Immutep Announces Positive Update from Phase I Study of IMP761, a First-in-Class LAG-3 Agonist Antibody for Autoimmune Diseases

- Initial pharmacological data from placebo-controlled, double-blind Phase I study shows significant T cell suppression and a favourable safety profile at dosing level of 0.9 mg/kg
- The substantial reduction in T cell activity highlights the potential efficacy of IMP761 in treating autoimmune diseases
- Single ascending dose levels will continue with 2.5, 7 and 14 mg/kg
- Additional data from the Phase I to follow in second half of CY2025

SYDNEY, AUSTRALIA – June 23, 2025 – Immutep Limited (ASX: IMM; NASDAQ: IMMP) ("Immutep" or "the Company"), a late-stage immunotherapy company targeting cancer and autoimmune diseases, today announces positive initial efficacy data and continued favourable safety data from the placebo-controlled, double-blind first-in-human Phase I study evaluating IMP761, a first-in-class LAG-3 agonist antibody for autoimmune diseases.

Through the highest dosing level to date (0.9 mg/kg of IMP761), there have been no treatment-related adverse events in healthy participants. Additionally, pharmacodynamic data at this dosing level show that the inhibition of T cell infiltration in the skin at day 10 following a neoantigen rechallenge has already reached 80%. Given the encouraging efficacy and safety, Immutep is continuing with single ascending dose levels of 2.5, 7 and 14 mg/kg.

The LAG-3 (lymphocyte-activation gene-3) immune checkpoint has been identified as a promising therapeutic target for rheumatoid arthritis, Type 1 diabetes, and multiple sclerosis in multiple publications.[1-3] IMP761 is the first LAG-3 agonist antibody developed to potentially treat these large and growing disorders, each of which represent multi-billion dollar markets, and many other autoimmune diseases. By enhancing the "brake" function of LAG-3 to silence dysregulated self-antigen-specific memory T cells, IMP761 is designed to target the cause of autoimmune diseases and restore balance to the immune system.

Dr. Frédéric Triebel, CSO of Immutep, said: "The early pharmacological data showing substantial T cell suppression at the highest dose level of IMP761 are very promising, especially in conjunction with its continued favourable safety profile, and highlight the potential efficacy of this LAG-3 agonist in treating autoimmune diseases. LAG-3 expression on activated T cells is known to be highly specific to disease sites, and particularly in areas of chronic inflammation. This unique specificity enables the potential for IMP761 to have a more targeted approach with fewer side effects than other therapies. We look forward to evaluating higher dosing levels of IMP761 and hope to further enhance its ability to safely silence the dysregulated T cells responsible for many autoimmune diseases."

The Phase I trial is being conducted by the Centre for Human Drug Research (CHDR) in Leiden, the Netherlands. In addition to the safety analysis, CHDR is implementing its keyhole limpet haemocyanin (KLH) challenge model to evaluate IMP761's pharmacological activity.

Additional data from the Phase I to follow in second half of CY2025. For more information on the trial, please visit clinicaltrials.gov (NCT06637865).

About IMP761

IMP761, a first-in-class immunosuppressive lymphocyte-activation gene-3 (LAG-3) agonist antibody, has the potential to address the root cause of many autoimmune diseases by specifically silencing autoimmune memory T cells that accumulate at disease sites and restoring balance to the immune system. As published in the Journal of Immunology, encouraging pre-clinical in vivo and in vitro studies show IMP761 inhibits peptide-induced T cell proliferation, activation of human primary T cells, and an antigen-specific delayed-type hypersensitivity (DTH) reaction.[4] Additional preclinical data in oligoarticular juvenile idiopathic arthritis (o-JIA) published in Pediatric Research details how IMP761 led to a decrease in a broad spectrum of effector cytokines.[5] This study also shows children with o-JIA have a skewed LAG-3 metabolism and suggests they can benefit from agonistic LAG-3 activity.

About Immutep

Immutep is a late-stage biotechnology company developing novel immunotherapies for cancer and autoimmune diseases. The Company is a pioneer in the understanding and advancement of therapeutics related to Lymphocyte Activation Gene-3 (LAG-3), and its diversified product portfolio harnesses LAG-3's ability to stimulate or suppress the immune response. Immutep is dedicated to leveraging its expertise to bring innovative treatment options to patients in need and to maximise value for shareholders. For more information, please visit www.immutep.com.

1. Pedersen, J.M., Hansen, A.S., Skejø, C. et al. Lymphocyte activation gene 3 is increased and affects cytokine production in rheumatoid arthritis. Arthritis Res Ther 25, 97 (2023). https://doi.org/10.1186/s13075-023-03073-z

2. Jones BE, Maerz MD et al. Fewer LAG-3+ T Cells in Relapsing-Remitting Multiple Sclerosis and Type 1 Diabetes. J Immunol. 2022 Feb 1;208(3):594-602. doi: 10.4049/jimmunol.2100850. Epub 2022 Jan 12. PMID: 35022272; PMCID: PMC8820445.

3. Zhou X, Gu Y et al. From bench to bedside: targeting lymphocyte activation gene 3 as a therapeutic strategy for autoimmune diseases. Inflamm Res. 2023 Jun;72(6):1215-1235. doi: 10.1007/s00011-023-01742-y. Epub 2023 Jun 14. PMID: 37314518.

4. Mathieu Angin, Chrystelle Brignone, Frédéric Triebel; A LAG-3–Specific Agonist Antibody for the Treatment of T Cell–Induced Autoimmune Diseases. J Immunol 15 February 2020; 204 (4): 810–818. https://doi.org/10.4049/jimmunol.1900823

5. Sag, E., Demir, S., Aspari, M. et al. Juvenile idiopathic arthritis: lymphocyte activation gene-3 is a central immune receptor in children with oligoarticular subtypes. Pediatr Res 90, 744–751 (2021). https://doi.org/10.1038/s41390-021-01588-2

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This announcement was authorised for release by the CEO of Immutep Limited.