IMUGENE

ASX:IMU

INVESTOR NEWSLETTER

Edition 06, June 2018

Greetings from the CEO

Welcome to the latest edition of Imugene's Investor newsletter! I am very pleased to announce some big news items regarding Imugene.

First, after a worldwide tour of major investment centres, Imugene is currently raising AUD$20 million. In this issue, we will walk you through the details of the allocation of this funding, which includes the expansion of various clinical programs, as well as a substantial acquisition through a licensing agreement with Ohio State University and the Mayo Clinic.

This strategic transaction will kick Imugene's pipeline into high gear. The impressive work of OSU's Professor Pravin Kaumaya will strengthen and broaden our existing body of innovative cancer therapies. In this newsletter, we will provide information regarding Imugene's new post-aquisition expanded pipeline, introduce you to the eminently regarded doctors involved and explain the science that we at Imugene believe potentially represents a paradigm shift in the field of cancer immunotherapies.

I am personally very excited about these latest achievements and the promise of growth for Imugene that they hold. I encourage you to continue to follow our progress. As always, many thanks for your enduring support.

Warmest regards,
Leslie Chong
Chief Executive Officer
& Managing Director, Imugene

Imugene Completes Licensing Transaction with Ohio State University and The Mayo Clinic

Effective 07 June 2018, Imugene has signed an exclusive, world-wide license to the entire body of cancer vaccine work and intellectual property developed by medical teams at Ohio State University and The Mayo Clinic, led by Professor Pravin Kaumaya. The acquisition will significantly expand the company's pipeline of clinical-stage B-cell vaccines.

Inside the Acquisition

A Strategic Opportunity

The impressive array of Investigational New Drug (IND)-ready cancer vaccines and pre-clinical development programs to be licensed to Imugene will place the company in a strong position globally in the research and development of B-cell peptide technologies. "The multiple commercial, strategic and clinical benefits of this transaction secures our leadership position in the promising B-cell peptide cancer vaccine sector, in particular PD-1 checkpoint inhibitors, where Ohio's pre-clinical work for a Phase I PD-1 clinical trial is well advanced," says Imugene's Chief Executive Officer and Managing Director, Leslie Chong.

(continued on page 2)

Imugene To Raise $20 Million In Capital

Imugene announced on 07 June 2018 that it will be conducting a worldwide capital raise campaign in the amount of $20 million.

Full Funding For the Next Three Years

A large portion of the capital raise will be used to fund the development of the clinical portfolio of cancer vaccine technologies and related intellectual property from Ohio State University and the Mayo Clinic, a move that promises to put Imugene at the forefront of the specialized and rapidly growing B-cell peptide and PD-1-targeting cancer vaccine sector (see above).

In addition, proceeds will go towards expanding Imugene's ongoing clinical programs through key clinical data readouts and value inflection points (see chart on page 4). Most notable of these initiatives is the adaptive study for the Phase 1 PD-1 vaccine candidate newly acquired through the OSU/Mayo transaction. Also falling under the funding umbrella are R&D programs at OSU to advance additional vaccine candidates, the GMP manufacturing and GLP pre-clinical studies for clinical candidates and general working capital for the company.

Acquisition Highlights

- Strengthens and broadens IMU's B-cell cancer vaccine pipeline
- Acquisition of wide body of clinic-ready B-cell technology, including checkpoint inhibitors and combination therapies, with a full spectrum of indications and targets to choose from
- Clinical programs broaden to include US and EU centres
- Expanded Imugene platforms and technologies fully patented

Imugene Completes Licensing Transaction with OSU/Mayo - cont'd from page 1

Whereas the acquired intellectual property serves to strengthen and broaden Imugene's B-cell cancer vaccine pipeline, Professor Kaumaya's work in the area of checkpoint inhibitors (such as PD-1) and tumor-associated antigens is also highly complementary of Imugene's existing portfolio.

Multiple Clinical Candidates and Programs

The transaction provides several major opportunities for Imugene, including the acquisition of a Phase I, IND-ready PD-1 vaccine and an FDA-approved HER-2 vaccine, currently in a NCI-funded, Phase 2 clinical trial. Additionally, the intellectual property estate is comprised of a broad patent portfolio which includes six patent families consisting of 16 pending applications or issued patents for compositions of matter and/or methods of use of a large range of B-cell peptide and cancer vaccines. The agreement also expands Imugene's R&D capability via access to Professor Kaumaya's comprehensive translational laboratory facilities at Ohio State under a three year research contract.

