



IMUGENE
Developing Cancer Immunotherapies

ASX: IMU

Newsletter July 2020

**IMUGENE
APPROVED
TO START
PD1-VAXX TRIAL**

04

02

Featured in 'Behind the Scenes' hosted by Laurence Fishburne

03

The B Cell Chronicles

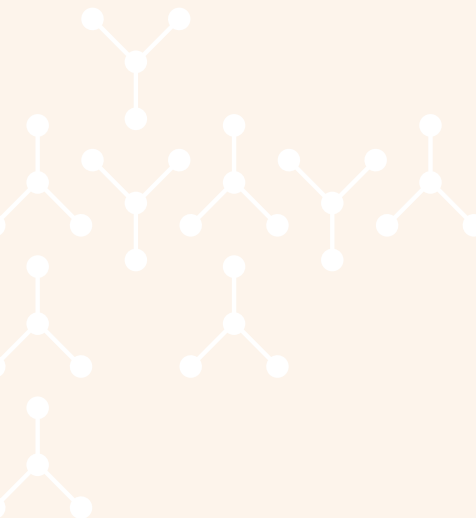
06

Message from the Chair and financial standing



“Cancer does not take a holiday when some other pestilence grabs the front page. Neither do we.”

LESLIE CHONG
IMUGENE CEO



CEO UPDATE

Good morning and welcome to our update on how events are unfolding for your company.

First and foremost, may I extend the hope that you, your family and those dear to you are coping with these extraordinary times.

The ramifications of COVID-19 have extended well beyond its health determinations and is seriously impacting upon our lifestyle, part of which is economic. We have all been deluged with information on it so I will not stray into self-evident comment except to bring home one simple truth to you.

Cancer does not take a holiday when some other pestilence grabs the front page. Neither do we.

As the world works toward a vaccine for COVID-19 and certain sectors of the economy falter, we are still pushing forward to discover new frontiers in the fight against cancer.

Our commitment and expertise have not faltered and in this brief note I'll bring home to you that we indeed do have positive information to bring to your attention. Simply said, Team Imugene is all systems go and our local and international efforts are being acknowledged by peer level reviews and regulatory bodies.

So, where are we? As you know we are researching on two fronts, our B-Cell immunotherapy efforts with HER-Vaxx and PD1-Vaxx and our

oncolytic virus front with CF33 and its constituent parts, CHECKvacc and VAXINIA.

In our last note to you we brought home the remarkable efforts of our colleagues at The City of Hope Comprehensive Cancer Center in Los Angeles and our newfound relationship with them. I'll give you a brief update on where we are with them later in the piece but my main focus in this newsletter is on our B-Cell immunotherapy platform.

We'll also give you a snapshot of a recent Bell Potter report on your company and an analysis in the leading trade journal, Bioshares. We've had two abstracts presented at the American Association of Cancer Research (AACR) annual conference, arguably the foremost gathering (albeit remotely this year) of cancer research scientists worldwide. Both presentations are available on our website: www.imugene.com/conference-presentations

Our Executive Chairman, Paul Hopper as always has a few succinct and insightful words for us.

I sincerely hope this reach out to you brings an affirmation that when things may not be as they should, there are still crucial areas of your life that are constant.

One such is our respect for your investment with us and our determination to see it prosper.

WATCH
THE PROMO
[youtu.be/
4nJNOB4AHSE](https://youtu.be/4nJNOB4AHSE)

BEHIND THE SCENES
WITH LAURENCE FISHBURNE

FEATURED IN 'BEHIND THE SCENES HOSTED BY LAURENCE FISHBURNE'

Airing on PBS channels from July 27th

We are proud to share news that our Executive Chairman Paul Hopper, CEO Leslie Chong, and our Oncolytic Virotherapy Scientific Advisory Board Member, Yuman Fong from City of Hope, feature in a segment on 'Behind the Scenes'. The documentary 'Behind the Scenes with host Laurence Fishburne' will air on PBS channels from July 27th in America.

