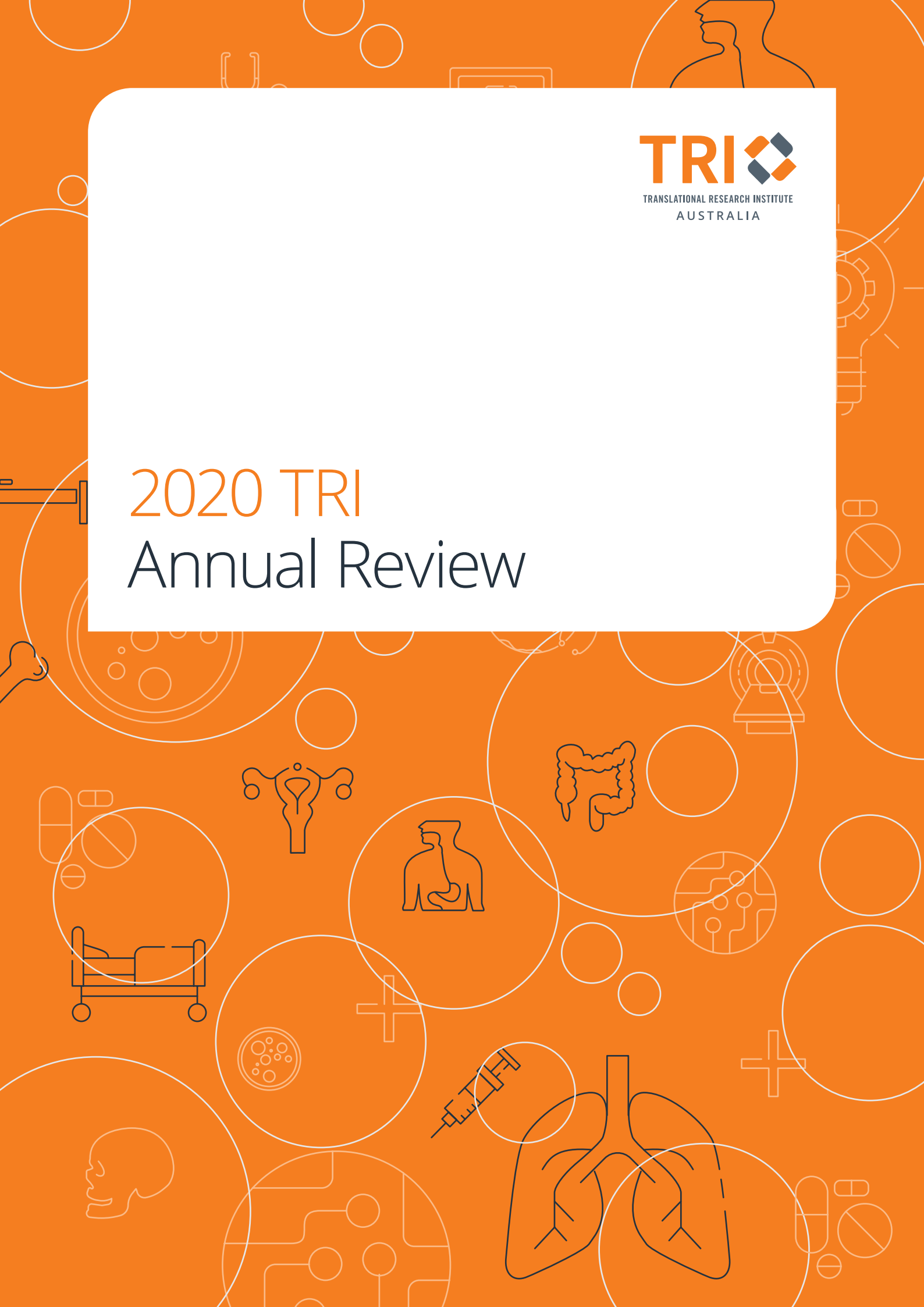


# 2020 TRI Annual Review





TRANSLATIONAL RESEARCH INSTITUTE  
AUSTRALIA

## ACKNOWLEDGEMENT OF COUNTRY

*TRI acknowledges the traditional custodians of country throughout Australia and recognises their continuing connection to land, waters and community. We pay our respects to them and their cultures; and to Elders past and present.*

### Key

Name	Acronym
The University of Queensland	UQ
University of Queensland Diamantina Institute	UQDI
Queensland University of Technology	QUT
Institute of Health and Biomedical Innovation	IHBI
Princess Alexandra Hospital	PA Hospital
Translational Research Institute	TRI
Good Manufacturing Practice	GMP
Medical technology	Medtech
Associate Professor	A/Prof
Professor	Prof
Cancer & Ageing Research Program	CARP
Medical Technology and Pharmaceutical	MTP
Therapeutic Goods Administration	TGA

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# 2020 Highlights

## 2020 TRI ACHIEVEMENTS & NATIONAL STANDING

**\$32m** in grants

**37** awards – local, national and international

**103** research leaders

**28** industry collaborations

**338** international collaborations

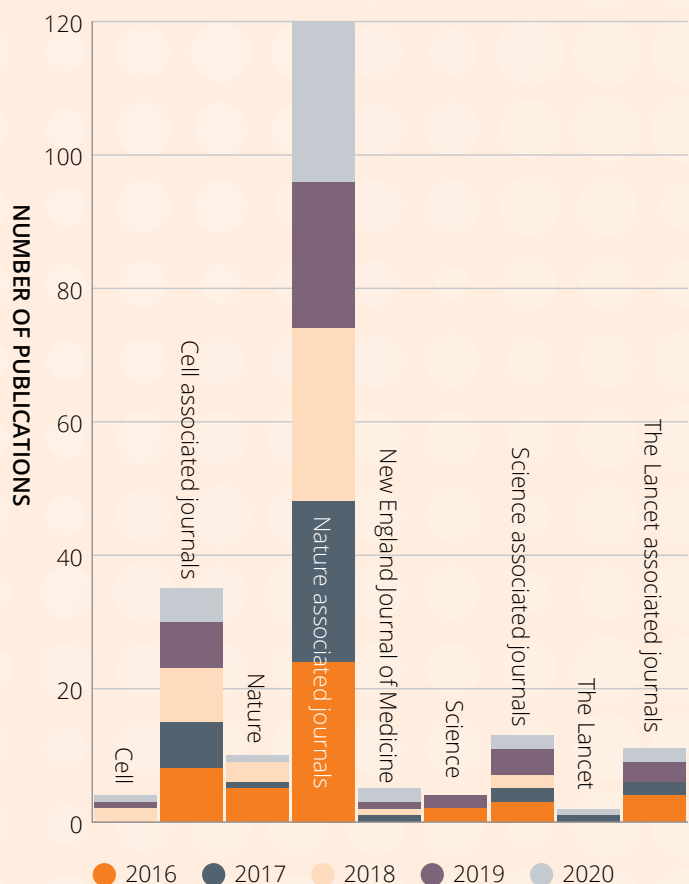
**139** clinical trials

**6** companies based at TRI

**102** commercial staff

**87** TRI staff

## PUBLICATIONS IN SELECTED TOP TIER JOURNALS: 2016-2020



## 2020 TRI RESEARCH PUBLICATION STATISTICS



**594**

publications/  
scholarly output\*

**19%**

in top **10%**  
most-cited  
publications  
worldwide (field-  
weighted)



**2988**

citations for 2020  
publications



**38%**

in Q1 journals

**2.7%**

in top **1%**  
citation  
percentiles



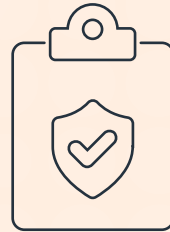
**81**

publications  
mentioned in  
**703** news stories  
in **28** countries



**14,563**

mentions in  
social media

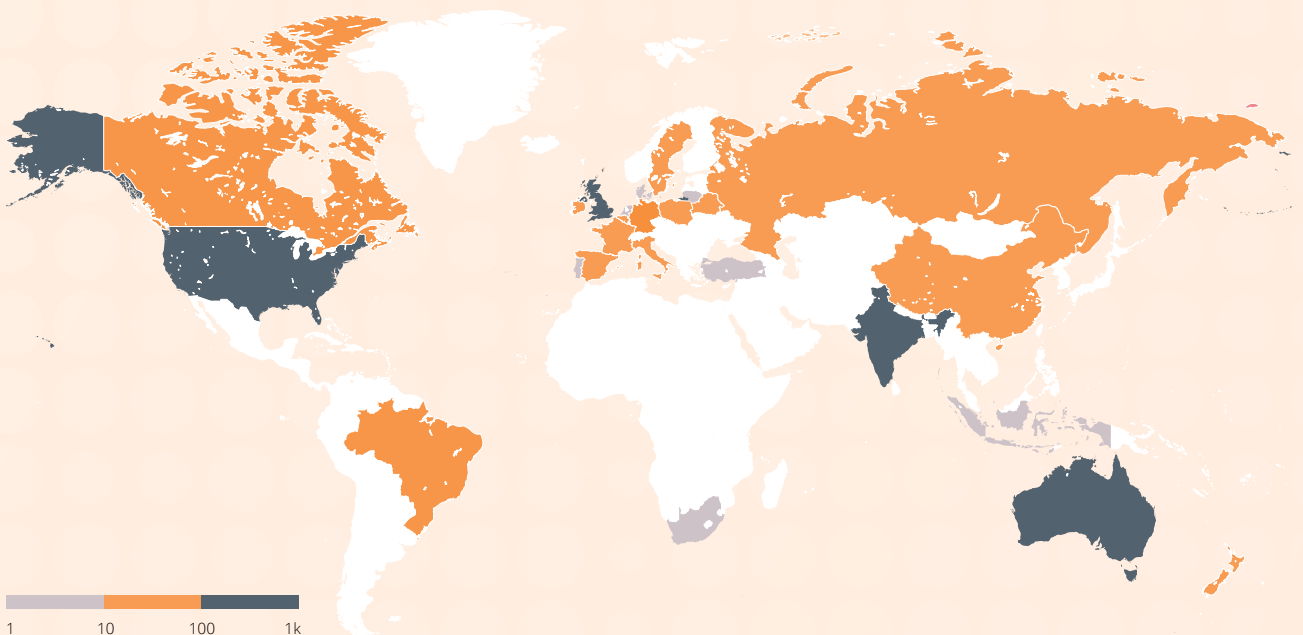


**5**

policy documents  
mention  
publications

\* Peer-reviewed journal publications, book series, and stand-alone books (including edited volumes, monographs, text books and reference works)

## 2020 GLOBAL MEDIA COVERAGE OF TRI BASED PUBLISHED RESEARCH



# About TRI

TRI was constructed with a \$356 million investment from the State and Federal governments, Atlantic Philanthropies, Queensland University of Technology and The University of Queensland, and opened in 2012. The shareholders in this Australian first collaborative research venture are UQ, QUT, Mater Research and Queensland Health.

TRI improves the translation of innovative research by providing:

- world class research and scientific laboratory facilities
- small scale manufacturing capabilities
- clinical trial facilities and expertise with links to clinicians
- start-up commercial facilities with links to industry, government and other funding opportunities
- an education and training program aimed at producing a skilled workforce along the entire translational pathway.

TRI is dedicated to building the entrepreneurial skills of scientists and clinicians and the translational skills of start-ups.

In addition to the main building, TRI has a clinical trial facility within the PA Hospital in Metro South Health; a children's clinical trial facility on the Queensland Children's Hospital campus and leases a large-scale bio-pharmaceutical manufacturing facility to Patheon, Thermo Fisher Scientific.

The international adoption of the Gardasil cervical cancer vaccine, one of Australia's most successful examples of

translational research, co-invented by TRI's foundation CEO, Prof Ian Frazer was a catalyst for TRI's development.

After eight years' operation TRI has 632 scientists, 95 clinicians and 175 support staff, \$37 million in research equipment and over 100 current clinical trials. TRI has six start-ups, who have grown to 102 staff and attracted >\$50 million in funding while here. The commercial space is oversubscribed with 13 companies on the wait list and a further 27 who have expressed a need to access the facilities and services offered at TRI in the next two years.

## VISION

TRI will be a global leader in the effective translation of research and innovation into improved healthcare.

## MISSION

To promote the translation of innovative research into clinical practice, TRI provides world-class research facilities, effective clinical interfaces, links to industry and government, and a workforce effective in translational pathways.

# TRI STRATEGIC PLAN 2019–2021

# 1

## **GOAL 1:** PROMOTE AND INCREASE INNOVATIVE TRANSLATIONAL RESEARCH

**Outcome:** Recognition, both nationally and internationally, for the successful interface of academia, medicine and industry and for translational outcomes.

---

# 2

## **GOAL 2:** PROVIDE WORLD-CLASS FACILITIES

**Outcome:** Enhancement of TRI's competitive position nationally and internationally and attraction of world-class clinicians and researchers to TRI.