Attractive Terms

The terms of the license include an initial upfront payment, with the lion's share of the licensee fees to be paid by way of single digit royalty payments based on future product sales. The license, valid through the expiry of the last patent, is worldwide, exclusive and sublicensable.

MEET THE DOCTORS
behind the OSU/Mayo License

THE INVENTOR:
Professor Pravin Kaumaya

- Professor of The Medicine Department of Obstetric Gynecology at Ohio State University's Wexner Medical Center and The James Comprehensive Cancer Center
- Expert in vaccine research with an emphasis on peptide vaccines for cancer
- Research focus in tumor immunology, mechanisms of tumor cell-immune cell interactions, and immune mechanisms
- Over 130 peer-reviewed articles in major scientific journals
- Fellow of the American Association for the Advancement of Science (AAAS), treasurer of American Peptide Society
- Conducted first NCI-funded and FDA-approved Phase 1 trial in Stage 4 cancer patients with solid tumors in several indications at The Ohio State University Comprehensive Cancer Center

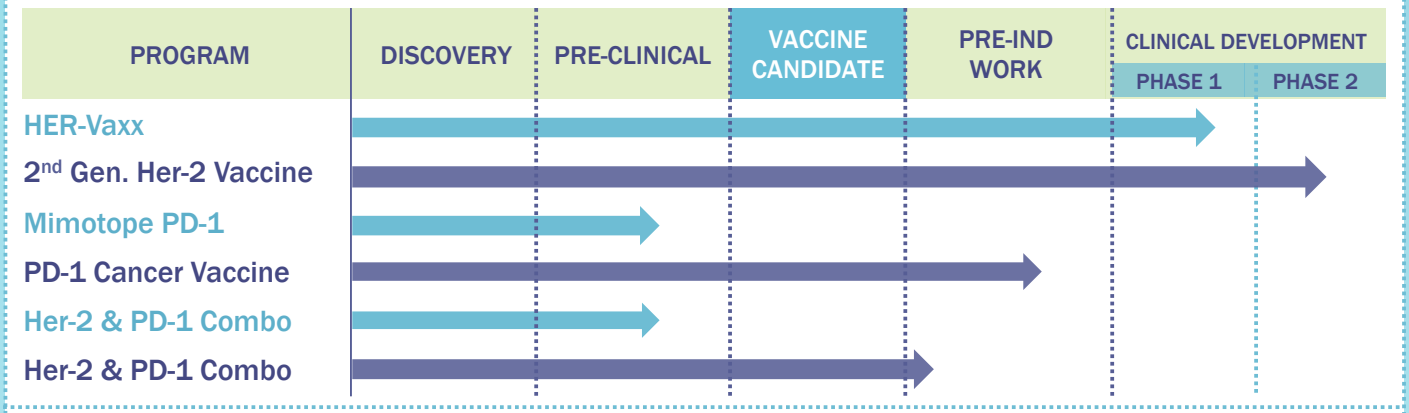
THE PRINCIPAL INVESTIGATOR:
Doctor Tanios Bekaii-Saab

