

- Results confirm IMU-935 as a potent inverse agonist of RORYt with an IC₅₀ of 24 nM, leading to potent inhibition of Th17 differentiation while allowing normal thymocyte maturation -**
- In addition to its effect on RORYt, IMU-935 is shown to be a DHODH Inhibitor with an IC₅₀ of 240 nM; both mechanisms act synergistically on the reduction of pro-inflammatory cytokine release which would potentially give IMU-935 a broad therapeutic window -**
- IMU-935 demonstrates efficacy after oral administration in animal models of colitis and psoriasis -**

SAN DIEGO, June 4, 2019 [/PRNewswire/](#) -- **Immunic, Inc. (Nasdaq: IMUX)**, a clinical-stage biopharmaceutical company focused on developing best-in-class, oral therapies for the treatment of chronic inflammatory and autoimmune diseases, announced that Hella Kohlhof, Ph.D., Chief Scientific Officer of Immunic, will present today newly available preclinical data confirming IMU-935 as a highly potent inhibitor of both, RORYt and dihydroorotate dehydrogenase (DHODH), which was shown to lead to a strong synergism on the reduction of pro-inflammatory cytokine release. The data also showed that IMU-935 does not affect thymocyte maturation. In previous studies, it was hypothesized that affecting thymocyte development may lead to the risk of developing thymoma. Furthermore, in preclinical animal models of colitis and psoriasis, IMU-935 also demonstrated efficacy after oral administration. Dr. Kohlhof will present the data in a poster presentation at the 2nd Conference on Molecular Mechanisms of Inflammation in Trondheim, Norway, beginning today at 6:00 pm CEST.

An important hallmark of many autoimmune diseases is the imbalance between Th17 cells and regulatory T cells. The key transcription factor for Th17 cell differentiation and IL-17 secretion is the nuclear receptor RORYt, widely believed to be a major switch for the reduction of Th17 cells and cytokines involved in various autoimmune diseases.

The poster, entitled, "Development of IMU-935, an orally available small molecule inhibitor of IL-17 with a unique molecular profile for the treatment of autoimmune diseases," outlines Immunic's preclinical models, in which IMU-935 was characterized in different in vitro and cellular assay systems as well as in vivo disease models, in order to demonstrate its inhibitory capacity on RORYt, DHODH, Th17 differentiation, cytokine secretion and impact on autoimmune diseases, but allowing normal thymocyte maturation.

Results confirm that IMU-935 is a potent inverse agonist of RORYt, with an IC₅₀ (the concentration of drug that inhibits 50 % of the activity of the target) of 24 nM, with a maximum inhibition of approximately 80 %, thereby maintaining a biologically important basal activity at any concentration. As a second and synergistic acting target, IMU-935 was shown to inhibit DHODH with an IC₅₀ of 240 nM. The combined effects lead to a very potent inhibition of the secretion of IL-17A, IL-17F and IFN γ , with IC₅₀ concentrations of 3-5 nM tested in human PHA stimulated PBMCs. Th17 differentiation was inhibited with an IC₅₀ of 150 nM. Additionally, the data showed that maintaining a basal activity of RORYt of approximately 20 %, and at the same time synergistically targeting DHODH, effectively leads to inhibition of Th17 differentiation and blocking of IL-17 secretion at very low concentrations, while maintaining normal thymocyte maturation. Previous publications of other research groups had hypothesized that blocking thymocyte maturation may lead to a risk of thymoma development.

IMU-935 also demonstrated activity in a DSS (dextran sulfate sodium) induced colitis model and in an Imiquimod induced psoriasis-like model after oral application of the drug.

"The data are highly encouraging and confirm our belief that IMU-935 is a very potent orally available small molecule inhibitor of the Th17/IL-17 axis with the advantage of not affecting thymocyte maturation, and may, therefore, represent a potential new, best-in-class therapy for certain inflammatory and autoimmune diseases that currently affect millions of patients, globally," stated Dr. Kohlhof. "We look forward to completing preclinical, IND-enabling studies and remain on track to move IMU-935 into phase 1 double-blind, placebo-controlled, single and multiple ascending dose trials in healthy volunteers later this year. We also plan to extend these studies to assess safety and mechanism-related biomarkers in patients with psoriasis."

About Immunic, Inc.

Immunic, Inc. (Nasdaq: IMUX) is a clinical-stage biopharmaceutical company developing a pipeline of selective oral immunology therapies aimed at treating chronic inflammatory and autoimmune diseases, including ulcerative colitis, Crohn's disease, relapsing-remitting multiple sclerosis, and psoriasis. The company is developing three small molecule products: IMU-838 is a selective immune modulator that inhibits the intracellular metabolism of activated immune cells by blocking the enzyme DHODH; IMU-935 is an inverse agonist of ROR γ t; and IMU-856 targets the restoration of the intestinal barrier function. Immunic's lead development program, IMU-838, is in phase 2 clinical development for ulcerative colitis and relapsing-remitting multiple sclerosis, with an additional phase 2 trial in Crohn's disease planned for 2019. An investigator-sponsored proof-of-concept clinical trial for IMU-838 in primary sclerosing cholangitis is planned to start at the Mayo Clinic. For further information, please visit: www.immunic-therapeutics.com.

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This press release contains "forward-looking statements" that involve substantial risks and uncertainties for purposes of the safe harbor provided by the Private Securities Litigation Reform Act of 1995. All statements, other than statements of historical facts, included in this press release regarding strategy, future operations, future financial position, future revenue, projected expenses, prospects, plans and objectives of management are forward-looking statements. Examples of such statements include, but are not limited to, statements relating to Immunic's three development programs and the targeted diseases; the potential for IMU-838, IMU-935 and IMU-856 to safely and effectively target diseases; preclinical data for IMU-935; the timing of future clinical trials; the nature, strategy and focus of the company; and the development and commercial potential of any product candidates of the company. Immunic may not actually achieve the plans, carry out the intentions or meet the expectations or projections disclosed in the forward-looking statements and you should not place undue reliance on these forward-looking statements. Such statements are based on management's current expectations and involve risks and uncertainties. Actual results and performance could differ materially from those projected in the forward-looking statements as a result of many factors, including, without limitation, risks and uncertainties associated with the ability to project future cash utilization and reserves needed for contingent future liabilities and business operations, the availability of sufficient resources to meet business objectives and operational requirements, the fact that the results of earlier studies and trials may not be predictive of future clinical trial results, the protection and market exclusivity provided by Immunic's intellectual property, risks related to the drug development and the regulatory approval process and the impact of competitive products and technological changes. Immunic disclaims any intent or obligation to update these forward-looking statements to reflect events or circumstances that exist after the date on which they were made.

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