December 10, 2017

Combination of G100 with KEYTRUDA (pembrolizumab) Triggers Robust Systemic Responses in Follicular NHL Patients

- *39% ORR for G100+pembrolizumab is greater than either agent alone; reaches 57% ORR in the TLR4^{high} patient population receiving G100+pembrolizumab (potential predictive biomarker)*
- *Responses occur in both recurrent/refractory and treatment-naïve patient populations*
- *Data presented at ASH 2017*
- *Conference call Monday, December 11 at 8:00 a.m. EST*

SEATTLE and SOUTH SAN FRANCISCO, Calif., Dec. 10, 2017 (GLOBE NEWSWIRE) -- Immune Design (Nasdaq:IMDZ), a clinical-stage immunotherapy company focused on oncology, today presented data from the randomized Phase 2 trial of its investigational intratumoral TLR4 agonist G100 plus low-dose radiation (G100 Monotherapy) with or without KEYTRUDA® (pembrolizumab), Merck's anti-PD-1 therapy, in follicular non-Hodgkin's lymphoma (FL) patients. The G100 Monotherapy and pembrolizumab combination resulted in a 39% objective response rate (ORR), with a 57% ORR in those patients who expressed a potential predictive biomarker. These data were presented at the 59th American Society of Hematology (ASH) Annual meeting in Atlanta, Georgia on Sunday, December 10, 2017.

"We have been developing two immuno-oncology platforms in parallel: an intratumoral immunization approach with G100 as the lead therapeutic candidate, and novel cancer vaccines from the Dendritic cell-targeting RNA vector platform, ZVex. We believe these data presented at ASH confirm that G100 is an active and safe agent that results in systemic tumor responses, which are further enhanced in combination with KEYTRUDA," said Carlos Paya, M.D., Ph.D., President and Chief Executive Officer of Immune Design. "In light of the fact that some inhibitors of the anti-PD-1 class are viewed to have limited activity in this type of hematological malignancy, these positive data support further investigation of the potential synergy of G100 with anti-PD-1/L1 agents and the use of TLR4 expression as a potential predictive biomarker."

The randomized Phase 2 trial was designed to examine intratumoral (IT) administration of G100 Monotherapy vs. G100 Monotherapy + pembrolizumab (G+P) in either treatment naïve or recurrent/refractory FL patients (13 patients/arm). Highlights from the study include:

- **Clinical Benefit**
  - Patients receiving G+P showed a 39% ORR, as compared to 15% in the G100 Monotherapy arm.
    - Pembrolizumab monotherapy in a similar recurrent/refractory FL study showed 11% ORR (Ding, ASH 2017 abstract).
  - Patients receiving G+P also had more frequent and deeper abscopal tumor shrinkage and a trend toward a better progression free survival (PFS).
- **Safety:** Adverse events considered possibly related to G100 were Grade 1 or 2, with no related serious adverse events. The safety experience in the G+P arm did not suggest any unexpected or worsening toxicity compared to what has been reported previously with pembrolizumab alone.
- **Potential Predictive Biomarker:** A strong association between baseline tumor TLR4 expression and objective clinical response was observed. Reported ORR in patients with a >50% TLR4 expression by IHC (TLR4^{high}) receiving G+P increased to 57%, including patients with recurrent/refractory disease.
- **Potential Further Development:** Because clinical responses were observed in patients with recurrent/refractory disease, treatment failure <2 years after rituximab-containing chemotherapy, and high-risk patients based on GELF criteria, G+P may provide a therapeutic option in this unmet medical need population. Enrichment of patients more likely to respond may be attained by selecting for high expression of TLR4.

Additional subtypes of indolent lymphomas with injectable lesions are known to express TLR4, which expands the potential of this combination of G100 and pembrolizumab in hematological malignancies beyond FL. Likewise, many solid tumors are known to express TLR4.

G100 has been granted orphan drug designation by the U.S. Food and Drug Administration and the European Medicines Agency for the treatment of FL.

Conference Call Information

Immune Design will hold a conference call on Monday, December 11, 2017 at 8:00 a.m. EST. Ahmad S Halwani, MD,

Assistant Professor of Medicine, Huntsman Cancer Institute, University of Utah, and a Principal Investigator on the trial, will join the call.

The live call may be accessed by dialing 844-266-9538 for domestic callers and 216-562-0391 for international callers. The audience passcode is 3258589. A live webcast of the call will be available online from the investor relations section of the company website at http://ir.immunedesign.com/events.cfm and will be archived there for 30 days. A telephone replay of the call will be available for five days by dialing 855-859-2056 for domestic callers or 404-537-3406 for international callers and entering the conference code: 3258589.

ASH Presentation Details:

Intratumoral G100 Induces Systemic Immunity and Abscopal Tumor Regression in Patients with Follicular Lymphoma: Results of a Phase 1/2 Study Examining G100 Alone and in Combination with Pembrolizumab (Abstract # 2771)

Presenter: Christopher R. Flowers, M.D.
Session Name: 623. Mantle Cell, Follicular, and Other Indolent B-Cell Lymphoma—Clinical Studies: Poster II
Poster Discussion: Sunday, December 10, 2017, 6:00 PM - 8:00 PM Eastern
Location: Georgia World Congress Center, Bldg A, Lvl 1, Hall A2

About G100

G100 is a product candidate from Immune Design's GLAAS® discovery platform. It contains a potent synthetic small molecule toll-like receptor-4 (TLR-4) agonist, Glucopyranosyl Lipid A (GLA), and is the lead product candidate in Immune Design's Antigen Agnostic approach. G100 activates innate and adaptive immunity in the tumor microenvironment to generate an immune response against the tumor's preexisting diverse set of antigens. A growing set of clinical and preclinical data have demonstrated the ability of G100 to activate tumor-infiltrating lymphocytes, macrophages and dendritic cells, and promote antigen-presentation and the recruitment of T cells to the tumor. The induction of local and systemic immune responses has been shown in preclinical studies to result in local and abscopal (shrinking of tumors outside the scope of the localized treatment) tumor control.

About Follicular Non-Hodgkin's Lymphoma

Follicular lymphoma is a malignancy affecting the lymph nodes and may spread to the bone marrow or spleen. The most common type of slow-growing (indolent) non-Hodgkin's lymphoma (NHL), it represents approximately 20% of all NHL cases. Despite advances in treatment options in recent decades, FL is considered incurable. Currently, patients who do not respond to initial treatment or whose disease progresses within two years of diagnoses after treatment have a worse survival prognosis and may constitute an unmet medical need population. In 2017, it is estimated that more than 14,000 new cases of FL will be diagnosed in the United States alone.

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 disease. 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 two leading product candidates focused in cancer immunotherapy, are the first products from Immune Design's two separate discovery platforms targeting dendritic cells in vivo, ZVex® and GLAAS®. Both ZVex and GLAAS also have potential applications in infectious disease and allergy as demonstrated by ongoing pharmaceutical collaborations. Immune Design has offices in Seattle and South San Francisco. For more information, please 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," "intend", "believe", "appear", "trend" 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 that could cause our clinical development programs, future results or performance to differ significantly from those expressed or implied by the forward-looking statements. Forward-looking statements contained in this press release include, but are not limited to, statements about the timing, scope and results of clinical trials, the association of data with treatment outcomes, and the timing and likelihood of obtaining regulatory approval of 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, changes in expected or existing competition, changes in the regulatory environment, the uncertainties and timing of the regulatory approval process, 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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