---

# 3

## **GOAL 3:** EFFECTIVE CLINICAL INTERFACES

**Outcome:** Improved healthcare by ensuring that early innovative translational research is successfully implemented into clinical practice, where possible with industry interface. This will enhance the national and international standing of TRI and partners.

---

# 4

## **GOAL 4:** STRENGTHEN RESEARCH LINKS TO INDUSTRY AND GOVERNMENT

**Outcome:** TRI, with its partners and stakeholders, will be well prepared to participate in national and international initiatives.

---

# 5

## **GOAL 5:** GENERATE HEALTH WORKFORCE CAPABILITY IN THE TRANSLATION OF INNOVATION

**Outcome:** The next generations educated in how best to innovate, translate and interface with industry. Expansion of Australia's medical technology, healthcare delivery and export industries, generating new jobs and economic growth.

# MESSAGE FROM THE TRI CHAIR



Image: Emeritus Professor David Siddle.

The TRI Board is pleased with how well the four shareholders and their teams that are based at TRI are working together, not just on the 2020 COVID-19 Response, but also on identifying and agreeing on priorities in education and training, equipment, collaboration and clinical engagement. The Board believes that stronger collaboration will lead to better outcomes for translational research and more opportunities to access funding.

In order to improve the outcomes for the TRI Strategic Plan 2019 – 2021, the Board identified a number of focus areas for each Goal.

For Goal 1, we concluded that TRI needed to increase collaboration between the four Shareholders to improve translational outcomes. The first challenge was to identify current research and collaborations, which was greatly advanced in 2020, and to support combined grant applications.

To provide world-class facilities (Goal 2), the Board sought a focus on working with our shareholders to ensure a smooth transition of the management of digital infrastructure and services to TRI. The transition was completed in 2020 with continuing activities to improve cybersecurity and data sharing.

With a management focus on clinical outreach (Goal 3), stronger ties with senior clinician researchers resulted in greater utilisation of TRI's clinical trial facilities and management services in 2020.

Surprisingly in a time of decreased community interaction due to COVID-19, TRI substantially increased its engagement with both industry and government in 2020 (Goal 4). Our focus was on providing a solution to a critical gap in Australia's ability to improve healthcare through innovation. Specifically, TRI wishes to construct Australia's first 'scale-up' facility for successful Medtech start-ups to move to the next stage of product development.

The focus for Goal 5 was to increase knowledge of the translational pathway, with success based on participant feedback and numbers for events. This was also impacted by the inability to hold physical events due to COVID-19 and adapting to an online format. However, by improving TRI's online delivery of events, a substantial number of participants benefited from some 145 events.

**Emeritus Professor David Siddle**  
*TRI Chair*



# MESSAGE FROM THE TRI CEO

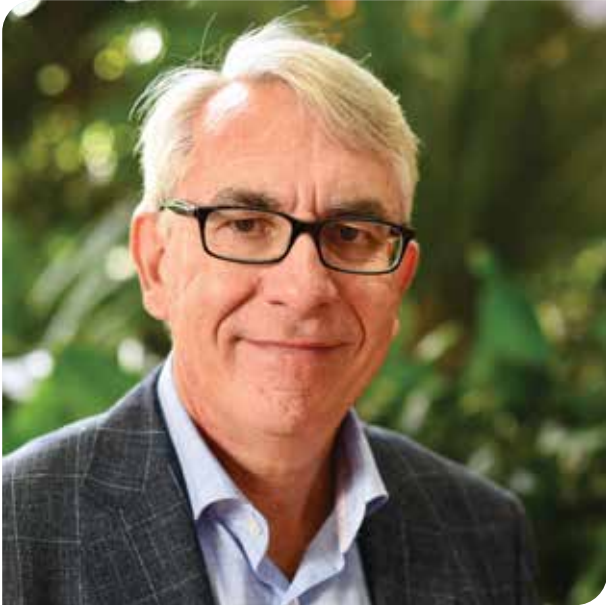


Image: Professor Scott Bell.

In the year of living under the threat of a global pandemic, TRI placed considerable effort on building relationships with key people and organisations in the academic, health, government and commercial sectors. This comprehensive program of engagement focused on:

- keeping critical research and facilities operational while protecting the health of our staff and the community during the pandemic
- identifying and raising awareness of the achievements and needs of translational research and researchers at TRI
- strengthening partnerships and collaboration between academic and clinician researchers and with industry partners
- increasing clinical translation through clinical engagement.

## COVID-19 Response

TRI overcame the challenges presented by COVID-19 through a collaborative, consistent response with clear, timely messages.

Behind the scenes' planning and monitoring occurred through the daily meetings of the TRI COVID-19 Response Team, and the twice weekly meeting with the Directors and Operational Leads of TRI's partner institutes, to find mutually acceptable solutions and approved, consistent messages and protocols.

The response in 2020 was based on Queensland Government health advice and included over 20 building-wide emails, webinars, printed and electronic signage, use of QR codes and COVID-safe event plans.

In 2020, TRI-based research groups joined the global race to find new preventions, diagnostics and treatments for COVID-19 as the pandemic galvanised the rapid release of new funding by state and federal governments, and philanthropic agencies.

## TRI Translational Pathway

Translational research focuses on health and medical research which aims to translate laboratory-based research into the clinic to improve the detection, diagnosis and treatment of disease and improve health outcomes for the population. It almost invariably takes over a decade and costs more than \$1 billion to take novel scientific discoveries through to a new diagnostic or treatment for patients. Despite this time and investment many discoveries still fall by the wayside, even those that have reached pivotal, Phase III human clinical trials.

Over the past two decades, governments around the world have increasingly invested in programs to support translational research pathways and training opportunities that aim to decrease the time it takes for such discoveries to reach the clinic. In parallel, there has been rapid growth in the number of scientific journals focussing specifically on translational science, and conferences and courses for training scientists and clinicians in translational research approaches. In Australia, the Federal Governments' investment in the Medical Research Future Fund (MRFF) has clearly demonstrated its focus on ensuring the investment in research not only generates new knowledge, but that this knowledge ultimately leads to better health outcomes for Australians.

Of course, there is no 'one' pathway for any health improvement and it is not 'one directional' either. One approach begins in the clinic where a new diagnostic or therapy is applied to patients receiving healthcare, which ultimately leads to evidence to support implementation to the broader patient population.

Another approach is where a discovery leads to early-stage translation, often in an academic research setting. There are a number of options for progressing from this stage including licensing the development to an existing company or setting up a start-up company and seeking funding. The start-up company then takes on the role, usually in collaboration with researchers, of progressing the new diagnostic or therapy to the next stage of the translational pathway.

## TRI Translational Pathway – resources and partnerships

In early October, the 2020 Nobel Prize in Chemistry was awarded to the first all-female team, Prof Jennifer Doudna and Prof Emmanuelle Charpentier, for the discovery of gene editing using the platform of CRISPR/CAS9 technology. This scientific advance has to date,

and will continue to, revolutionise discovery research and potentially translate to new therapies for many diseases. The discovery of the CRISPR/CAS9 and its ultimate application in the clinic is a true example of the importance of bridging discovery science and translational research pathways, thus emphasising the importance of the approach of “bench to bedside to bench”.

During the COVID-19 pandemic, it has become clear that the limited Medtech manufacturing industry in Australia, contributed to critical supply chain gaps and delays. Australia excels in research discoveries and early-stage translation. However, a decline in Australia's manufacturing capabilities has meant that many of these discoveries, including Professor Ian Frazer's Gardasil vaccine for cervical cancer, need to move overseas to conduct large-scale clinical trials.

Rather than selling its discoveries, Australia should be growing its advanced health and medical manufacturing capability for Phase II and Phase III clinical trials.

That is why time was spent in 2020 engaging with industry and government to seek funding and support for a new manufacturing facility.

The concept is for a scale-up bio-medical facility, co-located with TRI, to provide a local clinically integrated capability and infrastructure, enabling economic benefit to Australia via solutions to global health issues. The facility will support Medtech start-ups and SME's in their translational journey from discovery to clinical products by providing specialist space, including regulated GMP cleanrooms, equipment, skilled support staff and industry access to clinical trials, in a collaborative environment, creating a sustainable pathway to growth.

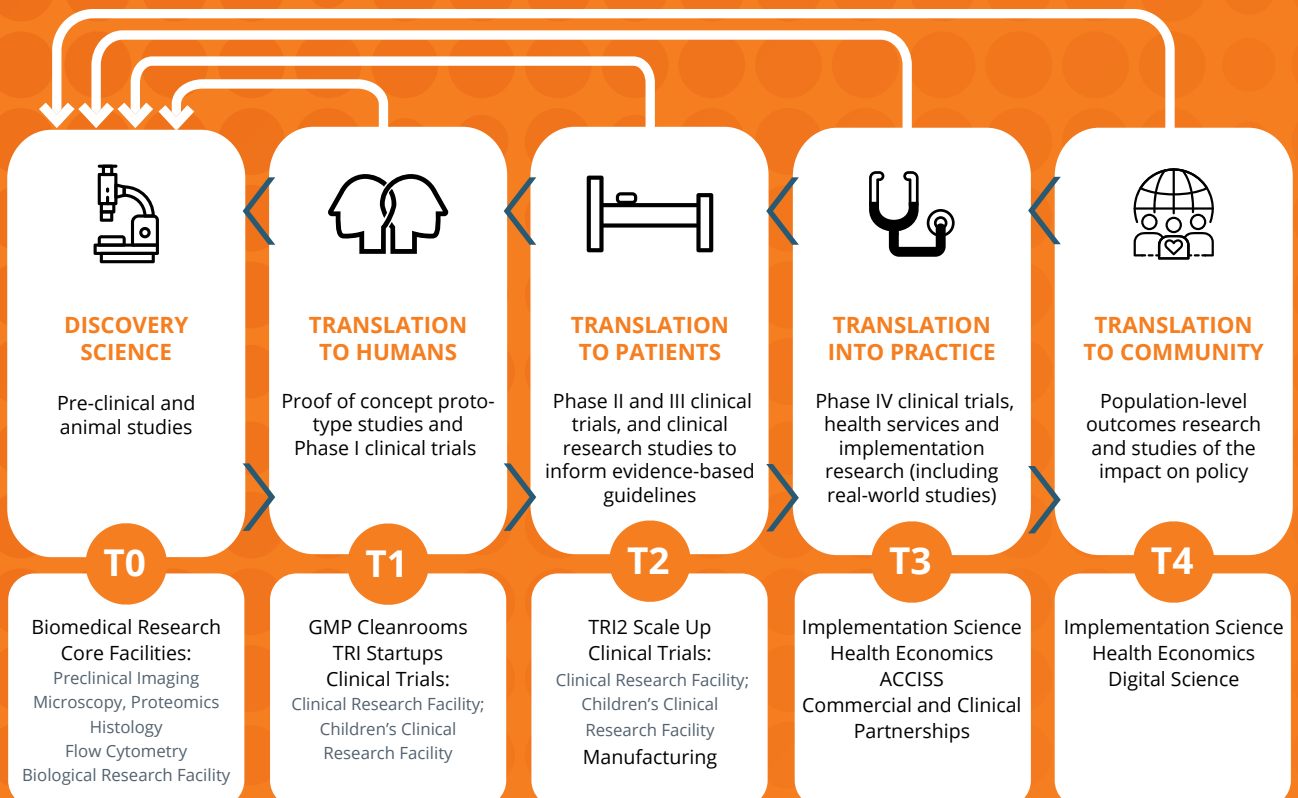
Additionally, this facility will address the advanced skills pipeline by providing the regulated manufacturing GMP environment for hands-on training of research and technical staff.

Another challenge is to support clinician scientists to ensure translational research pathways are clinically relevant. There is a need to ensure clinical connectedness between the discovery scientists to ensure that the key questions in the clinic today are being addressed in the basic science laboratories (bench to bedside and back to the bench). The important final challenge is to make clinical trial platforms readily available to support translational research nationally.

