



IMUGENE

ASX:IMU



# HARNESSING B-CELLS FOR CANCER IMMUNOTHERAPY

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**Leslie Chong**

Managing Director & Chief Executive Officer

July 2018 General Meeting



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Any forward looking statements in this presentation have been prepared on the basis of a number of assumptions which may prove incorrect and the current intentions, plans, expectations and beliefs about future events are subject to risks, uncertainties and other factors, many of which are outside Imugene Limited's control. Important factors that could cause actual results to differ materially from any assumptions or expectations expressed or implied in this brochure include known and unknown risks. As actual results may differ materially to any assumptions made in this brochure, you are urged to view any forward looking statements contained in this brochure with caution. This presentation should not be relied on as a recommendation or forecast by Imugene Limited, and should not be construed as either an offer to sell or a solicitation of an offer to buy or sell shares in any jurisdiction in which it would be a contravention of applicable law.



# A TEAM WITH TRACK RECORD IN DRUG DEVELOPMENT



**Leslie Chong (Sydney, Australia)**

**Managing Director & Chief Executive Officer**

- Over 20 years of oncology experience in Phase I – III of clinical program development
- Leadership role involvement in two marketed oncology products
- Previously Senior Clinical Program Lead at Genentech, Inc., in San Francisco



**Prof Ursula Wiedermann (Vienna, Austria)**

**Chief Scientific Officer**

- Co-inventor of HER-Vaxx
- Professor of Vaccinology at Medical University of Vienna



**Dr Axel Hoos (Philadelphia, U.S.A.)**

**Non-Executive Director**

- Senior Vice President and Head of Oncology at GSK
- Former Medical Lead for Yervoy, the first survival improving medicine in Immuno-Oncology
- Chairman of the BoD of the Sabin Vaccine Institute
- Co-Chair of the Cancer Immunotherapy Consortium Think-Tank



**Mr. Charles Walker (Brisbane, Australia)**

**Non-Executive Director**

- Experienced listed biotech CEO and CFO (ASX;ACL)
- Experienced in financial markets including executing 55 international tech corporate transactions
- Clinical experience includes managing pipeline of drugs in all stages from discovery, through to Phase III to launched products



**Paul Hopper (Sydney, Australia)**

**Executive Chairman**

- International & ASX biotech capital markets experience particularly in immuno-oncology & vaccines
- Former Chairman of Viralytics, Founder & Director of Prescient, Founder of Imugene & Polynoma LLC, former Director pSivida, Somnomed & Fibrocell Science



**Dr Nick Ede (Melbourne, Australia)**

**Chief Technology Officer**

- Over 25 years peptide vaccine and drug development
- Former CEO Adistem, CEO Mimotopes
- VP Chemistry Chiron (now Novartis), Research Fellow CRC Vaccine Technology

# A BETTER WAY TO MAKE ANTIBODIES TO TREAT CANCER?

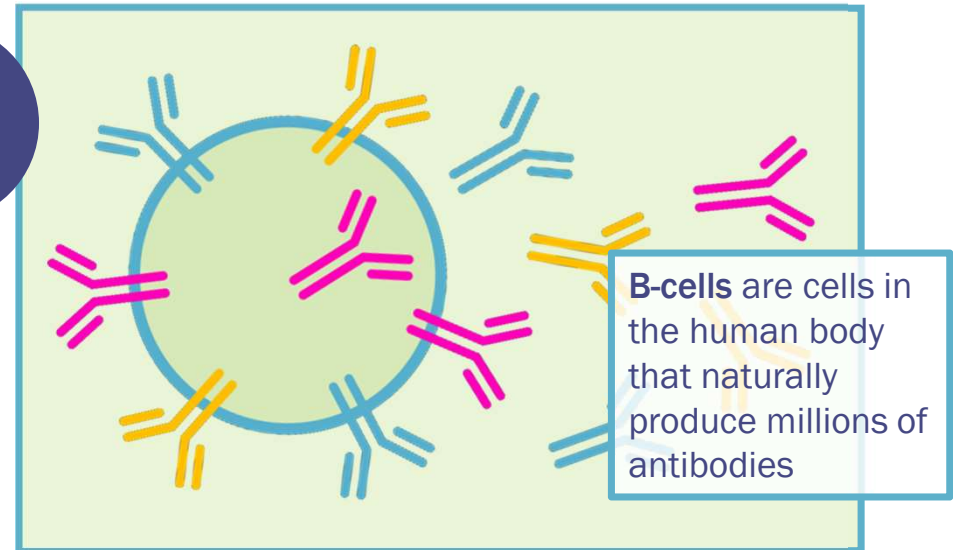
In a facility:



