Idera Pharmaceuticals Presents Clinical Translational and Pre-Clinical Data from IMO-2125 Development Program at the American Association for Cancer Research (AACR) 2017 Annual Meeting

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- Clinical Translational Data of Immune Parameters Generated Demonstrate IMO-2125 Mechanism of Action Correlated with Previously Reported Clinical Results -

WASHINGTON, April 05, 2017 (GLOBE NEWSWIRE) -- Idera Pharmaceuticals, Inc. (NASDAQ:IDRA), a clinical-stage biopharmaceutical company developing toll-like receptor and RNA therapeutics for patients with cancer and rare diseases, today is reporting additional clinical translational and pre-clinical data from its ongoing intratumoral IMO-2125 development program at the AACR 2017 Annual Meeting being held in Washington, DC.

In the poster presentation entitled, “Translational evidence of reactivated innate and adaptive immunity with intratumoral IMO-2125 in combination with systemic checkpoint inhibitors from a Phase 1/2 study in patients with anti-PD-1 refractory metastatic melanoma,” Cara Haymaker, Ph.D. from the University of Texas, MD Anderson Cancer Center, presented an update on the translational findings from the ongoing Phase 1/2 trial of intratumoral IMO-2125 in combination with ipilimumab in patients with anti-PD-1 refractory metastatic melanoma.

The key findings in Dr. Haymaker’s presentation were that intratumoral IMO-2125 monotherapy in the injected lesions results in activation and maturation of dendritic cells, and the induction of type-1 interferon gene signature by 24 hours after first dose. After 8 weeks of therapy with intratumoral IMO-2125 and ipilimumab, increased immune infiltration has been observed in distant lesions of responding patients, suggesting an abscopal effect. Dr. Haymaker concludes that activation of intratumoral dendritic cells and induction of the associated downstream immune cascade enhances T-cell priming. In combination with checkpoint blockade, this mechanism may be an important key in treating patients who have been refractory to prior immune oncology approaches.

“We are excited to be examining the significant amounts of data emerging from this trial, which goes far beyond merely conducting clinical outcome analysis and to our knowledge has not been done to this depth before,” stated Sri Chunduru, Ph.D., Idera’s Vice President, Translational Research. “The data emerging from the serial biopsies in these patients is highly informative to the guidance of our ongoing development program with IMO-2125 and leads us to a significantly greater understanding of tumor microenvironment before, during, and after immune therapy. We look forward to continuing to build upon this body of data as our study continues to enroll further patients. Importantly, we are very pleased that the data that has been generated validates our understanding of IMO-2125’s mechanism of action correlated with clinical results also generated to date.”

A second poster presentation entitled, “Local treatment with novel TLR9 agonist IMO-2125 demonstrates anti-tumor activity in preclinical models of pancreatic cancer,” presented by Daqing Wang, Ph.D., Principal Scientist & Group Leader, Idera Pharmaceuticals, demonstrated that intratumoral IMO-2125 showed dose-dependent antitumor responses associated with the increased tumor-infiltrating lymphocytes (TILs) in treated tumors of the Panc02 pancreatic cancer model. These antitumor responses and TILs were also observed in the distant, untreated tumors. In this study, treated mice, which remained tumor-free, showed lack of tumor growth upon rechallenge with the same tumor cells, suggesting an antitumor memory response.

Furthermore, a local treatment of IMO-2125 was evaluated by administering intraperitoneally in a peritoneal metastasis Panc02 model. Mice treated with intraperitoneal IMO-2125 showed increased survival compared to mice treated with placebo, control oligo compound or subcutaneous IMO-2125. Histological analysis showed significant reduction of tumor growth in the peritoneal cavity. This illustrates that while local treatment is necessary, routes of administration other than i.t. may also be effective to generate an antitumor response in pancreatic cancer. Overall, we believe these data demonstrate that treatment with IMO-2125 modulates the tumor microenvironment and increases infiltration by TILs and that these changes are associated with antitumor activity in pancreatic cancer models, and indicate that IMO-2125 may potentiate checkpoint inhibitor therapy for the treatment of pancreatic cancer.

A copy of the poster presentations are currently available on Idera’s corporate website at http://www.iderapharma.com/our-approach/key-publications/.

