Idera Pharmaceuticals Presents New Third Generation Antisense (3GA) Data at the 12th Annual Meeting of the Oligonucleotide Therapeutics Society

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CAMBRIDGE, Mass. and EXTON, Pa., Sept. 27, 2016 (GLOBE NEWSWIRE) -- Idera Pharmaceuticals, Inc. (NASDAQ:IDRA), a clinical-stage biopharmaceutical company focused on the discovery, development and commercialization of novel nucleic acid-based therapeutics for oncology and rare diseases, today announced the presentations of new pre-clinical data on the mechanism of action supporting selective targeting of single point mutations. Also, data was presented on 3GA targeting the NLRP3 gene for the treatment of inflammatory disorders.

"The understanding we have gained of the mechanism of action of 3GA is providing insights into the increased potency and specificity of its gene silencing. This data has illustrated to us a way in which 3GA could be used to target point mutations," stated Sudhir Agrawal, D. Phil., President of Research at Idera Pharmaceuticals. "We are continuing to employ 3GA technology to target multiple genes, including NLPR3, with a goal of prioritizing a candidate for clinical development."

In the oral presentation, entitled "Selective Targeting of Point Mutations by Third Generation Antisense Oligonucleotides," Reina Improgo, Ph.D., Research Scientist of Idera's Discovery Team presented an overview of the novel mechanism of action of 3GA technology. These preclinical studies were conducted both in cell-based assays as well as in vivo models. The novel mechanism of action of 3GA leads to excision of the targeted RNA in the central region. Insertion of a single mismatch led to significant loss of gene-silencing activity. Based on this data, 3GAs were designed to target single point mutations. These proof-of-concept studies were conducted using two targets, the BRAF V600E and MYD88 L265P mutations. The 3GA targeted to BRAF V600E showed mutation-specific inhibition, whereas a 3GA targeted to wild type BRAF showed minimal activity. Similarly, 3GA targeted to MYD88 L265P showed mutation-specific inhibition, and had insignificant impact on wild type MYD88 expression. Based on the specificity in targeting RNA the data indicates that 3GA could be used to successfully treat diseases that require allele-specificity.

Additionally, Fugang Zhu, Ph.D. and Wayne Jiang, M.D., Ph.D., scientists from Idera's Discovery Team, presented a poster entitled, "Third generation antisense (3GA) targeting NLRP3 for the treatment of inflammatory disorders." In the presentation, they showed that 3GA targeting NLRP3 led to the suppression of the NLRP3 mRNA and protein and inhibition of the downstream cascade, including IL-1β and IL-18. The data also demonstrated that 3GA targeting of NLRP3 resulted in marked improvement in disease-associated parameters in both interstitial cystitis and uveitis preclinical models.

These presentations are currently available on Idera's website at http://www.iderapharma.com/our-approach/key-publications/.

Previously the company has announced the identification of NLRP3 (NOD-like receptor family, pyrin domain containing protein 3) and DUX4 (Double Homeobox 4) as initial gene targets to advance into IND-enabling activities, which will occur throughout 2016. Potential disease indications related to these targets include, but are not limited to, interstitial cystitis, lupus nephritis, uveitis and facioscapulohumeral muscular dystrophy (FSHD). The Company is currently conducting clinical, regulatory and commercial analysis activities and conducting IND-enabling studies with the plan to enter the clinic in 2017 for the first clinical development program. In addition to these activities, over the first half of 2016, Idera generated 3GA compounds for a series of additional gene targets. These will enable the Company to continue to expand both its future pipeline opportunities for internal development as well as its opportunities for partnerships in areas outside of Idera's focus. Additionally, Idera is party to a collaboration and license agreement with GSK to research, develop and commercialize compounds from its 3GA technology for the treatment of undisclosed, selected renal targets.

About Idera's Third Generation Antisense Platform (3GA)
Idera's proprietary third-generation antisense (3GA) platform technology is focused on silencing the mRNA associated with disease causing genes. Idera has designed 3GA oligonucleotides to overcome specific challenges associated with earlier generation antisense technologies and RNAi technologies.

About Idera Pharmaceuticals, Inc.
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 using a TLR-targeting technology, to design synthetic oligonucleotide-based drug candidates to act by modulating the activity of specific TLRs. In addition to its TLR programs, Idera has created a third generation antisense technology platform using its proprietary technology to inhibit 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, including statements about potential treatments for cancer or other diseases employing combinations of drug therapies including Idera's third generation gene silencing technology. Such statements may be identified by words such as "believe," "expect," "may," "plan," "potential," "will" and similar expressions, and are based on the company's current beliefs and expectations. Development of drug therapies involves a high degree of risk, and only a small percentage of research and development programs undertaken may result in the commercialization of a product. Positive preclinical data does not ensure that later stage clinical trials will be successful. For more detailed information on the risks and uncertainties associated with Idera's development activities, please review the Risk Factors section of Idera's most recent annual or quarterly report filed with the Securities and Exchange Commission. Any forward-looking statements speak only as of the date of this press release and the company assumes no obligation to update any forward-looking statements, whether as a result of new information, future events or otherwise.

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