ASX/Media Release

Immutep Announces New Biomarker Data from TACTI-002 Phase II in First Line Non-Small Cell Lung Cancer

- *Statistically significant increases of Th1 biomarkers (IFN-gamma, CXCL-10), circulating immune cells (lymphocytes), and RNA levels of immune activating genes were observed and linked to improved clinical outcomes*
- *Early increase in absolute lymphocyte count is correlated with the positive Overall Survival results in non-small cell lung cancer patients recently reported at ESMO 2023, and is a potential on-treatment biomarker for clinical benefit*
- *Similar immune response biomarkers in the blood were seen in the double-blind, randomized AIPAC Phase IIb trial, which combined efti with chemotherapy alone and did not include any anti-PD-1 therapy*

SYDNEY, AUSTRALIA – 3 November 2023 – Immutep Limited (ASX: IMM; NASDAQ: IMMP) ("Immutep" or "the Company"), a clinical-stage biotechnology company developing novel LAG-3 immunotherapies for cancer and autoimmune disease, today announces new biomarker data from the TACTI-002/KEYNOTE-798 Phase II trial evaluating eftilagimod alpha ("efti"), a soluble LAG-3 protein and first-in-class MHC Class II agonist administered subcutaneously, in combination with MSD's (Merck & Co., Inc., Rahway, NJ., USA) anti-PD-1 therapy KEYTRUDA® (pembrolizumab) as first-line treatment for patients with previously untreated unresectable or metastatic non-small cell lung cancer (NSCLC).

The biomarker data related to blood samples from TACTI-002 patients to be presented at the Society for Immunotherapy of Cancer (SITC) 38th Annual Meeting substantiates efti's unique immune system stimulation and can be linked to its success in first line treatment of metastatic NSCLC patients, including the positive Overall Survival results recently reported at ESMO Congress 2023.

Dr Frederic Triebel, Immutep CSO, said, "Immunomonitoring of blood cells is of prime importance when one would like to understand the effect of a systemic immunostimulant injected subcutaneously, like efti is. Importantly, the pharmacodynamic data from efti in combination with pembrolizumab is associated with the 35.5-month median Overall Survival in first-line treatment of metastatic non-small cell lung cancer patients expressing PD-L1 (TPS ≥1%) that we recently reported at ESMO 2023. Similar to the immune response biomarker data seen in efti's double-blind, randomized Phase IIb trial in HER2-/HR+ metastatic breast cancer, this data further confirms efti's unique stimulation of the immune system, which may help patients live longer."

Sustained and significant increase of interferon-gamma (IFN-γ) and C-X-C motif chemokine ligand 10 (CXCL10) serum biomarkers for systemic Th1 response were seen at three months and six months on-therapy. Among patients with a partial or complete response, 86% (6/7) showed a ≥1.4-fold change of IFN-γ and 100% (7/7) showed a ≥1.4-fold change CXCL10, after the first efti dosing.

Additionally, the early increase of absolute lymphocyte count (ALC) was significantly greater in patients that experienced a clinical benefit (e.g., overall survival, progression-free survival, complete response, partial

response, stable disease), and is a potential on-treatment biomarker for response to this therapy. Furthermore, blood-based gene expression profiling (GEP) analyses revealed significant enrichment of genes involved in immune activation and cytotoxicity, including CD8 T cells, in patients with a favourable tumor response.

This biomarker data from the TACTI-002 Phase II is similar to the biomarker analysis from Immutep's randomized, double-blind AIPAC Phase IIb trial in HER2-/HR+ metastatic breast cancer, which combined efti solely with paclitaxel chemotherapy and did not include any anti-PD-1 therapy. In that trial, the number of circulating immune cells (monocytes, activated CD8 T cells) and CXCL10 serum levels with efti increased in a statistically significant fashion compared to baseline. The increase in pharmacodynamic markers, including ALC and CD8 T Cells, were also significantly linked to improved overall survival in the efti group.

The poster titled "Biomarker results from the 1st line non-small cell lung cancer cohort of TACTI-002: pharmacodynamic effects of combining eftilagimod alpha (soluble LAG-3) and pembrolizumab" will be available on the Posters & Publications section of Immutep's website following its presentation.

KEYTRUDA® is a registered trademark of Merck Sharp & Dohme LLC, a subsidiary of Merck & Co., Inc., Rahway, NJ, USA.

About Eftilagimod Alpha (Efti)
Efti is Immutep's proprietary soluble LAG-3 protein and MHC Class II agonist that stimulates both innate and adaptive immunity for the treatment of cancer. As a first-in-class antigen presenting cell (APC) activator, efti binds to MHC (major histocompatibility complex) Class II molecules on APC leading to activation and proliferation of CD8+ cytotoxic T cells, CD4+ helper T cells, dendritic cells, NK cells, and monocytes. It also upregulates the expression of key biological molecules like IFN-γ and CXCL10 that further boost the immune system's ability to fight cancer.

Efti is under evaluation for a variety of solid tumours including non-small cell lung cancer (NSCLC), head and neck squamous cell carcinoma (HNSCC), and metastatic breast cancer. Its favourable safety profile enables various combinations, including with anti-PD-[L]1 immunotherapy and/or chemotherapy. Efti has received Fast Track Designation in 1st line HNSCC and in 1st line NSCLC from the United States Food and Drug Administration (FDA).

About Immutep
Immutep is a clinical-stage biotechnology company developing novel LAG-3 immunotherapy for cancer and autoimmune disease. We are pioneers in the understanding and advancement of therapeutics related to Lymphocyte Activation Gene-3 (LAG-3), and our diversified product portfolio harnesses its unique 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.

Australian Investors/Media:
Catherine Strong, Citadel-MAGNUS
+61 (0)406 759 268; cstrong@citadelmagnus.com

U.S. Investors/Media:
Chris Basta, VP, Investor Relations and Corporate Communications
+1 (631) 318 4000; chris.basta@immutep.com

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