**Professor Scott Bell**  
TRI CEO



## TRI TRANSLATIONAL PATHWAY – RESOURCES AND PARTNERSHIPS



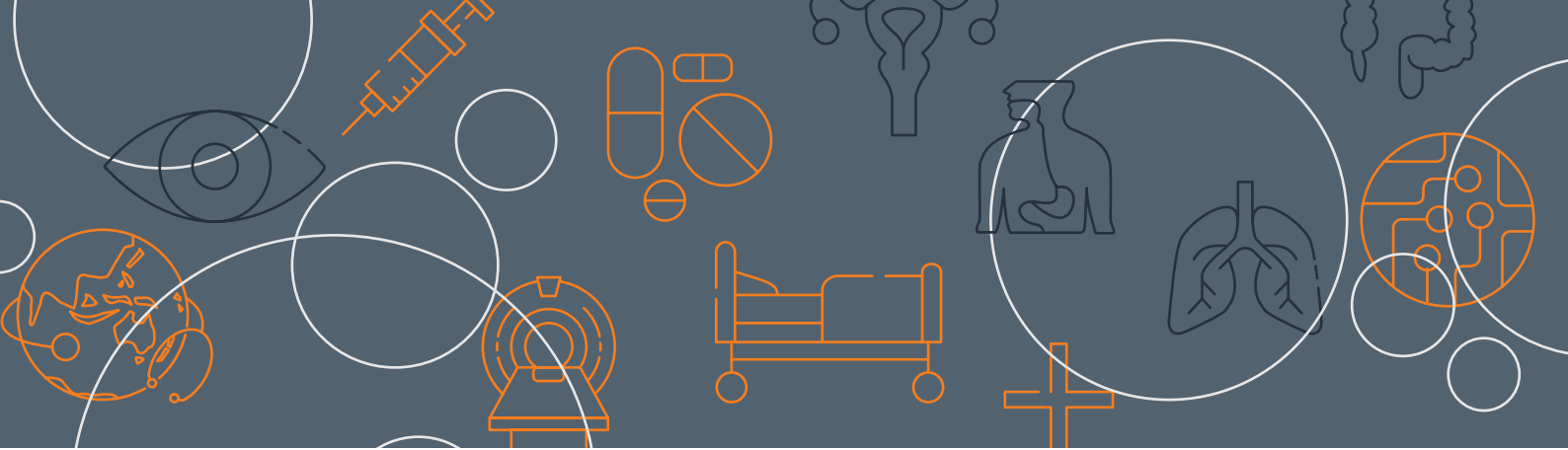
# Goal 1

## Promote and increase innovative translational research

### OUTCOME

Recognition, both nationally and internationally, for the successful interface of academia, medicine and industry and for translational outcomes.





## 2020 HIGHLIGHTS

TRI engaged extensively in 2020 to identify and profile translational research across TRI and establish closer links between researchers, clinicians and industry.

Team leaders and clinicians from our partner institutes were identified and their areas of research (listed in *Appendix 1*).

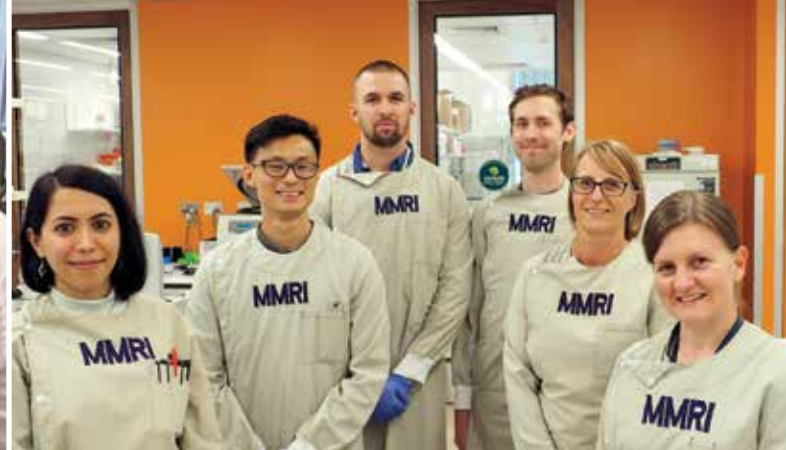
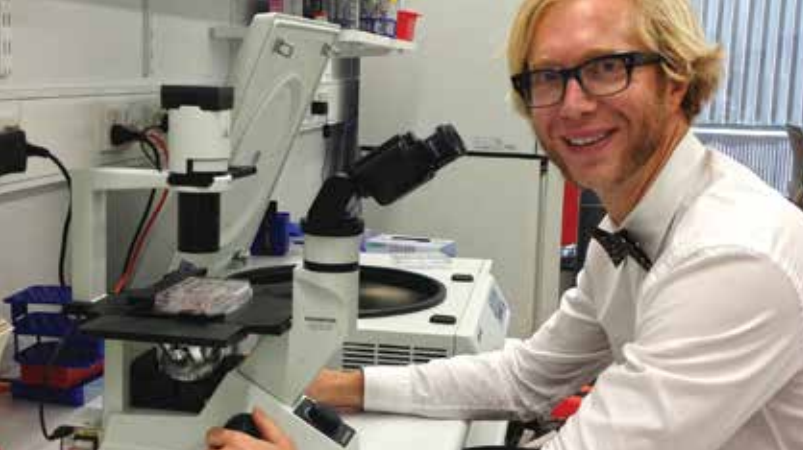
The number of journal articles and citations demonstrates the world-leading nature of research at TRI. In 2020, there were 594 articles with 2,988 citations. The publications highlighted 338 international collaborations and 28 industry collaborations.

Between 2016 and 2020, researchers based at TRI contributed to 3059 publications, which have been cited 57,137 times.

TRI is demonstrating that the combined success in 2020 in obtaining grants of nearly \$32 million (listed in *Appendix 2*) and prestigious awards (listed in *Appendix 3*) places TRI as one of Australia's leading translational health and medical research institutes.

The important scientific and clinical advances generated at TRI are profiled on social media. In 2020, TRI promoted 246 journal articles; 39 successful grant recipients; 27 award winners; and 21 profiles on researchers, clinicians and companies. This, combined with supporting news published by TRI's partners and resident companies meant that the content was delivered to 1.7 million peoples' social media feeds in 2020.

Due to the COVID-19 lockdowns in 2020, there were long periods of time when only those supporting or undertaking critical research were able to access the building. Despite that, TRI still hosted 17 media conferences; 15 film crews; nine tours and a number of photo opportunities.



Images Left to Right: Associate Professor Mike Doran. Associate Professor Kristen Radford and team.

## Using placenta stem cells to help bones mend

A/Prof Mike Doran from QUT is trialling a new regenerative medicine treatment to help mend fractured bones using stem cells taken from placentas.

Doran described the normal healing of damaged bone and other tissues as an elegant cascade of events, with each stage triggering the next, however, in some patients, this cascade is interrupted and the bone ends don't properly knit together.

"In most cases, bone tissue will repair on its own very efficiently, but in some patients, fractures do not heal, and non-unions form," he said.

To help fix 'non-unions', A/Prof Doran and his team are looking at a treatment where placenta-derived stem cells could be implanted into the fracture site to promote tissue repair.

Normally, stem cells produced in the bone marrow are responsible for bone repair. It takes about 100 million cells to make a cubic centimetre of tissue, with stem cells acting like small biofactories at the site of the injury, producing the factors needed for healing.

"The important thing about placenta-derived stromal cells is that they secrete a lot of growth factors that encourage tissue regeneration," he said.

A/Prof Doran is collaborating with QUT colleagues at TRI and the Departments of Orthopaedic Surgery at the Royal Brisbane and Woman's Hospital and at the PA Hospital.

The clinical trial is being funded through a \$100,000 research grant from the National Stem Cell Foundation of Australia's (NSCFA) 2020 Matched Funding Program and Inner Wheel Australia.

## New cancer vaccine for solid and blood cancers

A media release announcing the successful preclinical trials of a potential new cancer vaccine was the most popular TRI news story in 2020.

TRI-based Mater researchers in partnership with UQ have developed a new cancer vaccine, which has shown promising signs in preclinical laboratory studies.

Funded by grants from the Worldwide Cancer Research in the United Kingdom, and Mater Foundation, the new vaccine could be potentially used to treat a variety of blood cancers and malignancies.

Lead Researcher A/Prof Kristen Radford says the study is a major breakthrough for cancer vaccinations.

"We are hoping this vaccine could be used to treat blood cancers, (myeloid leukaemia, non-Hodgkin's lymphoma, multiple myeloma, and paediatric leukaemias) plus solid malignancies including breast, lung, renal, ovarian, and pancreatic cancers, and glioblastoma," she said.

"Our new vaccine is comprised of human antibodies fused with tumour-specific protein, and we are investigating its capacity to target human cells while activating the memory of the tumour cells."

A/Prof Radford explains that the vaccine offers several key advantages over existing cancer vaccines, which have already shown promise in early clinical trials.

"First, it can be produced as an 'off the shelf' clinical grade formulation, which circumvents the financial and logistical issues associated with patient-specific vaccines," she said.

"Secondly, this prototype vaccine targets the key tumour cells required for the initiation of tumour-specific immune responses, thereby maximising potential effectiveness of treatment, while minimising potential side effects."

The study was published in July 2020 in the highly ranked journal 'Clinical and Translational Immunology'.



Images Left to Right: Dr Yaowu He (L), Professor John Hooper (R) and Associate Professor Pam Pollock.

## Ovarian cancer clinical trial begins

In May 2020, TRI-based researchers received vital funding from the Australian Government to trial a new diagnostic for epithelial ovarian cancer (EOC), the first study of its kind in humans.

Mater Research scientist, Prof John Hooper is leading the trial in collaboration with UQ scientists A/Prof Paul Thomas and Prof Trent Munro.

According to Prof Hooper, the trial will assess the safety of a new radio-tracer for ovarian cancer.

"We're going to test if it can help as a contrast agent to detect epithelial ovarian cancer by PET-CT scan," he said.

EOC is the most common type of ovarian tumour that develops in the lining of the ovaries and fallopian tubes.

A/Prof Thomas said while EOC generally responded to initial treatments, the disease eventually progressed in most patients, and narrowed their options for symptom management and remission.

"By administering this new agent, we will attach a tracer to the ovarian cancer cells, which is expected to make detection of the disease easier during radiology scans, similar to what is currently performed with prostate cancer diagnosis," he said.

---

**"By administering this new agent, we will attach a tracer to the ovarian cancer cells, which is expected to make detection of the disease easier during radiology scans..."**

Improved tracking of ovarian cancer may lead to new treatment options for EOC and guide future interventional clinical trials.

The trial is being conducted at the Royal Brisbane and Women's Hospital Nuclear Medicine Department with the support of A/Prof Lewis Perrin's Gynaecological Oncology unit at the Mater Hospital.

## New biomarker for poor prognosis endometrial cancer

A newly discovered endometrial cancer biomarker and diagnostic method could enable detection of the tumour type that is likely to spread and recur so that clinicians can initiate treatment early and stop the primary cancer from attacking other parts of the body.

The new biomarker also could be used to develop therapies to target the cancer before it spreads to other parts of the body.

TRI-based QUT's A/Prof Pamela Pollock and her PhD student Asmerom Sengal have developed and optimised a new technique to specifically detect a gene variant that leads to an aggressive form of endometrial or uterine cancer.

The biomarker is based on a variation of the gene Fibroblast Growth Factor Receptor 2, or FGFR2, which they found was expressed in 40 per cent of 386 patient tumour samples used in the study.

"We found this variant was linked with shorter survival and progression-free survival in a significant number of women," says A/Prof Pollock.

"Based on our findings, we believe this variation called FGFR2c, could be used both in the fine-tuning of prognosis for endometrial cancer, and also as a predictive biomarker that indicates whether the tumour will be sensitive to or resistant to FGFR inhibition.

"It will lead the way to detecting early the 10–15 per cent of women whose tumour is likely to recur and spread within a group that was previously thought to all have a good chance of survival."

A/Prof Pollock said the gene was a viable therapeutic target in endometrial cancer as two FGFR inhibitors have now been approved in the United States for treatment of other cancers that showed FGFR activation.

"We'd like to trial anti-FGFR therapeutics to treat women with high-risk uterine cancer, but first, we need to run critical pre-clinical trials."



Images Left to Right: Vaxxas Nanopatch. Dr Arutha Kulasinghe.

## TRI-led COVID-19 research

In 2020, TRI-based research groups joined the global race to find new preventions, diagnostics and treatments for the coronavirus disease, COVID-19. If successful, their research will help clinicians better diagnose and treat people with the virus and help protect us when we go to work, shop or travel.

### PREVENTATIVES

QUT's Prof Rik Thompson is working closely with collaborators in China and industry to leverage a discovery they made in developing a new breast cancer treatment to fight the spread of COVID-19. They are concentrating on developing a possible body lotion or spray to temporarily block the COVID-19 causing virus from entering cells on the surface of the body. If successful, the product could offer up to five hours or more protection.

His QUT colleague, Dr Mark Adams was awarded an Advance Queensland Fellowship to investigate the effectiveness of a novel anti-cancer therapeutic candidate as a COVID-19 inhibitor. His research looks at using therapeutic treatment to switch off the virus's ability to replicate, and reduce severity of COVID-19 symptoms. His partners in the project include The PA Hospital and CARP Pharmaceuticals.

In the vaccine space, TRI-based Vaxxas Pty Ltd secured a US\$22 million grant, through the U.S. Government's Biomedical Advanced Research and Development Authority (BARDA), to support deployment of their Micro-projection Array Patch (MAP) as a pandemic vaccination platform.

The initial focus will be on a pandemic influenza vaccine, but Vaxxas will also investigate opportunities to improve the performance of other pandemic vaccines, including against COVID-19.

### DIAGNOSTIC

A new blood biomarker test developed by QUT's Dr Arutha Kulasinghe is being commercialised by an Australian biotech company. The test has the potential to rapidly detect the severity of COVID-19 infections when a person with flu-like symptoms first presents to a clinic.