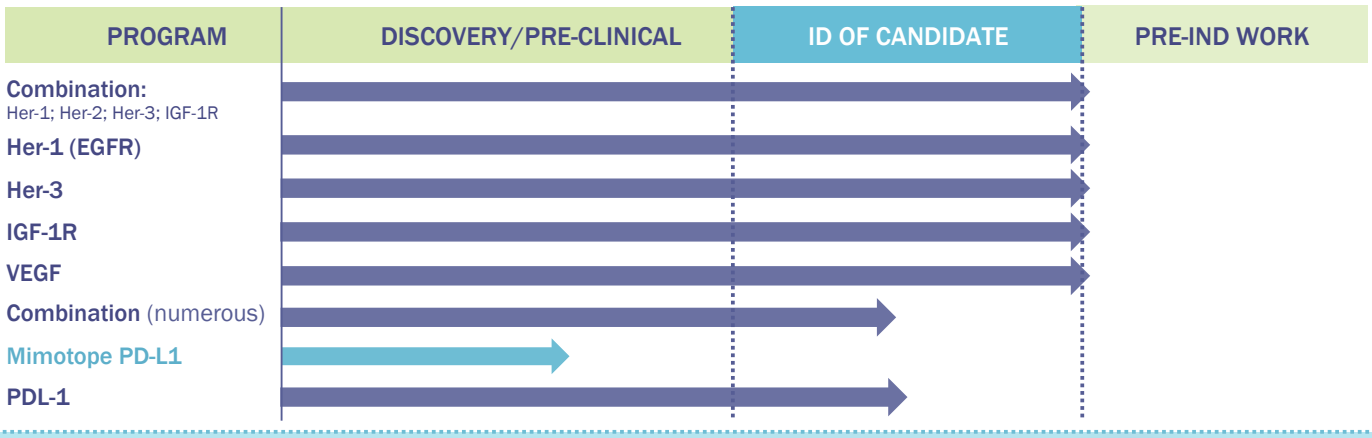
- Professor of Medicine at The Mayo Clinic College of Medicine and Science Co-Leader of The Gastrointestinal Cancer Program at The Mayo Clinic Cancer Center
- Medical Director of The Cancer Clinical Research Office and Senior Associate Consultant at the Division of Hematology/Oncology in the Dept. of Internal Medicine at the Mayo Clinic
- Focus on new therapeutic strategies, particularly for molecular-targeted and immune therapies in gastrointestinal malignancies
- Principal Investigator on numerous clinical trials, with work funded by the National Cancer Institute and multiple industry partners
- Member of the American Society of Clinical Oncology, the American Association for Cancer Research, and the American College of Physicians.
- Authored or co-authored over 350 peer-reviewed publications, abstracts, and book chapters

Imugene:

OSU/Mayo:

EXPANDED IMUGENE PIPELINE
With the OSU/Mayo License



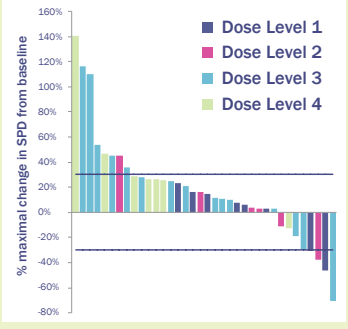


LEAD PROGRAMS

Her-2 Vaccine
(Phase 2)

- **2nd generation Her-2 vaccine currently in Phase 2 clinical development**
- Phase 1 completed with 10 out of 24 patients' best response rate showed stable disease and 1 out of 24 partial response
- Phase 2 currently recruiting patients with breast, GIST, colon and ovarian cancer tumours
  - Endpoints: Efficacy signals
  - Interim data due in Dec 2019
- Median prior therapy was 4, some upwards of 11 prior lines of therapy
- Patients' decision to forego chemotherapy.

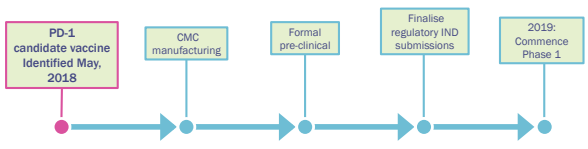
ACQUIRED HER-2 VACCINE: ENCOURAGING PHASE 1 TRIAL RESULTS



PD-1 Vaccine
(Phase 1, IND-ready)

- **PD-1 vaccine candidate identified**
- Vaccine candidate tested in pre-clinical immunogenicity and industry-validated mouse models of cancer
- Ready for GMP manufacture and formal IND-enabling GLP preclinical tox/safety pharmacological studies
- ***Outperforms gold standard PD-1 monoclonal antibodies*** in mouse models of colon cancer when administered individually or in combination with Her-2 vaccine
- Encouraging data when combined with acquired Kaumaya Her-2 vaccine

PD-1 VACCINE PHASE 1 DEVELOPMENT PATH 2018-2019



The Promising SCIENCE behind the OSU/Mayo License

"With the rapid rise of industry attention to the PD-1 checkpoint inhibitor, a PD-1 vaccine utilizing B-cell technology represents a paradigm shift in cancer immunotherapy."
- Leslie Chong, Imugene CEO