NOW AIRING
ON FOX NEWS

From July 20-31 you can watch on primetime channels such as CNN, MSNBC, CNBC & Discovery Life



THE B CELL CHRONICLES

Our work with PD1-Vaxx progresses apace and its footprint in the Imugene roster is firmly in place and imprinted in our forward strategy.



mediated side effects have been identified and their success rates are relatively low with only a proportion of patients responding to treatment as a monotherapy. In pre-clinical studies our PD-1 and Her-2 vaccines have shown both efficacy and a response rate with minimal toxicity.

You can find an animated explanation of the mechanism of action of PD1-Vaxx on [our website](#) and on Imugene's [Youtube channel](#).

Our research indicates that PD1-Vaxx has the potential to stop lung cancer cells from avoiding T-Cell recognition and subsequent killing, which then gives the T-Cells the ability to recognise cancerous cells and mount an immune system response.

The concept of teaching and inducing the body to generate its own antibodies targeting PD1 expressing cells represents a paradigm shift in oncology, and is a novel treatment method for cancer

Our ongoing efforts have twofold potential, firstly as standalone and/or as we suggested earlier, the possibility of tandem effect when combined with treatments such as Keytruda® (Merck) and Opdivo® (BMS), two of the most financially successful drugs on the market today.



You can find an animated explanation of the mechanism of action of PD1-Vaxx on Imugene's Youtube channel, and our website: [imugene.com/b-cell-immunotherapies](https://www.imugene.com/b-cell-immunotherapies)

PD1-Vaxx

To refresh your memory, PD1-Vaxx is a B-Cell activating immunotherapy designed to treat, in the first instance, cancerous tumours in the lung.

Simply defined it induces the body to produce antibodies that bind, interact and produce an anti-cancer effect similar to available and transformational treatments like billion dollar blockbuster drugs Keytruda® and Opdivo®. Merck announced 2019 full year sales results for Keytruda® of \$11.1 billion US dollars and BMS announced \$7.2 billion US dollars of sales for Opdivo®.

They were both approved for public use by the FDA in recent years for several different types of cancer, including lung cancer, but toxicity and immune-

Pre-clinical studies were positive and in exciting news, we have received ethics approval from the Chris O'Brien Lifehouse, and Macquarie University Human Research Ethics Committees to begin Phase 1 human trials in Australia. Patient screening is expected to start in August. Additional clinical sites will be opened in the USA following a Food and Drug Administration (FDA) investigational new drug (IND) submission.

This confirmation affirms that the company has completed all the necessary pre-clinical safety and efficacy testing on PD1-Vaxx required to commence human trials and represents a significant milestone for Imugene and clinicians treating patients faced with the challenge of lung cancer. Accomplishing this goal speaks to the perseverance and dedication of Imugene's clinical and research team as we continue to build on our clinical and commercial potential.

The first Phase 1 trial will be a multi-centre dose escalation study of PD1-Vaxx both as a standalone therapy and in combination with immune checkpoint inhibitors such as Keytruda® and Opdivo® and we will, in the first instance, be targeting patients with non-small cell lung cancer.

The Australian Lung Foundation estimates 12,800 Australians are diagnosed with lung cancer each year.

Third party advocacy is a sought after by-product of good research and we are pleased to announce that our pre-clinical research on related PD-1 mimotope immunotherapies, has been published in the well respected journal, "Frontiers in Immunology."

The input to the journal flowed from research supplied by Professor Ursula Wiedermann and her colleague Dr Joshua Tobias, that peptides incorporated into Imugene's proprietary immunotherapeutic vaccine delivery platform generated antibodies that bound specifically to immune cells expressing the PD1 biomarker that subsequently allows the immune system to join the fight and destroy the cancerous cells.