Dr Kulasinghe said results of the test could inform doctors if patients were likely to develop a severe infection and require a ventilator when they first present and thus differentiate them from patients likely to experience a milder case and who could go home and self-isolate.

"This is extremely important for the triage of patients when hospitals are running near or beyond capacity," says Dr Kulasinghe.

### TREATMENTS

UQD's Prof Ian Frazer AC is leading the development of a new anti-inflammatory drug, IC14, as a treatment for people during the early stages of COVID-19 respiratory disease. The drug is the lead therapeutic compound for Brisbane and Seattle-based biotech company, Implicit Bioscience, which was co-founded by Prof Frazer.



Image: Professor Ian Frazer.

Prof Frazer says, "From previous IC14 research in patients with sepsis and lung injury, we hypothesise that the investigational drug will help to control damaging levels of immune response to the viral infection."

QUT's Dr Lisa Philps is using an Advance Queensland Fellowship to pivot two drugs under development for aggressive prostate cancer to combat the deadliest response to COVID-19 infection—acute respiratory distress syndrome (ARDS).

Dr Philps says, "The drugs we are investigating could address the fundamental overwhelming inflammatory response ARDS causes by targeting the signalling hormones responsible for it."

Also from QUT, Prof Derek Richard is hoping to secure funding to run Phase I clinical trials for another potential COVID-19 treatment, which he adapted from a cancer therapeutic he is developing.

Prof Richard is also working with the Cancer and Ageing Research Program's (CARP) drug discovery team to identify further novel compounds. They are using a super-computer to screen thousands of FDA-approved therapeutics and millions of drug-like compounds to see if any of them could be effective in treating COVID-19.





Image: Dr Mark Adams.

## UNDERSTANDING THE DISEASE

Mater Research scientist, Dr Mitchell Sullivan is using an Advance Queensland Fellowship to fund his research into diabetes, kidney disease and COVID-19. He says people with either diabetes or kidney disease have been impacted very severely by COVID-19.

Other TRI-based scientists are studying how the disease affects the body and identifying key symptoms, including UQDI researcher, Dr Daniel Hwang, who was involved in a global initiative to investigate potential relationships between COVID-19 and loss of smell and taste via an online survey.

## Personalised treatment to improve lung-cancer outcomes

Dr Mark Adams is uncovering potential new treatment targets and diagnostics for a range of diseases, including lung, breast, colorectal and endometrial cancers as he delves into the human genome.

Based at TRI with the QUT's CARP, Dr Adams is studying the interplay of molecules that control cell cycle, cellular growth and maintenance of genomic stability to identify molecules, which hold potential as predictive biomarkers or targets for future therapeutics.

Dr Adams says all his research has a translational focus, driven by a desire to improve patient outcomes. When it comes to cancer, he is investigating several possible genes.

“Our lead candidate is a diagnostic biomarker for non-small cell lung cancer patients who are resistant to standard chemotherapy treatment,” he says.

“We’ve just submitted a provisional patent application for our most prominent candidate, and while we’re looking at this particular marker in non-small cell lung cancer, it’s also present in breast and colorectal cancers so it could have a much broader impact.

“We’re in the preclinical testing stage, but I’m working to secure further grants and industry funding to progress this research into clinical trials in combination with a new candidate therapeutic.”

If shown to be accurate within a clinical setting, the diagnostic could potentially change the way people with non-small cell lung cancer are treated. Non-small cell lung cancer accounts for around 85% of all lung cancers, with the majority of patients presenting with advanced stage disease.

The next step in Dr Adams’ work is to examine large numbers of patient samples and their treatment records to see if his diagnostic is accurate in the clinical setting.

In 2020, Dr Adams received a Cure Cancer grant, with support from the Denton Trust and an Advance Queensland Fellowship.

## Therapeutic for autoimmune diseases

A career dedicated to rheumatoid arthritis has led TRI-based Prof Ranjeny Thomas AM to develop a new platform therapeutic for autoimmune diseases.

The PA Hospital rheumatology specialist and Arthritis Queensland Chair of Rheumatology with UQDI, is hoping to adapt the platform therapeutic to treat a range of diseases.



Image: Professor Ranjeny Thomas.

Prof Thomas' platform therapeutic works by retraining people's overactive immune systems, which are the cause of autoimmune diseases like rheumatoid arthritis.

"It's a concept that we developed and trialled for rheumatoid arthritis, but it is transferable to any autoimmune disease," she says.

"We're looking at tailoring it for several autoimmune diseases in parallel. If we can show safety, and how it works in at least one autoimmune disease, and the medical need is great in other disease areas as well, it will help build the case for development and investment."

In 2020, UQ's commercialisation company, UniQuest, announced a partnership between biotech CSL and Prof Thomas to develop and potentially commercialise

a treatment for Sjogren's Syndrome, an autoimmune disease of the salivary glands.

Prof Thomas says the CSL deal is very exciting. "We are fortunate to be able to partner with CSL and utilise their expertise in developing products to treat autoimmune conditions," she says.

---

**"We are fortunate to be able to partner with CSL and utilise their expertise in developing products to treat autoimmune conditions."**

In addition to Sjogren's Syndrome and Rheumatoid Arthritis, Prof Thomas and her collaborators are also working on Anti-Neutrophilic Cytoplasmic Antibodies (ANCA) vasculitis, a rare and serious cause of kidney failure, and Type 1 diabetes.

"By working on several diseases at the same, it allows us to diversify the financial risk for existing and possible new industry partners, and ensures we can advance our knowledge base for the platform technology," says Prof Thomas.

## Tackling type 1 diabetes from prevention to better treatments

Prof Josephine Forbes, who leads a Mater Research group at TRI, is preparing to run two clinical trials aimed at patients with Type 1 diabetes.

With a research grant from the Juvenile Diabetes Research Foundation (JDRF), Prof Forbes is collaborating with Yale University and an industry partner to select a lead therapeutic candidate to trial as a treatment for the autoimmune disease.

The drugs they are assessing, including a biological therapeutic developed by Professor Forbes' team, all target the cell surface 'Receptor for Advance Glycation End-products' also known as RAGE.

Prof Forbes has shown it is possible to prevent Type 1 diabetes developing in laboratory models by blocking RAGE early in the onset of diabetes, when the first autoantibodies are present.

"RAGE plays an important role in the immune system and activating the inflammatory response. In diabetes, we believe it is involved in initiation as well as sustaining the immune dysfunction which culminates in the disease," she said.



Image: Professor Josephine Forbes.

“We have three viable options to trial in individuals at risk of developing diabetes, but we are looking to see which one shows the best potential in our laboratory models [that] could be trialling a single drug or combination of the drugs.”

Prof Forbes is also preparing to run a clinical trial to test a potential new treatment (developed with the Mater Young Adults Health Centre) for diabetic kidney disease in young adults. The treatment improves mitochondrial function and Forbes hopes it will either prevent or slow the development of diabetic kidney disease.

“Kidney disease develops early in Type 1 diabetes and the best available clinical management stabilises but doesn't improve kidney function. There is a substantial treatment gap,” she said.

The clinical trial will run at the Mater Young Adult Diabetes Centre, in Brisbane.

BY THE YEAR 2030, WHO  
AIMS FOR ALL COUNTRIES  
TO ACHIEVE A:

**90%**

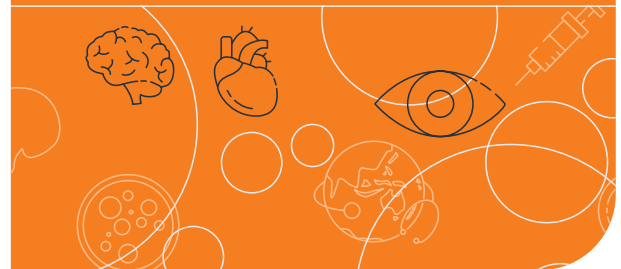
HPV vaccination coverage

**70%**

Screening coverage

**90%**

Access to treatment for cervical  
pre-cancer and cancer



## WHO announces goal to eliminate cervical cancer

In August 2020, the World Health Assembly passed a resolution calling for the elimination of cervical cancer and adopting a strategy to make it happen.

It was the first time the world has committed to eliminating a cancer.

The November 2020 launch of the World Health Organisation (WHO) elimination strategy came 14 years after the commercial release of the first cervical cancer vaccine.

The vaccine was co-developed by TRI founder Prof Ian and his team alongside Chinese virologist Dr Jian Zhou. The vaccine, Gardasil, protects against 70 per cent of the Herpes Papilloma Virus (HPV) infections that cause cervical cancer.

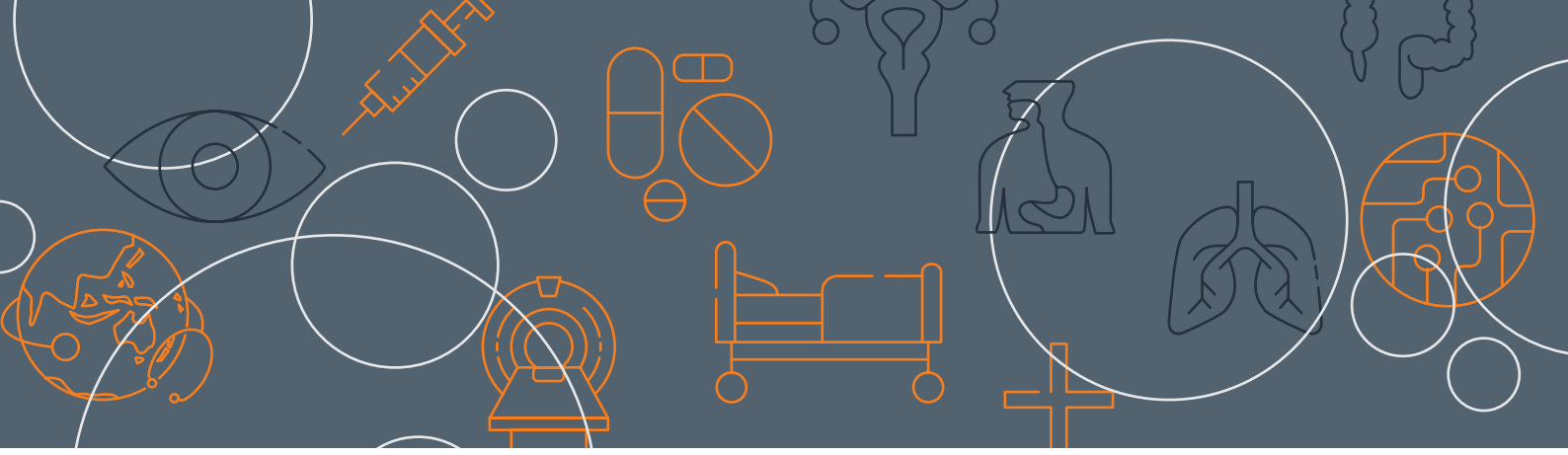
By the year 2030, WHO aims for all countries to achieve a 90% HPV vaccination coverage, 70% screening coverage, and 90% access to treatment for cervical pre-cancer and cancer, including access to treatments for advanced disease such as palliative care.

# Goal 2

## Provide world-class facilities

### OUTCOME

Enhancement of TRI's competitive position nationally and internationally and attraction of world-class clinicians and researchers to TRI.



## 2020 HIGHLIGHTS

TRI attracted four new research teams in 2020 due to its focus on translation and its connection to clinicians and clinical trial facilities. It also attracted great interest from industry.

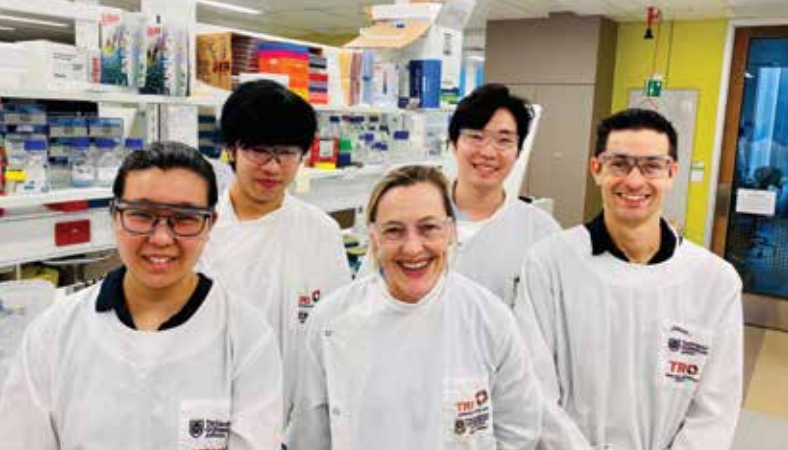
TRI is highly experienced in growing medtech, biotech and pharmaceutical (MTP) start-ups. In 2020 our designated incubator space housed six companies, with a further 13 awaiting space. These companies get access to:

- >\$100 million in scientific equipment and expertise
- cGMP cleanrooms for small-scale product manufacturing
- clinical trials facilities
- an extensive network of research scientists
- flexible office and lab space.