About IMO-2125

Toll-like receptors (TLRs) play a central role in the innate immune system, the body's first line of defense against invading pathogens, as well as damaged or dysfunctional cells including cancer cells. The innate immune system is also involved in activating the adaptive immune system, which marshals highly specific immune responses to target pathogens or tissue. Cancer cells may exploit regulatory checkpoint pathways to avoid being recognized by the immune system, thereby shielding the tumor from immune attack. Checkpoint inhibitors such as agents targeting CTLA4 or programmed cell death protein 1 (PD-1) are designed to enable the immune system to recognize tumor cells. In this setting, intratumoral TLR9 agonist administration may increase the tumor-infiltrating lymphocytes (TILs), and thereby potentiate anti-cancer activity of checkpoint inhibitors in the injected tumor as well as systemically.

Idera’s TLR9 agonist, IMO-2125 has been created using the company's proprietary chemistry-based discovery platform. IMO-2125 has been shown in various scientific presentations and publications to activate dendritic cells and induce interferon. Idera selected IMO-2125 to advance into clinical development in combination with checkpoint inhibitors based on this immunological profile. In previously completed clinical trials, subcutaneous administration of IMO-2125 was generally well tolerated in about 80 patients with hepatitis C. Idera has conducted further preclinical and clinical research evaluating the potential of IMO-2125 to enhance the anti-tumor activity of other checkpoint inhibitors in cancer immunotherapy with data being presented at several medical conferences during the past two years. The posters from these presentations can be found at http://www.iderapharma.com/our-approach/key-publications.

About Metastatic Melanoma

Melanoma is a type of skin cancer that begins in a type of skin cell called melanocytes. As is the case in many forms of cancer, melanoma becomes more difficult to treat once the disease has spread beyond the skin to other parts of the body such as by through the lymphatic system (metastatic disease). Melanoma accounts for only one percent of skin cancer cases, but causes a large majority of skin cancer deaths. The American Cancer Society estimates that in 2017, there will be 87,110 new cases of melanoma in the U.S., and about 9,730 will die of this disease.

About Idera Pharmaceuticals
Idera Pharmaceuticals is a clinical-stage biopharmaceutical company developing novel nucleic acid-based therapies for the treatment of certain cancers and rare diseases. Idera's proprietary technology involves designing synthetic oligonucleotide-based drug candidates to modulate the activity of specific TLRs. In addition to its TLR programs, Idera has used its proprietary knowledge to create a third generation antisense technology platform which inhibits the production of disease-associated proteins by targeting RNA. To learn more about Idera, visit www.iderapharma.com.

Forward Looking Statements
This press release contains forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. All statements, other than statements of historical fact, included or incorporated in this press release, including statements regarding the Company's strategy, future operations, collaborations, intellectual property, cash resources, financial position, future revenues, projected costs, prospects, plans, and objectives of management, are forward-looking statements. The words "believes," "anticipates," "estimates," "plans," "expects," "intends," "may," "could," "should," "potential," "likely," "projects," "continue," "will," and "would" and similar expressions are intended to identify forward-looking statements, although not all forward-looking statements contain these identifying words. Idera cannot guarantee that it will actually achieve the plans, intentions or expectations disclosed in its forward-looking statements and you should not place undue reliance on the Company's forward-looking statements. There are a number of important factors that could cause Idera's actual results to differ materially from those indicated or implied by its forward-looking statements. Factors that may cause such a difference include: whether interim results from a clinical trial, such as preliminary results reported in this release, will be predictive of the final results of the trial, whether results obtained in preclinical studies and clinical trials such as the preclinical data described in this release will be indicative of the results that will be generated in future clinical trials, including in clinical trials in different disease indications; whether products based on Idera's technology will advance into or through the clinical trial process on a timely basis or at all and receive approval from the United States Food and Drug Administration or equivalent foreign regulatory agencies; whether, if the Company's products receive approval, they will be successfully distributed and marketed; and such other important factors as are set forth under the caption "Risk Factors" in the Company's Annual Report on form 10K for the period ended December 31, 2016. Although Idera may elect to do so at some point in the future, the Company does not assume any obligation to update any forward-looking statements and it disclaims any intention or obligation to update or revise any forward-looking statement, whether as a result of new information, future events or otherwise.

Investor and Media Contact
Robert Doody
Vice President, Investor Relations and Corporate Communications
Office: 617-679-5515
Mobile: 484-639-7235
rdoody@iderapharma.com

Idera Pharmaceuticals, Inc.