For example, Merck's Keytruda

VS

Using B-cells in your body



Teaching B-cells to make antibodies using peptide antigens



## STRATEGIC ACQUISITION

### Ohio State University and Mayo Clinic B-cell peptide vaccine portfolio

- Opportunity to create the dominant position globally in B-cell peptide vaccines and therapeutics.
- Professor Kaumaya's work in the area of check-point inhibitors and tumor-associated antigens such as Her-2, is highly complementary to Imugene's existing platform and portfolio.
  - Six patent families including composition of matter and method of use patents covering PD-1, Her-1, Her-2, Her-3, VEGF, IGF-1R, CD28 peptide vaccines and therapeutics.
  - Commercially attractive upfront payment; royalty rate in low single digit royalty on sales; exclusive, world-wide and sub-licensable until expiry of the last patent.
- Broadens and accelerates key Imugene Research and Clinical programs
  - PD-1 and HER2 + PD-1 combination programs accelerate by 24+ months



THE OHIO STATE  
UNIVERSITY

# OSU / Mayo Clinic

WORLDWIDE, EXCLUSIVE  
LICENSE



Six patent  
families,  
22 patents

IND ready PD-  
1 clinical trial  
(Phase 1)

Ongoing Her-  
2 clinical  
trial  
(Phase 2)

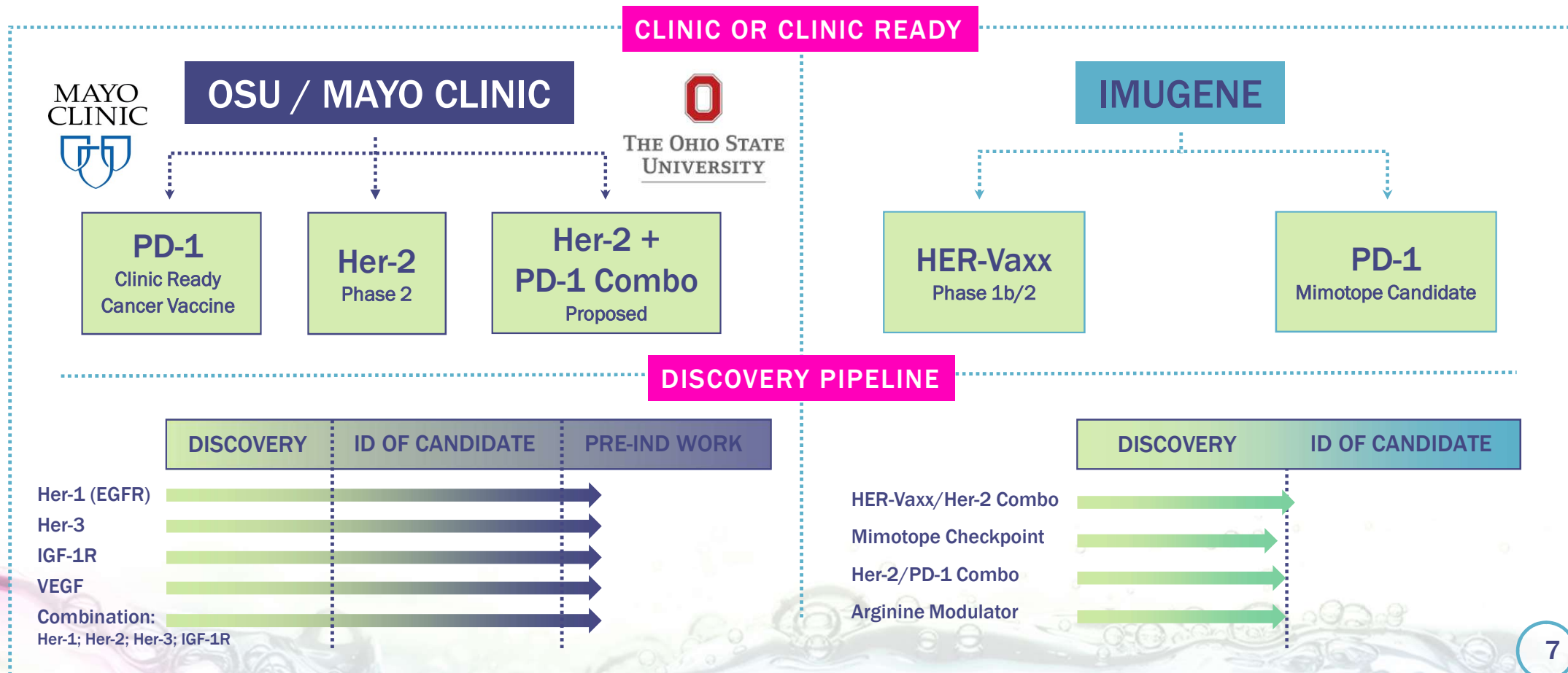
Six additional  
clinical candidates  
Her-1, Her-2, Her-  
3, VEGF, IGF-1R  
CD28