A focus in 2020 was developing a business case for a facility that would help overcome a major barrier to the translation and commercialisation of medical innovation. This unique facility in Australia will provide purpose-built manufacturing facilities and specialist support for up to 350 on-site staff and contract services for off-site companies. This will enable them to scale-up product manufacture for Phase II/III clinical trials rapidly and economically for a diversity of globally competitive products, such as medical devices, pharmaceuticals, biologics and novel implants.

Nominally called 'TRI2', the facility aims to:

- retain and grow high-value intellectual property
- decrease start-up failure rate
- enable companies to scale manufacture
- build and retain a highly skilled workforce in cGMP manufacturing
- capitalise on Australia's international reputation for high quality, safe products, developed and produced within a stringent and trusted regulatory framework.



Images Left to Right: Professor Gabrielle Belz and team. Hon Karen Andrews MP officially opening the TRI T3 Cleanrooms facility.

## New research groups

The TRI welcomed four new research group leaders in 2020: UQDI appointments Prof Gabrielle Belz, Prof Brandon Wainwright AM and Dr Snehlata Kumari, as well as Prof Gene Tyson, who is Director of a new QUT research centre.

Immunologist, Prof Belz, moved her research group to TRI from the Walter and Eliza Hall Institute in Melbourne. Prof Belz is interested in how the adaptive and innate (first response) elements of the immune system work together for long-term protection from diseases, in particular gut disease, asthma and COPD, tumour responses and pathogenic infections. The goal is to discover new therapies that boost our immune system to protect against infection.

Along with the opportunity to be closer to family, Prof Belz says relocating to TRI gives her the opportunity to synergise basic research with translational research and drive that forward.

"It's important to ensure our models accurately reflect the events that occur in human disease, and for that I need to collaborate with clinicians. The clinical links that TRI has embedded with the PA Hospital and various other hospitals in Brisbane are well developed to enable that bridge between translational and clinical excellence," she says.

The connection between the clinic and the laboratory is something Prof Belz says Australian research institutes struggle to achieve.

Geneticist, Prof Wainwright AM, is renowned for discovering the genetic pathway that causes most human cancer. He moved his research group to TRI from the UQ St Lucia campus in 2020 to help lead the newly established Children's Brain Cancer Centre. The Centre is Australia's first research initiative solely focused on paediatric brain cancer, treatment, and survivorship. It brings together world-leading researchers, doctors, and facilities. The Professor also leads a laboratory within the UQDI focused on understanding the genetic pathways behind medulloblastoma, a type of brain tumour that occurs predominantly in children.

He says, "Being located in the TRI not only facilitates clinical access, but also immunology research is very strong here and so affords us the opportunity to move our work into this new area and work towards a cure for babies and children with brain cancer."

"Being located in the TRI not only facilitates clinical access, but also immunology research is very strong here and so affords us the opportunity to move our work into this new area and work towards a cure for babies and children with brain cancer."

UQDI appointed Dr Snehlata Kumari in early 2020, but due to the COVID-19 pandemic, the immunologist was unable to relocate from Germany until late October.

The new Inflammation and Immunity Group Leader identified several novel signalling pathways regulating skin inflammation in laboratory models during her PhD and Postdoc at the University of Cologne, and at TRI she aims to develop new therapeutic intervention for human inflammatory skin disease.

"I was attracted to Brisbane because it is a global skin research hub and TRI offers me the perfect environment to look at my findings in humans and hopefully develop therapeutic approaches and interventions for inflammatory skin diseases, such as Psoriasis, Hidradenitis suppurativa and for skin cancer," says Dr Kumari.

Microbiologist, Prof Tyson relocated his group to TRI from UQ – including new Team Leaders, Dr Lauren Messer, Dr Simon McIlroy and Dr Ben Woodcroft – as part of his recent appointment at QUT. He is an internationally recognised expert in the development and application of culture-independent approaches to understand microbial communities in clinical and environmental systems.

Since starting at TRI in March 2020, Prof Tyson has established the Centre for Microbiome Research (CMR). As Director of CMR, he oversees research programs that span both clinical and environmental research, but his primary focus is on studying the role of the microbiome in human health and disease. The move to TRI means he is now co-located with the TRI-based gut microbiome analysis company, Microba, which he co-founded.



Image: Core facilities.

## T3 Cleanrooms – cGMP clinical manufacturing and training hub

In 2020, the Hon Karen Andrews, Minister for Industry and Science, officially opened the TRI 'T3 Cleanrooms', a state-of-the-art, flexible and accessible clinical manufacturing and training facility. This is the only facility of its kind in Australia for the medical technology and pharmaceutical sector.

TRI provides the infrastructure and regulatory compliance necessary for the small-scale manufacture of medicines and devices for human use. The Good Manufacturing Practice (cGMP) cleanroom facility is available for use by TRI researchers as well as researchers and commercial organisations from outside TRI. This facility is ideal for producing clean to sterile medical device, biotechnology, pharmaceutical and cell-based products for human clinical studies.

In collaboration with Vaxxas Pty Ltd, TRI offers professional training in cGMP manufacturing processes. Uniquely, TRI's programs allow participants to obtain hands-on experience using the cleanroom facilities. They are suitable for university-based researchers as well as people already working in the medtech and biopharma sector.

## Core to our success

TRI manages seven core facilities which provide access to specialty equipment, products, services and expertise to TRI and external uses from the research, health and commercial sectors. These Cores provide expertise and around \$27 million in specialist research equipment and resources through a:

- Proteomics Facility
- Preclinical Imaging Facility
- Flow Cytometry Facility
- Microscopy Facility
- Histology Facility
- Biological Research Facility
- Gnotobiotic Facility

Throughout the emergence and management of COVID-19 in 2020, the TRI Core Facilities focused on preserving the capability to support essential and critical research.

A positive outcome of the COVID-19 experience in 2020 was the wide-spread adoption of video conferencing and digital messaging platforms for easy communication between the Cores and researchers. For those who were required to work from home, it provided the opportunity to progress outstanding administrative projects and tasks and implement system and workflow improvements, which resulted in a rapid deployment of greater remote capabilities.

While COVID-19 limited the capacity for hands-on and face-to-face interactions, the Proteomics Core capitalised on the opportunity and undertook a body of work to develop and optimise the facility, resulting in new and improved service offerings for researchers. This included a new protein interaction assay; a new workflow to detect drug and metabolites in bio-fluids and increased automation.

In 2020, the Preclinical Imaging team was recognised for their contribution to a paper published in Cell. The COVID-19 study led by QIMR-B's A/Prof James Hudson utilised TRI's Vevo ultrasound machine, which enabled the demonstration that their drug can prevent cardiac dysfunction in a mouse model of lipopolysaccharide-induced cytokine storm. Currently, TRI is one of two organisations in the Brisbane area with preclinical ultrasound equipment.

During 2020, TRI installed a new Molecubes B-CUBE and X-CUBE PET-CT Systems, in the Preclinical Core Facility, worth over \$1.2 million.

2020 was an intensely demanding year in the Biological Resources Facility, with the team required to rapidly pivot services and operations in response to COVID-19 restrictions and research needs. The facility transitioned to a new animal management database and ethics management system, with continued progress being undertaken to develop and roll out functionalities to researchers into 2021.

Gnotobiotics Facility Senior Coordinator Emily Duggan is widely considered to be at the forefront of the Gnotobiotics field, being cited in a Tecniplast article in 2020 as: 'One of the most important Opinion Leaders in Gnotobiology in Australia'.

Gnotobiotics is a fast growing field in Australia and worldwide, driven largely by the boom in understanding the importance of the microbiome in health and disease. TRI's facility is ideally positioned to make a strong impact as the largest and most advanced facility in Australia.

## At your service

TRI's Scientific Services provide frontline support to all TRI occupants and assist in scientific facility management. The services include building inductions, coordinating equipment service and repair, work health and safety and other audit actions, equipment alarms response and facilitating communication between researchers, institutes and TRI for lab requests and facility information.

During 2020, 246 people were welcomed to TRI and given access and information to the services and facilities.

## Our People

### BUILDING-WIDE

**632** Researchers

**175** Research support staff

**102** Commercial staff

**95** Clinicians

**1004** Total types above

**1909** Total people with current access (not necessarily resident)

**450-500** Typical people on site any one day

## A priority at TRI

The TRI Workplace Health and Safety (WHS) team oversees health and safety for TRI staff, occupants, contractors and visitors to the building. It works with the partner WHS teams with the aim of a consistent risk management approach throughout the whole TRI facility.

In addition, the team manages many of the regulatory requirements associated with our research laboratories. Several framework documents have been developed to outline responsibilities of TRI and the partners to ensure our regulatory obligations in these areas are being covered.

In 2020, the TRI WHS team achieved:

- Over 95% of occupants up to date with mandatory safety trainings
- An internal safety auditing program that identified over 600 action items, with over 95% of these completed and closed out
- A Workers Compensation claim rate of just 0.33, which is well below the Queensland average of 3.8
- A reported accident rate of 3.8 incidents per 100 occupants, with most of these being minor accidents only requiring simple or no first aid.
- A good safety culture resulting in 74 hazard or near miss reports sent to WHS, many of which resulted in procedural improvements to prevent future incidents from occurring.



Image: Senior Scientific Services Manager Andrew Cummings.





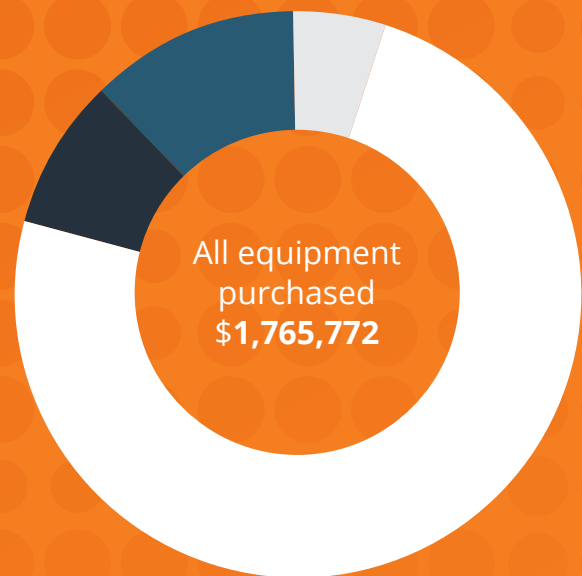
## Operating online

The need to move most operations online posed a few challenges in 2020 but the flexibility of TRI and its partners and the expertise of the support staff, accomplished this with very little impact on critical research, ongoing educational opportunities and staff performance.

This drastic and sudden change necessitated the need to invest in upgrading and maintaining infrastructure and equipment:

- to enable people to work from home in a safe and secure environment with the tools to conduct their daily business and meet and learn in the virtual world
- to enable researchers to remotely access data generated by the experiments, while also being able to run experiments at TRI in a COVID safe environment
- to ensure our Core Facilities continue to support world-class translational research
- to ensure our medical research facility, with labs and other modified environments, is fit for purpose and meets all regulatory requirements.

## INVESTMENT IN TECHNOLOGY



- Flexible working arrangements \$90,442
- Online meetings and education \$149,741
- Scientific infrastructure \$215,581
- Scientific equipment \$1,310,007

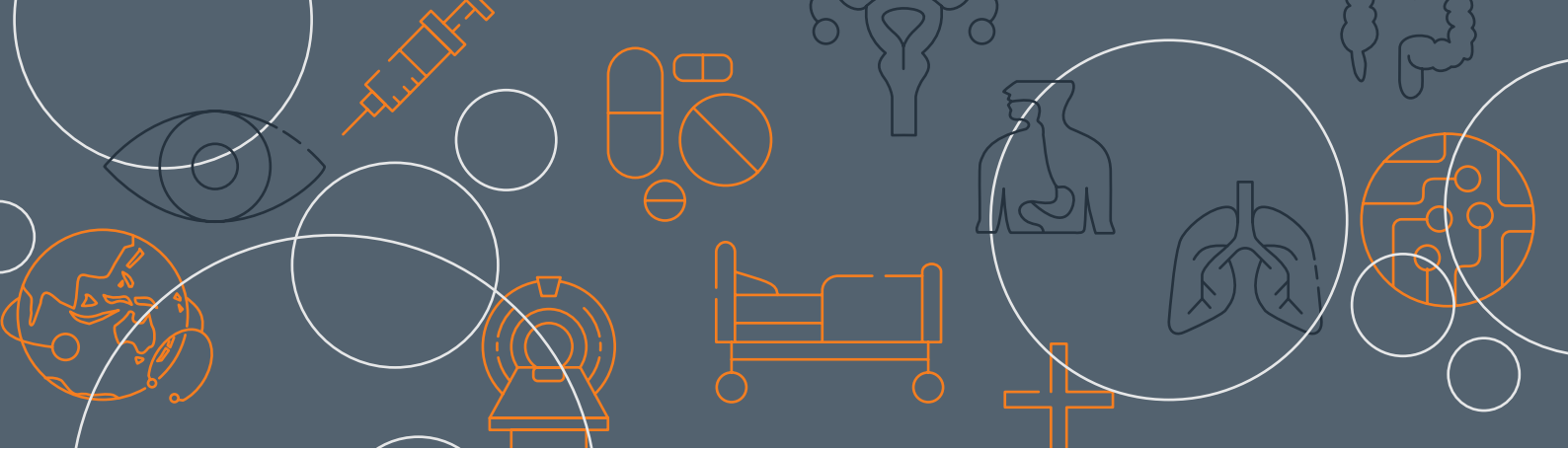
# Goal 3

## Effective clinical interfaces

### OUTCOME

Improved healthcare by ensuring that early innovative translational research is successfully implemented into clinical practice, where possible with industry interface. This will enhance the national and international standing of TRI and partners.