A Golden Opportunity

Monoclonal antibody therapies are a cornerstone of cancer therapies, with a market value totalling over US$65 billion. The checkpoint inhibitor class of monoclonal antibody drugs have shown strong promise in the treatment of cancer since they first arrived on the scene in 2014. Demand for these drugs continues to exponentially grow, prompting leading pharmaceutical companies such as Merck, BMS and Genentech/Roche to invest big bucks into their development. In particular, several I/O drugs, such as Keytruda and Opdivo (with sales in 2017 of US$3.8B and $4.9B, respectively), have focused on the PD-1 checkpoint target. *Read more about the growing PD-1 space on page 5.*

The vast majority of these vaccines utilizes T-cell peptides. However, Imugene's pipeline is comprised of B-cell peptide vaccines, a technology that has several advantages over traditional T-cell vaccines. *Read more about the superiority of B-cell technology over T-cell technology on page 6.*

Imugene in the Forefront

With the OSU/Mayo acquisition, Imugene secures a strong position of a highly promising and largely unexplored technology (B-cell peptide vaccines) within a very hot space in immuno-oncology (PD-1 checkpoint inhibitors). With the synergistic addition of Professor Kaumaya's impressive body of work on B-cell and PD-1 vaccines, which is highly complementary to Imugene's existing pipeline, Imugene iwell-positioned in this space.

A Good Match

Even before the OSU/Mayo deal, Imugene has been no stranger to the potential that B-cell technology represents for cancer-fighting drugs. Imugene's HER-Vaxx program, a B-cell peptide vaccine currently in Phase 1b/2 clinical trial, could demonstrate advantages over existing FDA-approved monoclonal antibody cancer therapies.

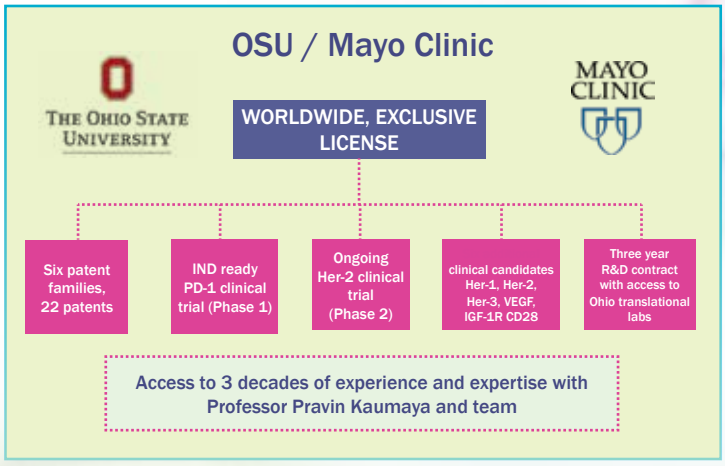
Now with the acquisition of OSU/Mayo portfolio, which also features PD-1-targeting B-cell peptide vaccines, Imugene's existing pipeline will be augmented and accelerated, positioning the company at the forefront of this segment of the industry.

Promising Results

There is already data to back up Imugene's investment in this technology. In industry-recognized mouse models of colon cancer, the PD-1 B-cell vaccine advanced by OSU/Mayo has been shown to outperform the gold standard PD-1 monoclonal antibody therapy.

Even more exciting are the results yielded from the combination of this vaccine with OSU/Mayo's Phase 2 Her-2 vaccine, also acquired by Imugene. In the same study mentioned above, the combination of these two vaccines demonstrated tumor growth inhibition compared with the existing monoclonal antibody control.

Armed with such data, Imugene's innovation within the monoclonal antibody space, already valued in the billions and rapidly on the rise, speaks to an encouraging future for Imugene.



The PD-1 Space Continues to Heat Up

A Booming Market for Checkpoint Inhibitors

There is a tremendous amount of activity surrounding the checkpoint inhibitor class of monoclonal antibody cancer therapies. Since the 2014 FDA approval of the first PD-1 checkpoint inhibitor drug, Keytruda, the number of these drugs being developed has skyrocketed. The Cancer Research Institute estimates that there are currently over 1500 clinical trials testing checkpoint inhibitors drugs.

