Idera Pharmaceuticals Presents Preclinical Data on Novel Gene-Silencing Oligonucleotide Technology at TIDES 2011 Conference

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CAMBRIDGE, Mass., May 24, 2011 (BUSINESS WIRE) --

Idera Pharmaceuticals, Inc. (Nasdaq: IDRA) today announced the presentation of preclinical data of its novel gene-silencing oligonucleotide (GSO) technology including observations that demonstrate GSOs exert gene-silencing activity through a similar cellular pathway as siRNA. The presentation, entitled "*Novel Oligonucleotides Containing Two 3'-Ends Complementary to Target mRNA Show Optimal Gene-Silencing Activity",* is being made at the TIDES: Oligonucleotide and Peptide(R) Research, Technology and Product Development conference being held in Boston, Massachusetts from May 22-25, 2011.

The data presented today are from studies of GSOs targeting MyD88, a signal transduction protein utilized in Toll-like receptor pathways. In these studies, MyD88 GSOs suppressed MyD88 mRNA in cell-based assays, and inhibited MyD88-dependent induction of cytokines and chemokines in mice. *In vivo* inhibition of MyD88-dependent immune responses was achieved by administering GSOs subcutaneously without the use of any delivery enhancement technology. In cell-based assays, using 5' RLM-RACE analysis, MyD88 GSO was shown to cleave the targeted mRNA at the same site as does MyD88 siRNA, thereby suggesting that GSOs exert gene-silencing activity through a similar mechanism as siRNA.

"GSOs are single-stranded oligonucleotides with two exposed 3'-ends that show length-dependent gene-silencing activity. Based on our ongoing research we believe that GSOs act through a common pathway as does siRNA," commented Nicola La Monica, Ph.D., Vice President of Biology at Idera Pharmaceuticals. "Additionally, the gene-silencing activity of GSOs has been achieved by systemic administration without the use of any carrier, which is one of the major limitations of the use of siRNA."

The presentation was authored by Weiwen Jiang, M.D., Ph.D., Nicola La Monica, Ph.D., Ekambar R. Kandimalla, Ph.D., and Sudhir Agrawal, D.Phil., all of Idera Pharmaceuticals**.** MyD88 is referred to as myeloid differentiation primary response gene (88).

An additional presentation entitled "*Modulation of Immune Responses through Toll-like receptors by Oligonucleotides"* will be made by Sudhir Agrawal, D.Phil. today at the TIDES 2011 conference at 5:15 p.m.

About Gene-silencing Oligonucleotides

Idera's gene-silencing oligonucleotides (GSOs) are single-stranded RNA or DNA constructs with two exposed 3'-ends that are complementary to targeted mRNA sequences of therapeutic interest. In preclinical studies, GSOs have inhibited gene expression *in vivo* without requiring a delivery enhancement technology. Idera holds multiple patent applications for its GSOs that are pending worldwide.

About Idera Pharmaceuticals, Inc.

Idera Pharmaceuticals develops drug candidates to treat chronic hepatitis C virus infection, autoimmune and inflammatory diseases, cancer, and respiratory diseases, and for use as vaccine adjuvants. The company's proprietary drug candidates are designed to modulate specific Toll-like Receptors, which are a family of immune system receptors. Idera's pioneering DNA and RNA chemistry expertise enables it to create drug candidates for internal development and generates opportunities for multiple collaborative alliances. For more information, visit 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 results obtained in preclinical studies and early clinical trials such as the results referenced in this release 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's collaborations 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; whether Idera's cash resources will be sufficient to fund the Company's operations; 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 year ended March 31, 2011 which important factors are incorporated herein by reference. Idera disclaims any intention or obligation to update any forward-looking statements.

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