## 2020 HIGHLIGHTS

TRI promotes and enables engagement between researchers and clinicians through the provision of:

- clinical trial facilities and expertise
- co-funded clinically-based programs
- access to TRI events and meeting spaces for clinicians
- training and networking events for researchers, clinicians and industry.

The TRI and Metro South co-funded clinician-led Australian Centre for Complex Integrated Surgical Solutions (ACCISS) has three trials involving 3D printed bio-soluble implants that regenerate bone. These trials have an industry partner, Singapore-based Osteopore, who want to locate manufacturing to TRI, reinforcing the fact that final production is often anchored to where the late stages of clinical development occur.

In 2020, TRI appointed an experienced Manager for its Translational Trials service to work closely with Metro South Health and the Queensland Children's Hospital to increase the number of researcher and clinician initiated trials carried out in TRI's clinical trial facilities.

## Clinical trials

TRI has two specialised Clinical Research units, the Clinical Research Facility (CRF) and TRI@Childrens (TRIC), along with a TRI trials specific administrative support team, Translational Trials. As at December 2020, TRI's two clinical trial facilities had 149 active trials.

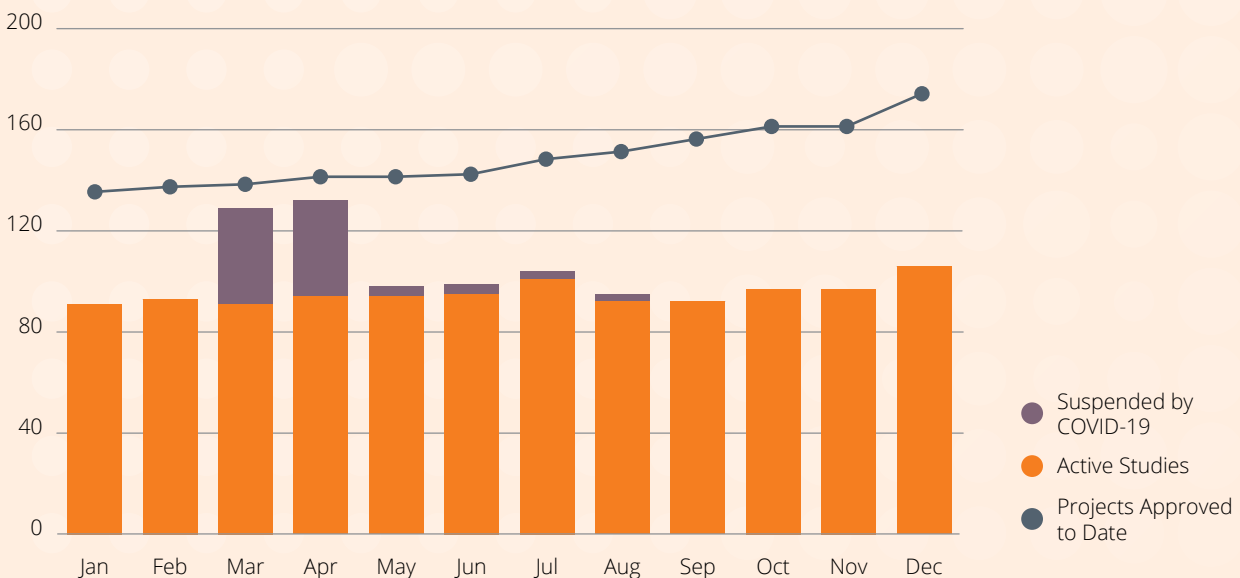
The CRF and TRIC provide state-of-the-art dedicated specialist facilities, resources and expertise for the conduct of patient-centric investigator-led and commercially-sponsored clinical trials. The CRF is situated in the Research Wing (R Wing) of the PA Hospital and specialises in adult clinical research across multiple phases. TRIC is located at the Centre the Children's Health Research next to the

Queensland Children's Hospital and specialises in paediatric research.

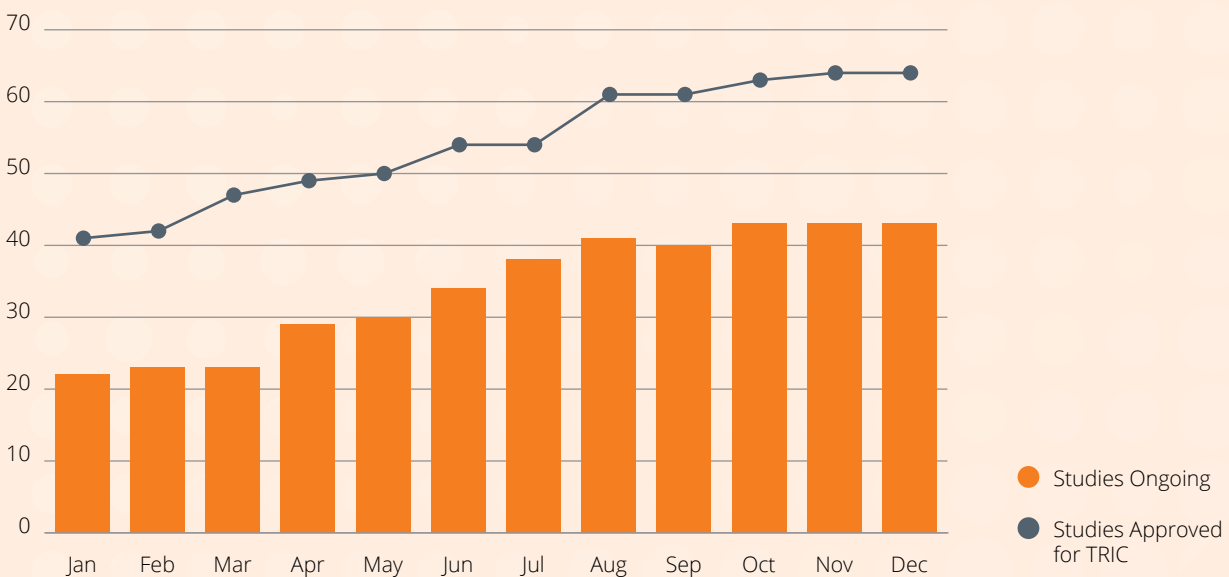
Translational Trials is a team of clinical research professionals dedicated to advancing clinical trials, with extensive experience in clinical trial management and coordination of services across multiple phases of clinical research. The Translational Trials team work with industry, clinical researchers, principal investigators and site staff from feasibility through start-up, clinical conduct and closeout.

In 2020, the Translational Trials' team had 48 active trials. There was a focus on developing Investigator-initiated trials and engaging with new areas. In 2020, these areas included COVID-19, Paediatric Dermatology, Ophthalmology, and Orthopaedics.

