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**Idera Presents Preclinical Data at ASCO on Agonists to Toll-like Receptor 9
in Combination with Chemotherapeutic and Targeted Therapies in Lung
Cancer Models**

**-Results Emphasize Broad Spectrum Therapeutic Potential of Idera's
Programs-**

Cambridge MA, June 5, 2006 – Idera Pharmaceuticals (AMEX: IDP) today announced that it had presented preclinical data for its TLR9 agonists in mouse lung cancer models at the American Society of Clinical Oncology (ASCO) Annual Meeting. These data demonstrate that in the preclinical studies conducted by Idera, Idera's TLR9 agonists enhanced the antitumor effect of several common chemotherapeutic agents including Gemzar[®] and Alimta[®] and the targeted cancer therapy Tarceva[®], and also had monotherapy activity. The new observations with Tarceva add to previous preclinical data developed by Idera collaborators of synergistic activity between Idera's TLR9 agonists and other EGFR inhibitors. Idera's lead TLR9 agonist IMO-2055 is currently in Phase 2 and Phase 1/2 clinical trials for renal cell carcinoma and for non-small cell lung cancer, respectively.

"These preclinical data reinforce the broad-spectrum potential of Idera's Toll-like Receptor targeted drugs and further substantiate our clinical oncology programs for IMO-2055," commented Robert W. Karr, M.D., President of Idera. "In addition to our oncology clinical trials with IMO-2055, we have a Hepatitis C preclinical development program underway with a second TLR9 agonist and a collaboration with Novartis to evaluate other TLR9 agonists in asthma/allergy."

"We believe that the broad applicability of our TLR9 agonist programs as well as our recently announced portfolio of TLR7/TLR8 agonists and TLR9 antagonists for potential applications in various diseases gives Idera one of the most comprehensive TLR portfolios in the industry," continued Dr. Karr.

The presentation of abstract number 2568 titled, “*Antitumor activity of a synthetic agonist of TLR9 in preclinical lung cancer models*” was given in a poster at the ASCO session Developmental Therapeutics: Immunotherapy on Sunday June 4th, 2006. The presentation included data from murine non-small cell lung cancer models in combination with Gemzar, cyclophosphamide, Alimta and Tarceva. In the preclinical studies, combination with Idera’s TLR9 agonists increased the antitumor activity of each of the agents.

About IMO-2055

IMO-2055 is Idera’s lead Toll-like Receptor 9 (TLR9) agonist for the treatment of cancer and is based on Idera’s proprietary Immune Modulatory Oligonucleotide (IMO™) technology. IMO-2055 is currently in Phase 2 trials in renal cell carcinoma and Phase 1 trials in non-small cell carcinoma. The Company has previously conducted a Phase 1 monotherapy trial of IMO-2055 in solid tumor oncology patients at Georgetown University Medical Center, data from which was reported at ASCO 2005.

About Idera Pharmaceuticals, Inc.

Idera Pharmaceuticals, Inc. (AMEX: IDP) is a Cambridge, Massachusetts biotechnology company focused on the discovery and development of targeted immune therapies based on modulation of Toll-like Receptors (TLRs). Drug candidates targeting TLRs have broad commercial potential in the areas of oncology, infectious disease, and allergy/asthma. Idera’s most advanced clinical candidate, IMO-2055, is an agonist of TLR9 and is currently in a Phase 2 monotherapy trial in renal cell carcinoma, and in a Phase 1/2 chemotherapy combination therapy trial in solid tumors. Idera has selected another TLR9 agonist, IMO-2125, as a lead candidate for infectious diseases. Idera also is collaborating with Novartis for the discovery, optimization, development, and commercialization of additional TLR9 agonist candidates for asthma and allergy. For more information, visit www.iderapharma.com.

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 the preclinical data referenced in this release will be indicative of results from clinical studies of IMO-2055; whether products based on Idera’s technology such as IMO-2055 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 the Company will complete enrollment of clinical

trials in the time expected; whether, if the Company's products such as IMO-2055 receive approval, they will be successfully distributed and marketed; whether the results of preclinical studies will be indicative of results that may be obtained in clinical trials; whether Idera's cash resources will be sufficient to fund product development and clinical trials; and such other important factors as are set forth under the caption "Risk Factors" in Idera's Quarterly Report on Form 10-Q filed on May 12, 2006, which important factors are incorporated herein by reference. Idera disclaims any intention or obligation to update any forward-looking statements.

Gemzar[®] and Alimta[®] are registered trademarks of Eli Lilly and Company.
Tarceva[®] is a registered trademark of Genentech, Inc.

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