

ASX Announcement

PD-1 cancer vaccine development update

- **New PD-1 cancer vaccine named KEY-Vaxx**
- **Phase 1 planning well advanced**
- **Preclinical results in validated models of colorectal (colon) cancer demonstrate inhibitory cancer growth activity**

MELBOURNE Australia 23 July 2018: Imugene Limited (ASX: IMU), a clinical stage immuno-oncology company is pleased to announce a development update of its newly acquired PD-1 cancer vaccine from Ohio State University. The check-point inhibitor cancer vaccine named KEY-Vaxx, demonstrates superior cancer growth inhibition compared with an industry-standard monoclonal antibody in validated models of colorectal (colon) cancer (CT26).

The check-point inhibitor market is dominated by the monoclonal antibody drug, Keytruda® (marketed by Merck). Sales reported Keytruda in 2017 were USD3.81b with double digit annual growth. Both KEY-Vaxx and Keytruda target PD-1, a key switch of the immune system's ability to find and eliminate cancerous cells.

The concept of teaching and inducing the body to generate its own antibodies against PD-1 expressing cells represents a paradigm shift in immuno-oncology, and is the first report of treating cancer by this method.

Imugene is consulting with international oncology leaders and regulatory consultants regarding the clinical development of KEY-Vaxx.

Preclinically, the murine CT26 colon carcinoma line has become a platform model for evaluating the potential of drug combinations with immune checkpoint inhibitor antibodies. It is a highly immunogenic tumor and tends to show objective response rates to a number of commercially available checkpoint inhibitors. Importantly, KEY-Vaxx not only inhibited cancer cell growth as a monotherapy, but also showed synergistic activity with Imugene's Ohio based Her-2 cancer vaccine currently in Phase 2 development in a second study utilising a CT26/Her-2+cell line. The potential for combining KEY-Vaxx with HER-Vaxx in Her-2 positive cancers will be investigated after an initial Phase 1 trial of KEY-Vaxx has completed.

Professor Pravin Kaumaya of Ohio State University said, “I am encouraged by the strong and immediate progress in this early stage of our collaboration.”

Imugene Managing Director and Chief Executive Officer Leslie Chong said, “We look forward to completing the preclinical program required to commence the Phase 1 trial and reporting further developments. Recruitment of the Phase 1b/2 gastric trial continues, and on completion of dosing, and data analysis, we look forward to advising shareholders” she added.

Imugene also advises that Professor Christoph Zielinski has stepped down from the Scientific Advisory Board. Professor Zielinski has provided solid support since the inception of the company and we wish him well for the future.

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About Imugene (ASX:IMU)

Imugene (ASX:IMU) is a clinical stage immuno-oncology company headquartered in Melbourne, Australia. The company is developing B Cell peptide cancer vaccines and therapeutics against validated and new oncology targets.