Idera Announces Presentation at AAD Annual Meeting Demonstrating Toll-like Receptor Antagonists Normalize Expression of Inflammatory Genes in Psoriasis Model

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--Phase 2 Data of IMO-3100 in Psoriasis to be Presented at IID Meeting 2013--

CAMBRIDGE, Mass.--(BUSINESS WIRE)--Mar. 2, 2013-- Idera Pharmaceuticals, Inc. (Nasdaq: IDRA) today announced the presentation of new data showing that its selective Toll-like receptor antagonists, IMO-3100 and IMO-8400, normalized the gene expression of important cytokines in a preclinical study of skin inflammation that is commonly used as a model of psoriasis. Notably, genes related to the production of key mediators of psoriasis including Interleukin (IL) -17, IL-6, IL-12/23, IL-1, IL-21 Receptor, and INF-gamma were restored toward normal levels. The data were presented by James G. Krueger, M.D., Ph.D, of The Rockefeller University, at the Late-Breaking Research Symposium on March 2nd, 2013, during the American Academy of Dermatology Annual Meeting.

“Our studies show that treatment with IMO-3100 and IMO-8400 reduces disease-associated expression of the IL-17 and IL-23 inflammatory cascade in the mouse IL-23-induced skin inflammation model,” said Dr. James Krueger. “Genes that play a mediating role in psoriasis were returned toward normal levels with both compounds; and the inclusion of TLR8 activity with IMO-8400 was additive to the effect on gene expression that we observed with the TLR7 and TLR9 antagonist compound. We are now extending this work, with the analysis of gene expression patterns in skin biopsies from patients treated with a TLR antagonist in a Phase 2 clinical trial.”

“The data presented by Dr. Krueger provide scientific support for the top-line results from the proof of concept Phase 2 trial of IMO-3100 in patients with psoriasis that Idera announced late last year. We look forward to presenting detailed results from the clinical trial at the International Investigative Dermatology Annual Meeting in May 2013,” commented Robert Arbeit, M.D., VP of Clinical Development at Idera. “In addition, during the first quarter, we completed the single dose portion of a Phase 1 clinical trial of IMO-8400 in healthy subjects. IMO-8400 was well-tolerated and demonstrated target engagement of TLRs 7, 8 and 9. The multiple-dose portion of the IMO-8400 Phase 1 trial is ongoing, and we anticipate data during the second quarter of 2013.”

A copy of the presentation is available on the AAD website.

About TLRs and Idera's Autoimmune and Inflammatory Diseases Program

Toll-like receptors (TLRs) play a key role in inflammation and immunity. Of the 10 human TLRs identified to date, Idera is developing compounds targeted to TLRs 3, 7, 8 and 9, which are expressed in different cells and serve unique functions. Using its chemistry-based approach, Idera has created novel drug candidates that modulate immune responses through either activation or inhibition of specific TLRs. Inhibition of specific TLRs may be useful in treating autoimmune disorders, such as systemic lupus erythematosus (SLE), psoriasis and rheumatoid arthritis, by blocking the induction of multiple cytokines and signaling pathways. Idera's clinical candidates for application in autoimmune diseases are IMO-3100, an antagonist of TLR7 and TLR9, and IMO-8400, an antagonist of TLRs 7, 8 and 9.

A characteristic of autoimmune diseases such as SLE and psoriasis is the production of autoantibodies, damage-associated molecular patterns, or DAMPs, and pathogen associated molecular patterns, or PAMPs, that may contain host nucleic acids. These stimuli activate TLRs 7, 8 and 9 and induce multiple cytokines and signaling cascades that cause further damage to the body's own tissues and organs, thereby releasing more self-nucleic acids. Thus, a pathologic amplification cycle is established, promoting disease maintenance and progression. In preclinical models of several autoimmune diseases, IMO-3100 and IMO-8400 inhibited TLR-mediated induction of Th1, Th17 and inflammasome pathways, leading to the suppression of multiple cytokines including tumor necrosis factor-alpha, or TNF-α, and interleukins IL-12, IL-6, IL-17 and IL-1β and improvements in multiple measures of disease. Current treatments for autoimmune and inflammatory diseases include the use of monoclonal antibodies to block the activity of one specific cytokine. TLR antagonists are designed to inhibit induction of immune responses to autoimmune disease stimuli rather than to block the activity of any one specific cytokine.

About Idera Pharmaceuticals, Inc.

Idera Pharmaceuticals applies its proprietary Toll-like receptor (TLR) drug discovery platform to create immunomodulatory drug candidates and has a clinical development program in autoimmune diseases. Additionally, Idera has a collaboration with Merck & Co. for the use of TLR-targeted candidates as vaccine adjuvants for cancer, infectious diseases and Alzheimer’s disease. The Company is also exploring its gene-silencing oligonucleotide (GSO) technology for the purpose of inhibiting the expression of disease-promoting genes. For more information, visit http://www.iderapharma.com.

Idera Forward Looking Statements

This press release contains forward-looking statements concerning Idera Pharmaceuticals, Inc. that involve a number of risks and uncertainties. For this purpose, any statements contained herein that are not statements of historical fact may be deemed to be forward-looking statements. Without limiting the foregoing, the words "believes," "anticipates," "plans," "expects," "estimates," "intends," "should," "could," "will," "may," and similar expressions are intended to identify forward-looking statements. There are a number of important factors that could cause Idera's actual results to differ materially from those indicated by such forward-looking statements, including whether Idera’s cash resources will be sufficient to fund the Company’s continuing operations and the further development of the Company’s autoimmune disease program; whether results obtained in preclinical studies and early clinical trials will be indicative of results obtained in future clinical trials; 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; whether the Company will be able to license any of its TLR target candidates on a timely basis or at all; whether the Company's collaboration with Merck & Co, Inc., will be successful; whether the patents and patent applications owned or licensed by the Company will protect the Company's technology and prevent others from infringing it; and such other important factors as are set forth under the caption "Risk Factors" in Idera's Quarterly Report on Form 10-Q for the quarter ended September 30, 2012 which important factors are incorporated herein by reference. Idera disclaims any intention or obligation to update any forward-looking statements.

Source: Idera Pharmaceuticals, Inc.

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