### CLINICAL RESEARCH FACILITY ACTIVITY 2020



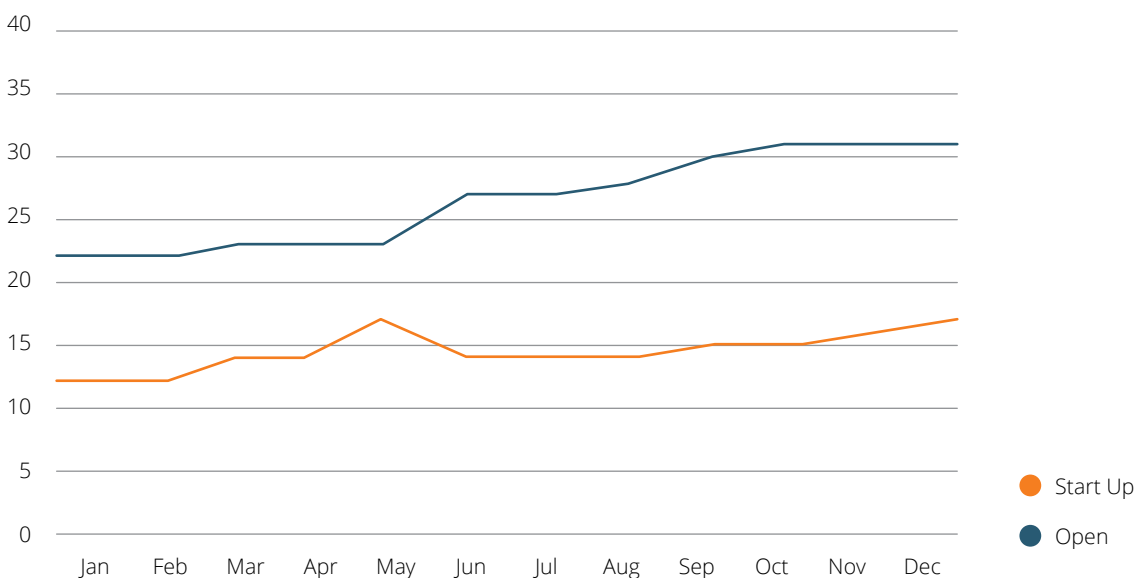
### TRI@CHILDRENS ACTIVITY 2020

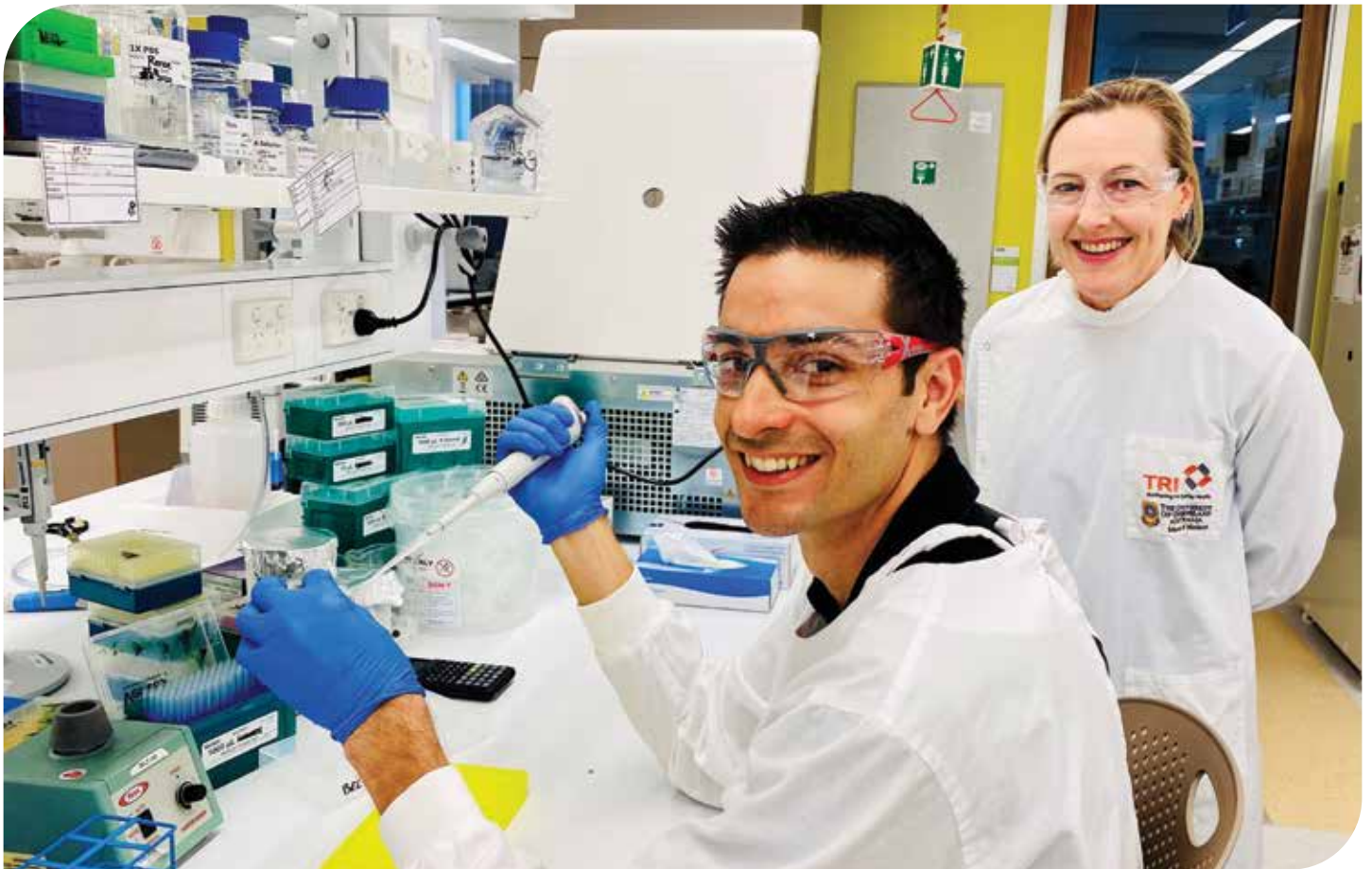


## TRANSLATIONAL TRIALS SUPPORT LEVELS

Model	Services	Staff Involved	Example
<b>Facility Space</b>	<ul style="list-style-type: none"> <li>Facility – study team provide all resources to conduct the study</li> </ul>	<ul style="list-style-type: none"> <li>PI (Partner affiliated)</li> <li>Research facility staff</li> </ul>	
<b>Minimal Support</b>	<ul style="list-style-type: none"> <li>Study start activities including Ethics and Governance support</li> <li>May include use of TRI facility</li> </ul>	<ul style="list-style-type: none"> <li>PI (Partner affiliated)</li> <li>Research facility staff</li> <li>Translational Trials staff assist trial activity</li> </ul>	
<b>Medium Support</b>	<ul style="list-style-type: none"> <li>Study start activities including Ethics and Governance support</li> <li>Research nurse and study coordination</li> <li>Management of vendor services (Hospital or External e.g. pathology, pharmacy, imaging)</li> <li>May include use of TRI facility</li> </ul>	<ul style="list-style-type: none"> <li>PI (Partner affiliated)</li> <li>Research facility staff</li> <li>Translational Trials staff for trial management and trial conduct</li> </ul>	
<b>Full Support</b>	<ul style="list-style-type: none"> <li>Study start activities, assist in protocol development, manage Ethics and Governance</li> <li>Research Nurse and study coordination Management of vendor services (Hospital or External e.g. pathology, pharmacy, imaging)</li> <li>May include use of TRI facility</li> <li>Financial and project management of study</li> </ul>	<ul style="list-style-type: none"> <li>PI (Partner affiliated)</li> <li>Research facility staff</li> <li>Translational Trials staff for trial management and trial conduct</li> <li>TRI support (finance, HR, Marketing, legal, Business Development etc.)</li> </ul>	

## TRANSLATIONAL TRIALS ACTIVITY 2020





*Jaring Schreuder and Professor Gabrielle Belz*

## Clinical interface

In 2020, TRI laid the foundations for a program that will be ramped up with the appointment of the TRI Director, Clinical Translation early in 2021.

TRI collaborated with Brisbane Diamantina Health Partners (BDHP) to host an 'Immunology in the Clinic' series aimed at bringing together clinicians and scientists, from across Brisbane, to develop collaborations and solve difficult clinical problems. The first forum and networking event was held on 26 November 2020 on the topic of 'The dilemma of fibrotic lung disease'.

TRI also partner with BDHP in an Immunology Symposium, with a Brisbane-wide organising committee chaired by UQDI's Prof Gabrielle Belz, held over two days in December. The Symposium was attended by a total of 188 people and featured over 35 speakers on topics covering every aspect of immunology. The Symposium was very well received and was suggested as an annual event to encourage collaboration and networking.

Working with Metro South Research, TRI and its partners identified researchers who were exemplars in clinical engagement and clinicians who want to collaborate with researchers. This has laid the groundwork for a program of engagement between the two groups, from students through to senior scientists and clinicians, to be developed and implemented in 2021.

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Working with Metro South Research, TRI and its partners identified researchers who were exemplars in clinical engagement and clinicians who want to collaborate with researchers.



Top Left: ACCISS team Dr Michael Wagels, Ross Kent and Denise Quaile.

## Translational Programs

### ACCISS MAKES LIFE SAVING SURGERY POSSIBLE

Virtual surgical planning and bio-soluble 3D-printed implants may seem futuristic but they have already greatly enhanced the lives of four young Queenslanders. Thanks to the foresight and perseverance of Dr Michael Wagels and his collaborators at the Australian Centre for Complex Integrated Surgical Solutions (ACCISS), a Translational Program established in April 2019 as a joint venture between Metro South Health and TRI to provide a coordinated virtual surgical planning (VSP) and point of care (POC) manufacturing service to produce innovative solutions.

Early in 2020, Brisbane school girl, Asha Morris had pioneering surgery at the Queensland Children's Hospital to remove a large piece of her left shin bone, replacing it with an experimental, custom-designed 3D-printed scaffold.

She's was the second person in the world – and the first cancer patient – to undergo a revolutionary operation by Dr Michael Wagels using an implant designed to encourage her own tibia to regenerate. Eight months later, she can already put some weight on her leg and has transitioned from wheelchair to crutches with scans showing the bone is starting to regrow.

The ACCISS team completed another world first surgery in 2020 using 3D printed technology to improve a birth defect known as “funnel chest.”

The surgery was a collaboration between ACCISS Director, Dr Michael Wagels and Professor Dietmar W. Huttmacher from QUT to 3D print a tailor-made chest scaffold. The scaffold fit the contours of the patient's chest to conceal the deformity without compromising her organs.

“I saw how amazing the result was on the operating table. That this scaffold developed and printed specifically for Caitlin Rutherford-Heard fit like a glove. It turned out better than we could have hoped,” Dr Wagels said.

Having proved that a new technique or implant can solve a bone defect problem, the next step is to investigate how it performs in a series of patients in clinical trials. Clinical trials for novel implants are rare. The regulatory framework is well developed for pharmaceuticals but not for implants.

To date, ACCISS has helped 47 patients. ACCISS is also developing techniques that will enable young surgeons to learn in a more realistic environment. Digital, non-invasive imaging allows the surgeon to view the problem and to take precise measurements.

ACCISS was also awarded a Metro South Board Chairs Award for Demonstration of the Vision of Metro South Health.



*Imaging Technology – Professor Graham Galloway.*

## IMAGING TECHNOLOGY

Between 2016 and 2020, the work undertaken in TRI's Imaging Technology Team has been focused on novel breast cancer imaging technologies and the use of advanced MRI technologies for a range of clinical disorders including psychiatry, neurology, brain injury and trauma.

Professor Graham Galloway, Director in Imaging Technology at TRI is the co-Chief Investigating Officer (CIO) on projects that include:

- Identification of neurochemical and fMRI changes in patients with Functional Dyspepsia and Irritable Bowel Syndrome with Prof Gerald Holtmann, Gastroenterologist, PAH and UQ.
- Biomarkers for Small Renal Cancers with A/Prof Glenda Gobe (Renal Biology UQ) and Dr Simon Wood (Renal Surgeon, PAH).
- Identification of markers to assess the role of breast density in pre-disposition to cancer with Dr Ian Bennett (Breast Surgeon, PAH) and Prof Rik Thompson (QUT).



*High Risk Breast Cancer Clinic – Dr Ian Bennett (L) and Hon Kate Jones (R).*

## HIGH RISK BREAST CANCER CLINIC

The High Risk Breast Cancer Clinic is a joint venture between PAH and TRI. It was officially launched in December 2019 and is located in TRI's Clinical Research Facility at the PAH. It is led by Dr Ian Bennett, Endocrine and Thyroid Surgeon at the PA Hospital. The aim is to provide a 'one-stop-shop' for women who do not have breast cancer but who are at increased risk of developing breast cancer, referred by their GP or specialist, with no out-of-pocket costs for attendance.

TRI supports a Research Fellow at the PA Hospital to ensure links with breast cancer researchers at TRI, which includes formal mentoring in research methodology.



*Microbiome – Professor David Theile and Professor Gerald Holtmann.*

## MICROBIOME

In 2020, Prof Gerald Holtmann was awarded \$1.6M of MRFF funding for his collaborative trial titled, 'Targeting the Gut Microbiome as a Treatment for Primary Sclerosing Cholangitis: The Queensland Clinical Network Study'. The goal of this clinical trial is to improve outcomes of patients with Primary Sclerosing Cholangitis (PSC). PSC is a rare disease without a proven medical therapy; most patients will develop within 15 years of diagnosis end-stage liver failure and require liver transplantation.





Image: Associate Professor Fiona Simpson and team.

## New combination treatment for cancer

UQ's TRI-based A/Prof Fiona Simpson and her Cancer Research group have identified a promising new drug combination that could significantly help the immune system target cancer cells and kill them.

The study published in 2020 in the prestigious journal, *Cell*, describes a treatment that works by combining an intravenous dosage of a well-known anti-nausea drug, prochlorperazine (called Stemetil in Australia), with existing cancer treatments.

A/Prof Simpson said the finding could lead to new treatments for some cancers.

"The anti-nausea drug works by changing the surface of the tumour cells so that existing cancer drugs which target tumours are better able to interact with the immune system," she said.

"The result is that cancer cells become sitting targets that can no longer escape the immune system."

The treatment can be combined with and improve the effectiveness of existing cancer drugs like cetuximab, trastuzumab and avelumab and was studied on tumours from head and neck, breast and metastatic colorectal cancers in mice, as well as five patients with head and neck cancer.

Following the initial findings, the researchers combined Stemetil with an anti-cancer antibody drug resulting in the disappearance of all the tumours from ten mice with head and neck cancer. Dr Simpson was curious to see what would happen if they re-introduced the same cancer back into the mice four weeks later. "Amazingly, their cancer was rapidly eliminated – as if the new combination, in addition to being more effective, was also able to teach the immune system how to better recognise cancer cells," A/Prof Simpson said.

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**"Amazingly, their cancer was rapidly eliminated – as if the new combination, in addition to being more effective, was also able to teach the immune system how to better recognise cancer cells."**

Dr Simpson's team is now undertaking a Phase 1 safety trial of the combination of Stemetil and cetuximab in head and neck cancer, triple-negative breast cancer and adenoid cystic carcinoma patients at the PA Hospital.



Image: Professor David Johnson and patient Phil Carswell.

## Clinician-led improvements in chronic kidney disease treatment

Clinician-researcher, Prof David Johnson is championing patient-centric kidney research and improvements in chronic kidney disease treatment and management.

Over the past two decades, he has led numerous clinical trials, which have led to changes in clinical guidelines. He was also a driving force behind UQ's Centre for Kidney Disease Research (CKDR) and the Australasian Kidney Trials Network (AKTN), both of which are based at TRI.

In addition to being the CKDR Director, Prof Johnson is the Medical Director-Queensland Kidney Transplant Service at the PA Hospital.

In 2020, Professor Johnson received an NHMRC Investigator grant to investigate how to improve the availability, accessibility and affordability of home dialysis for end-stage kidney disease patients.

"Home dialysis really is an important issue that we need to address. It can be performed easily in rural and remote areas and it makes it much easier to manage care for patients during pandemics and natural disasters. Most patients would prefer to do dialysis at home," he says.

His group is part of the global SONG Initiative for Peritoneal Dialysis, involving 3000 centres across nine countries, which is developing a suite of interventions to make home dialysis a viable option for patients.

Another aspect of home dialysis, which Prof Johnson is exploring in collaboration with the Home Network, is developing and assessing online training for home dialysis for both trainers and patients.

Prof Johnson has attracted several grants for this project, including a 2020 Medical Research Future Fund (MRFF) grant for the TEACH-PD study, involving 31 hospitals.

"Patients have to be taught how to do home-based dialysis, but there is no standardised program for teaching patient and there's currently a huge variation between renal units."



Image: Professor Sandro Porceddu and patient Mark Yabsley.

## Pioneering clinical trial for throat cancer

A Phase I clinical trial for an innovative new treatment for head and neck cancer associated with Human Papillomavirus (HPV) started patient recruitment at the PA Hospital in March 2020.

The pioneering Durvax Trial is testing a newly developed HPV vaccine in combination with an immunotherapy drug being commercialised by a major pharmaceutical company.

UQ's Prof Ian Frazer, who is based at the TRI, created the vaccine, which is being commercialised by Brisbane-based Jingang Medicine (Australia) Pty Ltd. The vaccine completed a successful first-in-human trial in 2019, demonstrating its safety in humans.

Durvax trial leader and Director of Radiation Oncology Research at PA Hospital, Prof Sandro Porceddu said the latest clinical trial was unique because it involved a completely new approach to treating cancer.

"For the first time, we're combining a class of drugs designed to kick-start the immune system with a HPV vaccine to activate the immune system to attack the cancer," said Prof Porceddu.

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"For the first time, we're combining a class of drugs designed to kick-start the immune system with a HPV vaccine to activate the immune system to attack the cancer."

"This treatment combination is important because many cancers, like HPV-induced throat cancers, are able to stop the immune system from having an effect on the cancer itself," he said.

"The addition of this immunotherapy drug takes the 'brakes off the immune system' enhancing the body's ability to attack the cancer which is similar to how the body manages infections."