Three year  
R&D contract  
with access to  
Ohio  
translational labs

Access to experience and expertise with Prof. Pravin  
Kaumaya and team

# EXPANDED IMUGENE B-CELL VACCINE PIPELINE

Strengthens and broadens Imugene's B-cell vaccine pipeline



## WHY SELECT AND TARGET PD-1 FOR B-CELL VACCINATION?

Monoclonal antibody immunotherapies  
Keytruda® (Merck) and  
Opdivo® (BMS) targeting PD-1 sold  
**USD\$3.8B and \$4.9B**,  
respectively, in 2017.

In industry-recognized mouse cancer  
models (colon cancer), the PD-1  
targeting B-cell vaccine is  
**more superior than the gold standard  
mouse PD-1 monoclonal antibody**  
(used in preclinical model testing for  
Keytruda and Opdivo).

Whilst acknowledging the rapid rise in  
clinical trials involving PD-1 and their  
combination with other treatments\*, a PD-1  
B-cell vaccination approach represents a  
**paradigm shift in cancer immunotherapy.**

*\* Tang et al. Comprehensive analysis of the clinical immuno-  
oncology landscape, Annals of Oncology, 2017*

The combination of the PD-1 vaccine  
with the acquired Phase II Her-2 vaccine  
**significantly inhibits tumor growth**  
c/w mAb control in a Her-2+ model of  
colon cancer.



## ACQUISITION SUMMARY

**Strengthens and broadens our B-cell cancer vaccine pipeline**

**Acquisition of clinic ready B-cell technology with full spectrum of indications and targets to choose from to include check point inhibitors and combination therapies**

**Clinical programs broaden to include US and EU centres**

**Expanded Imugene platforms and technologies fully patented**

- Funding: Capital raise to fund expanded clinical programs through key clinical data readouts and value inflection points
- Management team that has delivered on all critical milestones over the last three years and created value-inflections through strategic M&A activity
- Unique opportunity to secure the dominant position globally in the R&D of B-cell peptide vaccines and complementary check-point inhibitor programs
- Synergistic technology acquisition from Ohio State University and The Mayo Clinic: expanded clinical stage pipeline (Tumour Associated Antigens) and PD-1/PD-L1 B-cell vaccines
- Leading clinical stage B-cell cancer vaccine company with multiple clinical candidates
  - Phase Ib/II HER-Vaxx combination with SOC chemo in gastric cancer
  - Phase II – Her-2 vaccine monotherapy in multiple solid tumours
  - Phase I adaptive study ready PD-1 B-cell vaccine

# Leslie Chong

Chief Executive Officer &  
Managing Director

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