HER-Vaxx

Our other B-Cell immunotherapy front, HER-Vaxx is also forging ahead in merit as our Phase 1 trials in gastric cancer have successfully concluded and we have further received verification from our Independent Data Monitoring Committee (IDMC) to continue this important Phase 2 clinical trial.

This trial is measuring the efficacy, safety and immune response in 68 patients with metastatic gastric cancer overexpressing the HER-2 protein. It is being conducted at multiple sites across Eastern Europe and India where clinicians have difficulty accessing approved antibody treatments such as Herceptin® and where there is a high incidence of gastric cancer due to lifestyle and nutritional choices.

It is worth mentioning that the IDMC is a key process held in closed sessions and independent from Imugene. They analyse data from randomised studies and important clinical end points allowing for an independent assessment of safety and efficacy as the study progresses.

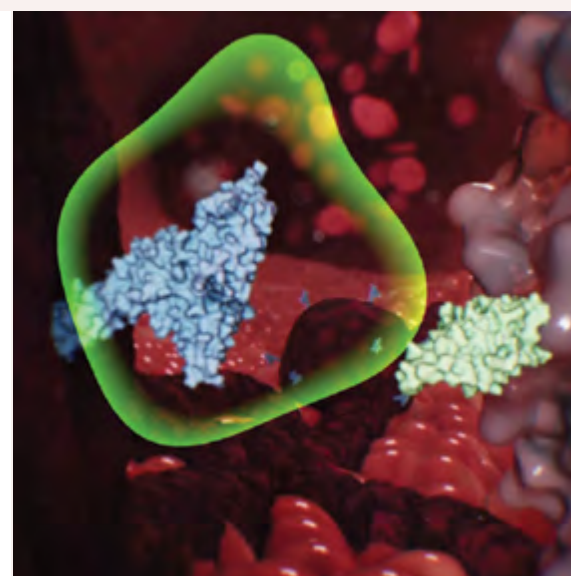
HER-Vaxx targets cells that over-express the HER-2 receptor, the same target as blockbuster drugs Herceptin® and Perjeta® (mAbs). Our research to date indicates our B-Cell activating immunotherapy approach could see better results than the synthetic monoclonal antibodies such as Herceptin® including higher tumour specificity and safety/efficacy evaluation.

That's the core analysis of where we're at with our B Cell Immunotherapy platform.

14 July 2020 | ASX Announcement

IMUGENE RECEIVES ETHICS APPROVAL TO START PD1-VAXX TRIAL

Imugene Limited (ASX:IMU), a clinical stage immuno-oncology company, today announced it has received Human Research Ethics Committee (HREC) approval to commence a Phase I clinical trial of its checkpoint immunotherapy candidate, PD1-Vaxx in Australia.



REPORT CARDS

Bell Potter and industry journal Bioshares have given us the thumbs up in comprehensive reports.

Due to the current isolation situation we have not been able to field as many third party advocacy reports as we normally do but Bell Potter and industry journal Bioshares have given us the thumbs up in comprehensive reports.

Bell Potter has initiated coverage with a speculative buy valuation of five cents.

Following on our focus for B-cell technology in this newsletter Bell Potter in part said, "HER-Vaxx and PD1-Vaxx are B-cell cancer immunotherapies that are an exciting new class of cancer therapy with the potential to become the most

significant development in oncology since the approval of CAR-T therapy."

Bioshares were equally as succinct and acknowledging of our progression as a company.

Both reports are detailed and can be found on [our website](#).



"HER-Vaxx and PD1-Vaxx are B-cell cancer immunotherapies that are an exciting new class of cancer therapy with the potential to become the most significant development in oncology since the approval of CAR-T therapy."

BELL POTTER

FINANCE

Financial Snapshot

(as at July 2020)

ASX code	IMU
Market cap	\$159.33M Jul 2020
52 week high/low	6.3c/1.5c
Cash balance	\$33.7M Mar 2020
Industry	Biotechnology

Note: All figures are in Australian dollars. Market capitalisation calculations based on ordinary shares (4.43b) only and excludes the dilutive impact of options outstanding (1.24b).