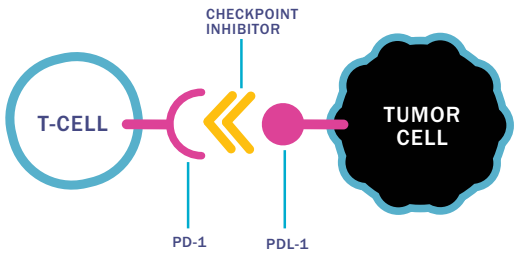
There's a good reason for this surge in the industry. Checkpoint inhibitors have yielded impressive results in a certain percentage of patients with cancer, including those who were not responding to conventional treatments. As a result of its success, the global immune checkpoint inhibitors market is anticipated to cross US$25 billion by 2022, according to a 2018 report by market research firm RNCOS. It's also forecasted that checkpoint inhibitors will account for a substantial percentage of all cancer immunotherapy revenue within the decade.

How and Why They Work

Checkpoint proteins, such as PD-1, exist on the surface of healthy cells and send signals to the immune system letting it know that a cell does not need its assistance. However, cancer cells are able to trick the immune system into treating them as though they are normal cells which effectively "turns off" an immune response to that cancer cell, which is then able to proliferate. Checkpoint inhibitor drugs work by blocking these proteins from sending these errant signals, allowing the immune system to respond appropriately to cancer cells.

Because checkpoint inhibitors work by using the body's own immune system to target tumours, they've demonstrated an impressive ability to combat several different forms of cancer, particularly when used in combination with other types of cancer therapies. The first wave of checkpoint inhibitor drugs targeted the CTLA-4 protein, but subsequent drugs that focus on PD-1 and PDL-1 proteins have shown to be better tolerated by patients.

Checkpoint inhibiting drugs block PD-1 and PDL-1 checkpoints from de-activating T-cells



Imugene's PD-1 Vaccine

Imugene has an answer to the growth opportunity that exists with checkpoint inhibitors. In preclinical tests,the Phase I-ready PD-1 targeting vaccine candidate being developed by Imugene and Professor Kaumaya outperformed the current gold-standard PD-1-targeting monoclonal antibody drug in validated mouse models of colon cancer. Furthermore, the same study demonstrated that this same drug significantly inhibited tumor growth when combined with Professor Kaumaya's Phase II Her-2 vaccine. The PD-1 vaccine is scheduled to move into Phase I clinical trials in 2019.

Estimated PD-1/PDL-1 Market Size and Evaluation

Drug	Name	Company	Status	Sales Estimate 2024 (USD$Mn)
Pembrolizumab	Keytruda	Merck	Approved	15,025
Nivolumab	Opdivo	Bristol Myers	Approved	20,050
Atezolizumab	Tecentriq	Roche	Approved	9,355
Avelumab	Bavencio	Pfizer	Approved	1,685
Durvalumab	Imfinzi	AstraZeneca	Approved	4,020
				50,135

The B-CELL Advantage

As discussed previously in this newsletter, checkpoint inhibitor monoclonal anitbody drugs have been taking the oncology world by storm since their debut in 2011. The numbers speak for themselves: the current monoclonal antibody market is roughly US$65 billion. Clearly, these drugs are working, but could they work even better?

The Under-Explored B-Cell

In stimulating the immune system, there are two main types of cells that can be produced: the T-cell and the B-cell. Whereas the function of T-cells is to either help stimulate the body's immune response or to attack mutated or infected cells, B-cells are busy making antibodies which identify and/or kill damaged cells.

Oddly, when it comes to immunotherapies, very little attention has been directed towards the B-cell. Monoclonal antibody drugs must be manufactured synthetically, in a facility rather than naturally inside of the body, and multiple treatments are required which has negative implications for many factors including safety and cost.

Safety, Efficacy, Durability, Usability, Cost

B-cell vaccines offer a unique opportunity to intervene at multiple points in the immune system and create immune memory which enhances the durability of response. Unlike synthetic antibodies which can come with a myriad of side effects, B-cell vaccines stimulate the body's own natural immune response from within the body. The antibodies are then continuously produced, generating a lasting immune response that may inhibit tumour recurrence. Furthermore, they don't involve multiple treatments, which makes for a safer, less invasive, and far less costly treatment.

B-Cell Innovation at Imugene

Imugene is one of the few biotech firms that has taken the initiative to explore B-cell technology. Now, with the OSU/Mayo acquisition, Imugene will be extending and accelerating its existing B-cell R&D programs, including the addition of a 2nd generation Her-2 B-cell vaccine currently in Phase II clinical development.

