlled IL-12 especially considering the benchmark mOS of 5 to 8 months for patients with rGBM that serves as historical controls.

"Glioblastoma at recurrence is a dreadful cancer with few treatment options that have demonstrated success. These updated data show a promising extension of patients' survival and demonstrate how controlling the powerful cytokine IL-12 can engage the body's own immune system to generate an

anti-tumor response against rGBM," said Dr. Antonio Chiocca, M.D., Ph.D., lead author of this poster and Professor of Neurosurgery at Harvard Medical School, Surgical Director of the Center for Neuro-oncology at Dana-Farber Cancer Institute, and Chairman of Neurosurgery and Co-Director of the Institute for the Neurosciences at Brigham and Women's Hospital.

The poster will be presented tonight at SNO 2018 at 7:30 p.m. CT. It will be available on the Company's website in the "Scientific and Medical Publications" section after the presentation.

About Ziopharm Oncology, Inc.
Ziopharm Oncology is a biotechnology company focused on developing its *Sleeping Beauty* platform for genetically modifying T cells to treat cancers and developing its Controlled IL-12 platform. The *Sleeping Beauty* platform uses a non-viral approach to genetically modify T cells with DNA plasmids to express T-cell receptors (TCR) to target specific antigens in solid tumors and chimeric antigen receptors (CAR) to target CD19 in blood cancers with the Company's very rapid T-cell manufacturing process referred to as "point-of-care." The *Sleeping Beauty* platform is being advanced in collaboration with the National Cancer Institute and MD Anderson Cancer Center.

Forward-Looking Statements 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 progress and timing of the development of the Company's research and development programs, including the initiation and completion of existing and future studies in rGBM, and potential future collaborations for the Company's Controlled IL-12 program in advance of registrational trials. All 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, interest from potential partners in the Company's Controlled IL-12 program, the Company's ability to finance its operations and business initiatives and obtain funding for such activities; whether Ad-RTS-hIL-12 + veledimex, chimeric antigen receptor T cell (CAR-T) approaches, T-cell receptor T-cell (TCR-T) approaches, and NK cell-based approaches, or any of other product candidates will advance further in the preclinical research or clinical trial process, including receiving clearance from the FDA to conduct its clinical trials 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-hIL-12 + veledimex, CAR-T, TCR-T, 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, 2018 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.

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