ASX Announcement

Imugene's onCARlytics combination with Estrella's CD19-Redirected ARTEMIS® T Cells presented at SITC Annual Meeting

Sydney, Australia, 14 November 2022: Imugene Limited (ASX:IMU), a clinical stage immuno-oncology company, and Estrella Biopharma, Inc., a preclinical-stage biopharmaceutical company focusing on cancer therapeutics, today announced that Imugene's onCARlytics (CF33-CD19) oncolytic virus in combination with Estrella's CD19-Redirected ARTEMIS® T cells was presented at the renowned Annual Meeting for the Society for Immunotherapy of Cancer (SITC), held in Boston, USA on 8-12 November 2022.

Dr Anthony Park from Dr Saul Priceman's lab at City of Hope presented the poster titled, "CF33-CD19t oncolytic virus (onCARlytics) targets hepatocellular carcinoma (HCC) and in combination with CD19-Redirected ARTEMIS® T cells results in significant tumor killing."

Key findings of the presentation are as follows:

- onCARlytics can target triple negative breast cancer cell line MDA-MB-468 to express CD19t as a target for engineered T-Cells in an MOI-dependent manner.
- onCARlytics can target hepatocellular carcinoma cell lines HepG2 and Hep3B to express CD19t as a target for engineered T-Cells in an MOI-dependent manner.
- CD19-Redirected ARTEMIS® T Cells in combination with onCARlytics demonstrated greater in vitro efficacy against MDA-MB-468, HepG2, and Hep3B tumor cell lines compared to onCARlytics alone.
- There is an increasing trend in ARTEMIS® T-cell activation in an onCARlytics MOI-dependent manner.
- CD19-Redirected ARTEMIS® T Cells demonstrated higher trend of IL-2 production and lower IFNγ production compared to COH CD19-CAR T Cells when co-cultured with onCARlytics.
- CD19t expression was detected in tumors following onCARlytics infection in vivo.
- CD19-Redirected ARTEMIS® T Cells and onCARlytics combination therapy efficacy will be tested in multiple in vivo models.

The poster is available on Imugene's website: https://www.imugene.com/conference-presentations.

Imugene CEO/MD Leslie Chong said "The goal of our collaboration with Estrella was to see if combining our onCARlytics technology with its CD19-Redirected ARTEMIS® T Cells could drive improved efficacy and

safety, and the outcomes from this research to date are very positive on numerous fronts. It again validates our combination approach and paves the way to advance this program."

"The data supports the potential benefit of the 'Mark-and-Kill' approach in addressing the lack of tumour-specific targets in treating solid tumours with T-cell therapies," said Dr. Cheng Liu, President of Estrella Biopharma. "We look forward to continue working with Imugene to validate our combination approach as an effective treatment for cancer as quickly as possible."

Estrella in-licensed the CD19-Redirected ARTEMIS T Cell technology from Eureka Therapeutics, Inc. in June 2022.

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About ARTEMIS T-Cells combination with onCARlytics

We have developed a novel chimeric vaccinia-based oncolytic virus, called onCARlytics (CF33-CD19t, Imugene Limited in collaboration with City of Hope®), that delivers a non-signaling, truncated CD19t (CD19t) antigen to tumors that allows for targeting of solid tumors by CD19 T-Cells[1]. Once the CD19t is

expressed on solid tumor cells, to enable cell killing, we have combined onCARlytics with CD19-Redirected ARTEMIS® T Cell, a CD19- targeting T-cell engineered with an Antibody-T-Cell Receptor (AbTCR), powered by the ARTEMIS® Cell Receptor Platform (developed by Eureka Therapeutics®, Inc. and licensed to Estrella Biopharma, Inc.). ARTEMIS® AbTCR is distinct from CAR by recruiting the endogenous CD3 complex and utilizing the same activation and regulatory signaling pathways employed by natural TCRs, which enables both potent killing activity against CD19+ tumor cells and a superior safety profile. When administrated after onCARlytics, CD19-Redirected ARTEMIS® T Cells were able to induce potent cytolytic activity against triple negative breast cancer and HCC tumor cells. OnCARlytics demonstrated expression of CD19t and robust in vivo anti-tumor efficacy against human HCC tumor xenografts. In summary, CD19-Redirected ARTEMIS® T Cells combined with onCARlytics is a potentially effective immunotherapy strategy for the treatment of patients with HCC and can be applied to other solid tumors.

References

[1] *Warner SG, Kim SI, Chaurasiya S, O'Leary MP, Lu J, Sivanandam V, Woo Y, Chen NG, Fong Y. A Novel Chimeric Poxvirus Encoding hNIS Is Tumor-Tropic, Imageable, and Synergistic with Radioiodine to Sustain Colon Cancer Regression. Mol Ther Oncolytics. 2019 Apr 11;13:82-92. doi: 10.1016/j.omto.2019.04.001. PMID: 31061881; PMCID: PMC6495072.*

About Imugene (ASX:IMU)

Imugene is a clinical stage immuno-oncology company developing a range of new and novel immunotherapies that seek to activate the immune system of cancer patients to treat and eradicate tumours. Our unique platform technologies seek to harness the body's immune system against tumours, potentially achieving a similar or greater effect than synthetically manufactured monoclonal antibody and other immunotherapies. Our product pipeline includes multiple immunotherapy B-cell vaccine candidates and an oncolytic virotherapy (CF33) aimed at treating a variety of cancers in combination with standard of care drugs and emerging immunotherapies such as CAR T's for solid tumours. We are supported by a leading team of international cancer experts with extensive experience in developing new cancer therapies with many approved for sale and marketing for global markets.

Our vision is to help transform and improve the treatment of cancer and the lives of the millions of patients who need effective treatments. This vision is backed by a growing body of clinical evidence and peer-reviewed research. Imugene is well funded and resourced, to deliver on its commercial and clinical

milestones. Together with leading specialists and medical professionals, we believe Imugene's immuno-oncology therapies will become foundation treatments for cancer. Our goal is to ensure that Imugene and its shareholders are at the forefront of this rapidly growing global market.

Release authorised by the Managing Director and Chief Executive Officer

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