POTENTIAL ADVANTAGES OF B-CELL BASED ANTIBODIES VS. SYNTHETIC ANTIBODIES

Issue	Natural B-Cell Derived Antibodies	Synthetic Antibodies
Safety	Stimulates the immune system to produce natural Abs, potentially safer, as demonstrated by HER-Vaxx	Synthetic Ab, with side effects (including ventricular dysfunction, CHF, anaphylaxis, immune mediation)
Efficacy	Polyclonal Ab response reduces risk of resistance and potentially increases efficacy	Monoclonal Ab - single shot
Durability	Antibodies continuously produced a lasting immune response to inhibit tumor recurrence	Half life up to 12 days sometimes less
Usability	Potentially low numbers of vaccinations required per year	Requires regular infusion
Cost	Low cost of production enables greater pricing flexibility facilitating combinations and opening up additional markets	Expensive course of treatment >USD100K per year in the US

IMUGENE
in the media

Biotech Entrepreneur Hopper Brings Companies To Life

May 14, 2018

THE AUSTRALIAN

"The Sydney-based businessman has served as a founder, chairman, non-executive director or chief executive of more than 14 companies in the US, Australia and Asia, and says the $500m sale of cancer drug developer Viralytics to pharmaceutical giant Merck is easily his career highlight."

"'I have a firm view based on a lot of bad experience that big pharma execs don't translate to a good CEO of a small biotech,' he says. He adds that an exception to his rule is Leslie Chong, the head of Imugene, an Australian listed drug developer that he chairs. Mr. Hopper is hopeful Imugene will follow the lead of Viralytics be globally recognised for its work in the cancer space.

Could Precision-Engineered Peptide Epitopes/Vaccines Be The Key To A Cancer Cure?

Editorial by Pravin TP Kaumaya

"Combination cancer vaccines with peptide mimics have the potential to treat existing cancer and prevent its recurrence."

- PT Kaumaya, Future Oncology

"The potential for personalized medicine with a new generation of molecularly targeted cancer therapeutics and vaccines with more efficacious and less toxic antitumor effects are excitingly close to reality."

- PT Kaumaya, Future Oncology

Future ONCOLOGY

Imugene To Raise $20m, Fund Trials At Ohio State University, Mayo Clinic

June 7, 2018

AUSTRALIAN FINANCIAL REVIEW

"This is an acquisition of well advanced technology. It gives us a broad opportunity for several cancer indications and we are able to compete in the checkpoint inhibitors space, such as immuno-oncology drugs Keytruda and Opdivo."

- Leslie Chong, quoted by The Australian Financial Review

KEY DATES FOR ENTITLEMENT

7 June	• Prospectus date • Announcement of the Equity Raising
12 June	• Ex date
13 June	• Record Date for Entitlement Offer (7.00pm, Sydney time)
18 June	• Prospectus and Entitlement and Acceptance Form despatched • Offer opens
3 July	• Offer closes (5.00pm, Sydney time)
4 July	• New Shares quoted on deferred settlement basis
6 July	• Announcement of results of Entitlement Offer and under-subscriptions
9 July	• Extraordinary general meeting to approve the issuance of shares and options under the Placement. Location: Offices of Whittens & McKeough, Level 29, 201 Elizabeth Street, Sydney NSW 2000
11 July	• Allotment of New Shares issued under the Entitlement Offer
12 July	• Despatch of holding statements for New Shares issued under the Entitlement Offer • Normal ASX trading for New Shares issued under the Entitlement Offer
13 July	• Allotment of shares issued under the Placement
16 July	• Despatch of holding statements for New Shares issued under the Placement • Normal ASX trading for New Shares issued under the Placement

IMUGENE

Investor Contact

Imugene Limited

Level 3, 62 Lygon St

Carlton, Victoria

Australia 3053

+61 3 9824 5254

Connect with Imugene

www.facebook.com/Imugene/

@TeamImugene

www.linkedin.com/company/imugene/

IMUGENE LEADERSHIP

Ms. Leslie Chong
Chief Executive Officer &
Managing Director
Leslie.Chong@imugene.com

Mr. Paul Hopper
Executive Chairman
paulhopper@lifescienceportfolio.com

Dr. Axel Hoos
Non-Executive Director

Mr. Charlie Walker
Non-Executive Director

Prof. Ursula Wiedermann
Chief Scientific Officer

Dr. Nick Ede
Chief Technology Officer

Dr. Anthony Good
Vice President of Clinical Research