April 20, 2016

Immune Design Presents New Preclinical Data on Advances of Two Separate Intratumoral Approaches at the American Association for Cancer Research (AACR) Annual Meeting 2016

- *Curative Efficacy and Anti-tumor Immunity Demonstrated with Intratumoral Administration of IL-12 by a ZVex™ Vector*
- *Systemic Anti-tumor Immunity Demonstrated with Intratumoral G100*

SEATTLE and SOUTH SAN FRANCISCO, Calif., April 20, 2016 (GLOBE NEWSWIRE) -- Immune Design (Nasdaq:IMDZ), a clinical-stage immunotherapy company focused on oncology, today announced the presentation of new preclinical data demonstrating broad anti-tumor activity of its ZVex™ platform and further evidence of the anti-tumor activity of G100, both via intratumoral administration. Results were presented at the American Association for Cancer Research (AACR) Annual Meeting 2016 in New Orleans.

"These AACR data highlight the multi-faceted approaches that Immune Design is employing to generate a therapeutic anti-tumor immune response," said Jan ter Meulen, MD, PhD, Chief Scientific Officer at Immune Design. "The results presented support for the first time the potential intratumoral applicability of Immune Design's dendritic-cell targeting platform, ZVex, beyond its current use to generate an antigen-specific immune response via systemic administration. Moreover, we presented additional data supporting the ongoing clinical development of G100 as a novel approach to intratumoral immunization."

Immune Design presented data describing the intratumoral administration of a ZVex Interleukin-12 (IL-12) vector to generate localized, intratumoral expression of IL-12. IL-12 is one of the most potent modulators of innate and adaptive immune response, but its use in the clinical setting has been limited due to toxicity when administered systemically. Results presented demonstrate strong local and systemic anti-tumor efficacy of the ZVex/IL-12 across multiple pre-clinical tumor models, including synergy when co-administrated with anti-CTLA-4 and GLA, Immune Design's synthetic TLR4 agonist, Glucopyranosyl Lipid A, the core of Immune Design's GLAAS™ platform. The AACR presentation was titled "Intratumoral expression of IL-12 from a dendritic cell-targeting chimeric lentiviral vector from the ZVex platform cures established tumors in multiple models and induces systemic anti-tumor responses" (Abstract #4884).

In addition, Immune Design presented data highlighting the ability of its G100 product candidate, comprised of GLA in a stable emulsion, to modulate the tumor microenvironment and trigger local and systemic immune responses following its direct injection in a murine lymphoma model. G100 induced broad pro-inflammatory cytokine and chemokine responses, while also upregulating activating genes in immune cells, leading to the switch from a "cold" to a "hot" tumor state. In addition, the upregulation of checkpoints such as PD-L1 in the G100-treated tumors suggests potential synergy with immune checkpoint inhibitors. These data support IMDZ's ongoing trial of G100 in follicular non-Hodgkin lymphoma in combination with local radiation therapy and KEYTRUDA® (pembrolizumab), further described below. The AACR presentation was titled "Intratumoral Injection of G100 (TLR4 agonist Glycopyranosyl lipid A) modulates tumor microenvironment and induces CD8 T cell-dependent, systemic anti-tumor immunity" (Abstract #4885).

About ZVex

ZVex is Immune Design's discovery platform designed to activate and expand the immune system's natural ability to create tumor-specific cytotoxic T cells (CTLs) *in vivo*. The ZVex delivery system uses a re-engineered virus to carry genetic information of a tumor antigen selectively to dendritic cells (DCs) in the skin or lymph nodes. This ultimately results in the creation of CTLs designed to kill tumor cells bearing that same specific tumor antigen. ZVex is also designed to carry the genetic information for, and therefore potentially cause dendritic cells to express, multiple antigens and/or selected epitopes of interest (including neoantigens), as well as cytokines or other immunomodulatory molecules.

About G100

G100 is a product candidate generated from the company's GLAAS™ discovery platform, and includes a specific formulation of Glucopyranosyl Lipid A (GLA), a synthetic, toll-like receptor-4 (TLR-4) agonist. G100 is part of Immune Design's intratumoral immune activation, or 'Endogenous Antigen,' approach to treating cancer, which leverages the activation of dendritic and other immune cells in the tumor microenvironment to potentially create a robust immune response against the tumor's preexisting diverse set of antigens. Preclinical and clinical data have demonstrated the ability of G100 to

activate dendritic cells in tumors and to increase antigen-dependent systemic humoral and cellular Th1 immune responses. A Phase 1 study of G100 in patients with Merkel cell carcinoma (MCC) completed enrollment and preliminary data presented on the first eight patients demonstrated that G100 had an acceptable safety profile and resulted in an objective response rate (ORR) of 50% per protocol. The data presented today represent the potential expansion of the intratumoral immune activation approach to include the ZVex platform, as well.

G100 Study in Patients with Follicular Non-Hodgkin's Lymphoma

A Phase 1b/2 study evaluating intratumoral G100 in patients with follicular non-Hodgkin's lymphoma is currently enrolling patients (NCT: 02501473). The study is evaluating the intratumoral administration of G100 with intravenous administration of KEYTRUDA® (pembrolizumab), Merck's anti-PD-1 therapy, in patients with follicular non-Hodgkin's lymphoma receiving local radiation, pursuant to a collaboration with Merck. The study is designed to evaluate G100 plus local radiation and KEYTRUDA® compared to G100 plus local radiation alone. In addition to an evaluation of the safety of the combination, the study will assess the response in both injected and non-injected lesions.

About Immune Design

Immune Design is a clinical-stage immunotherapy company employing next-generation *in vivo* approaches to enable the body's immune system to fight chronic diseases. The company's technologies are engineered to activate the immune system's natural ability to generate and/or expand antigen-specific cytotoxic T cells, while also enhancing other immune effectors, to fight cancer and other chronic diseases. CMB305 and G100, the primary focus of Immune Design's ongoing immuno-oncology clinical programs, are products of its two synergistic discovery platforms, ZVex and GLAAS, the fundamental technologies of which were licensed from the California Institute of Technology and the Infectious Disease Research Institute (IDRI), respectively. Immune Design has offices in Seattle and South San Francisco. For more information, visit www.immunedesign.com.

Cautionary Note on Forward-Looking Statements

This press release contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Words such as "may," "will," "expect," "plan," "anticipate," "estimate," "intend" and similar expressions (as well as other words or expressions referencing future events, conditions or circumstances) are intended to identify forward-looking statements. These forward-looking statements are based on Immune Design's expectations and assumptions as of the date of this press release. Each of these forward-looking statements involves risks and uncertainties. Actual results may differ materially from these forward-looking statements. Forward-looking statements contained in this press release include, but are not limited to, statements about the timing of initiation, progress, scope and outcome of clinical trials for Immune Design's product candidates and the reporting of clinical data regarding Immune Design's product candidates. Many factors may cause differences between current expectations and actual results including unexpected safety or efficacy data observed during preclinical or clinical studies, clinical trial site activation or enrollment rates that are lower than expected, changes in expected or existing competition, changes in the regulatory environment, failure of Immune Design's collaborators to support or advance collaborations or product candidates and unexpected litigation or other disputes. Other factors that may cause Immune Design's actual results to differ from those expressed or implied in the forward-looking statements in this press release are discussed in Immune Design's filings with the U.S. Securities and Exchange Commission, including the "Risk Factors" sections contained therein. Except as required by law, Immune Design assumes no obligation to update any forward-looking statements contained herein to reflect any change in expectations, even as new information becomes available.

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