Top 5 shareholders

Paul Hopper	4.0%
Private Portfolio Managers (PPM)	3.9%
Mr Richard John Mann	3.2%
Dr Nicholas Smith	2.7%
Platinum Assest Management	1.7%

Board & Management

Directors

Ms Leslie Chong
Chief Executive Officer & Managing Director

Mr Paul Hopper
Executive Chairman

Mr Charles Walker
Non-Executive Director

Dr Axel Hoos
Non-Executive Director

Dr Lesley Russell
Non-Executive Director

Dr Jens Eckstein
Non-Executive Director

Senior Management

Dr Nick Ede
Chief Technology Officer

Dr Mark Marino
Chief Medical Officer

Dr. Anthony Good
Vice President of Clinical Research

Ms Bonnie Nixon
Project Manager

Mr. Phillip Hains
Company Secretary

Mr Justyn Stedwell
Company Secretary

Scientific Advisory Board

Dr Josep Tabernero
President ESMO, Vall d'Hebron University Hospital Spain

Prof Pravin Kaumaya
OSU, USA

Prof Ursula Wiedermann
Medical University of Vienna

Dr Tanius Bakaii-Saab
Mayo Clinic USA

Dr Neil Segal
MSKCC USA

Dr Yelena Janjigian
MSKCC, USA

Prof Peter Schmid
Barts Cancer Institute at Queen Mary University London

Dr Michael Caligiuri
City of Hope, USA

OV Scientific Advisory Board

Dr Yuman Fong
City of Hope, USA

Prof Prasad Adusumilli
MSKCC, USA

Dr Rebecca Auer
Ottawa Hospital, Canada



CF33 SNAPSHOT

In our last newsletter we brought you up to date on the association we have with The City of Hope Comprehensive Cancer Center in Los Angeles and our work with the illustrious Dr Yuman Fong.

Since the last newsletter, two further publications have been published in prestigious medical journals describing the research outcomes from Dr Fong's group. His scientists are prolific in their output of outstanding new results in the oncolytic virotherapy field. The publications can be found

and downloaded from our website under the Publications tab.

On the commercial side of the ledger our long life IP for CF33 ensures that as we continue to deliver results, the financial viability of the project matches the scientific progression as well.

Our website has chapter and verse with our progress in this new and exciting area of your company's development.

FROM THE CHAIR

From where I sit, I see your company as a robust and innovative standout in today's volatile market.

Cast a slide rule over us and we stand out in all the crucial elements defining a company, financial as well as scientific and with the ongoing support of internationally applauded professionals in the field of cancer research.

The only downside is the current market perception and that's not a complaint, more an indication that better recognition is yet to come.

This is where I segue over to you in the hope that you will agree and see merit in my comments.

As you will read in this brief we are well and truly front foot on both our B-Cell and Oncolytic Immunotherapy projects, one moving into Phase 1 trials and the other into Phase 2 trials.

Our research path is forward. On all fronts.

With Leslie ably leading and co-ordinating our national and international efforts I firmly believe your faith and investment in us will be rewarded regardless the malaise that effects the broader market status today.

It is a tough world out there, no denying that, but in such times it's important to look for the investment that stands out from the pack.

Look to your own health and wellbeing and leave your current and future investment to us.

It's in safe hands.



**PAUL HOPPER
CHAIRMAN**



IMUGENE
Developing Cancer Immunotherapies

⋮ About

⋮ Imugene is a clinical stage immuno-oncology company developing a range of new treatments that seek to activate the immune system of cancer patients to identify and eradicate tumours.

⋮ Contact

⋮ **Leslie Chong**
Managing Director
& CEO

⋮ T +61 458 040 433
⋮ E Leslie.Chong@imugene.com

⋮ Connect



⋮ imugene.com

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