The trial is backed by a \$531,745 TRI research grant which was awarded in 2019 and co-funded by the Metro South Hospital and Health Service and UQDI with pharmaceutical companies Jingang Medicine (Australia) Pty Ltd and Astra Zeneca supplying more than \$2.5 million in vaccines and drugs.

## Genetic counselling for patients

Genetic researcher and counsellor, Dr Aideen McNerney-Leo is leading a series of multifaceted studies aimed at improving genetic testing and outcomes for skin cancer.

Based at TRI with UQDI, Dr McNerney-Leo is leading a world-first program to train dermatologists to provide genetic testing in their practice for patients with familial or heritable skin cancer.

“We are really pushing the envelope on mainstreaming genetic counselling through this trial,” she says.

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**“We are really pushing the envelope on mainstreaming genetic counselling through this trial.”**

“Routine genetic testing for familial melanoma patients makes a lot of sense because if you know that you have a genetic risk, you are in a great position to avoid sun exposure, use sun protective measures and get regular screening. All of these really limit the chances of the melanoma developing; and if one does occur, it ensures that it is removed at an early stage.”

In parallel, Dr McNerney-Leo is evaluating the psychosocial impact of genetic testing.

It turns out that some of us are prone to ‘genetic fatalism’ or the belief that the genetic contribution to a disease outweighs all other factors like lifestyle and environment.

“When someone is told they have a genetic predisposition to melanoma, will they do everything they can to prevent getting the disease, or will they think they’re doomed and not employ protective behaviours?,” asks Dr McNerney-Leo.

Dr McNerney-Leo and her team are also searching for an array of genes that can increase a person’s risk of developing the disease, in particular melanoma.

“When it comes to melanoma, we know that 55 per cent of melanoma risk is inherited, but we have yet to identify most of the genes that are involved. We are trying to uncover new genes, which are involved in melanoma, and understand how they modify risk.”



Image: Dr McNerney-Leo.

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**“When it comes to melanoma, we know that 55 per cent of melanoma risk is inherited, but we have yet to identify most of the genes that are involved. We are trying to uncover new genes, which are involved in melanoma, and understand how they modify risk.”**

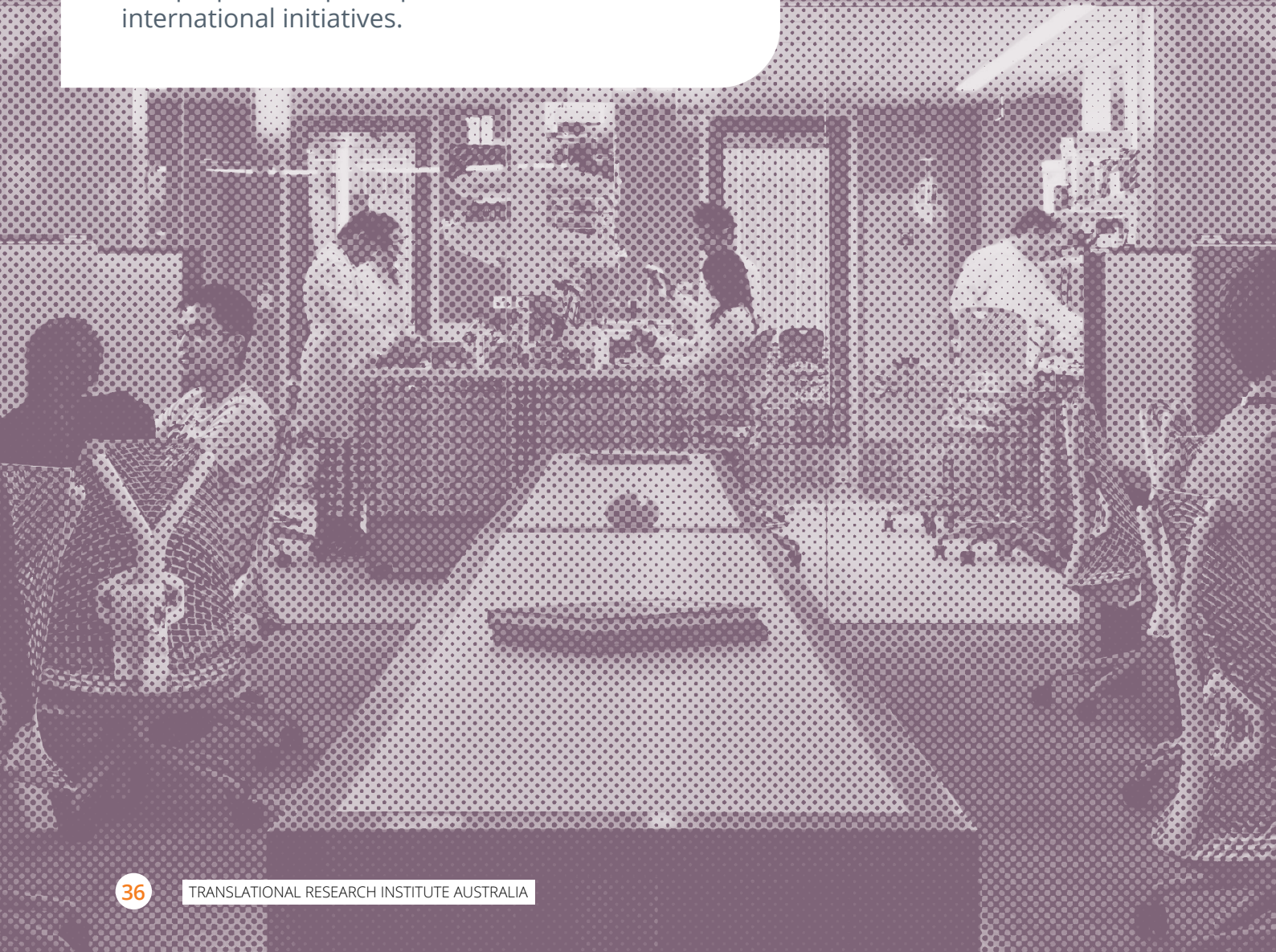


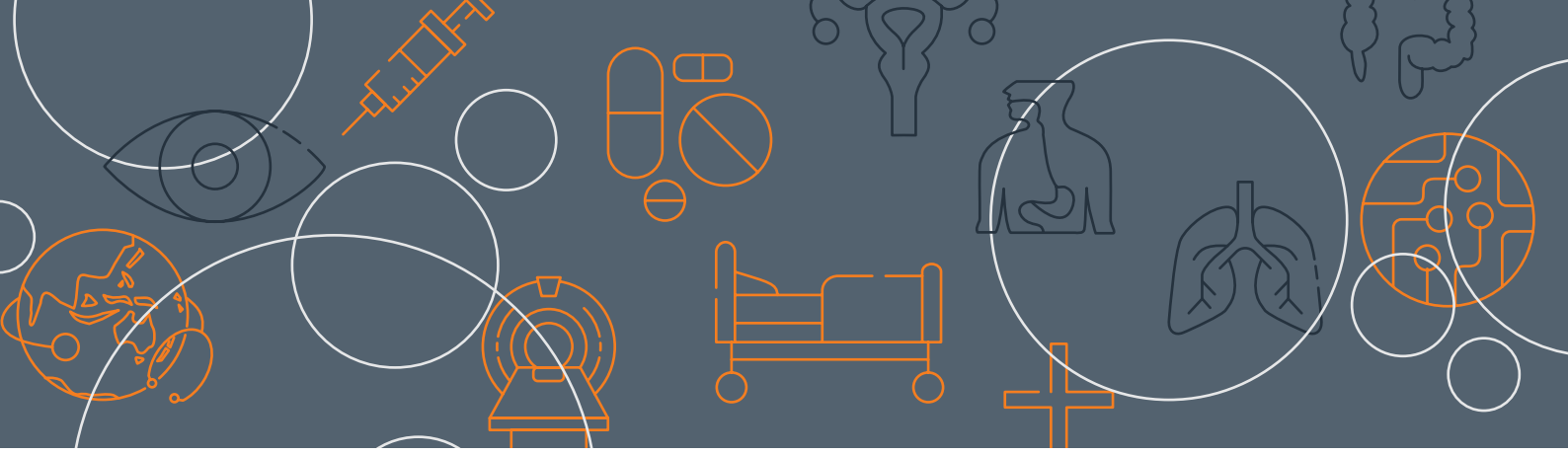
# Goal 4

## Strengthen research links to industry and government

### OUTCOME

TRI, with its partners and stakeholders, will be well prepared to participate in national and international initiatives.





## 2020 HIGHLIGHTS

2020 saw TRI develop and implement an Engagement Plan encompassing:

- shareholders and their partner institutes
- key State and Federal Government Ministers and departments
- relevant State and national industry bodies
- leading Australian biotech and medtech companies
- national start-ups
- medical research organisations
- the healthcare sector.

The aim this engagement was to build awareness and support to address a major challenge for translational researchers and start-up companies wanting to scale-up production of their medical innovations to undertake clinical trials for safety and efficacy. It included weekly online meetings; a regular TRI2 Update; a national survey, tours and targeted events.

Based on feedback from the Federal Government to find out what other medical research institutes were doing to address this challenge, TRI partnered with the Association of Australian Medical Research Institutes (AMMRI) to develop

a national webinar titled 'Building MRI commercialisation capability – supporting start-ups'; and also participated in a session in AMMRI's Annual Convention in December 2020 around the same theme. This engagement, and other online meetings with medical research institutes and precincts, highlighted TRI's experience and leadership in supporting start-ups to progress their innovations to market.

The Plan also involved engaging with the biotech and medtech sector throughout Australia. To do this, TRI developed and distributed a survey nationally, in partnership with Life Sciences Queensland (LSQ), to biotech and medtech start-ups and scale-ups, on their needs for facilities and services to progress their innovation to clinical trials. It was distributed and promoted by LSQ, MTPConnect, Therapeutic Goods Administration (TGA), Johnson & Johnson and other industry associations and government agencies. There were 40 responses from all over Australia with 27 stating that they needed scale-up facilities within two years.

The survey found that these companies need ongoing collaboration with research; access to clinical trial facilities and patients; and access to cleanroom manufacturing facilities and skilled staff to scale up production for clinical trials.



Image: Mr David Hoey, Vaxxas Chief Executive.

## Aussie invention propelling needle-free vaccine delivery

TRI is home to Australian biotech, Vaxxas, which is set to both disrupt and revolutionise vaccine delivery through their innovative needle-free vaccine delivery platform.

Vaxxas Chief Executive, David Hoey says the technology, which could be approved for commercial use within the next three to five years, is likely to play an important role in future pandemics.

"Vaxxas' High-Density Microarray Patch will allow vaccines to be quickly and easily deployed," says Mr Hoey.

"The technology will make it possible to post vaccines directly to people in their homes. It's also easy to use and doesn't require a nurse or doctor to administer the vaccine," he says.

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"The technology will make it possible to post vaccines directly to people in their homes. It's also easy to use and doesn't require a nurse or doctor to administer the vaccine."

Vaxxas reached several important milestones in 2020.

In March, the company's peer-reviewed results from its first clinical trial were published, showing an influenza vaccine delivered through its patch produced six times the response from antibodies in a shorter timeframe than vaccine delivered into the muscle via needle and syringe.

The results were followed up by announcements of a US\$12 million investment deal with global pharmaceutical company, Merck, and an alliance with production and packaging specialist, Harro Höfliger. Vaxxas also secured US\$22 million from the U.S. Government's Biomedical Advanced Research and Development Authority to support the pandemic deployment of their patch.

The company is gearing up to run several large-scale clinical trials of its platform, including a Phase I study with the Bill & Melinda Gates Foundation for a measles/rubella vaccine.

TRI provides Vaxxas with the office, laboratory and cGMP cleanroom space to support early-stage clinical development programs, including the ability to manufacture clinical product in-house and conduct early-stage clinical trials. VAXXAS supported the funding bid and operationalising of the TRI Cleanrooms.

## A national priority to advance translational research

Prof Scott Bell, TRI CEO, believes that the decline in manufacturing in Australia has led to medical discoveries, such as TRI's Founding CEO Prof Ian Frazer's cervical cancer vaccine, having to go overseas to undertake larger-scale manufacturing for clinical trials.

"Rather than selling our discoveries, we should be growing our advanced health and medical manufacturing capability in order to leverage off our excellence in the university and medical research institutes across Australia," said Prof Bell.

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"Rather than selling our discoveries, we should be growing our advanced health and medical manufacturing capability..."

It is commonplace in parts of Europe and North America to see manufacturing companies embedded in notable universities. This is just part of the process at places such as Germany's University of Tübingen and Toronto's MaRS Discovery District innovation hub, where the University of Toronto was a founding partner.





Image: Professor Scott Bell, TRI CEO.

“Our researchers need to think more laterally towards addressing questions such as what are the commercial opportunities; what contract research can be undertaken; and what are the opportunities to grow what we are working on in our research programs to support the development of translational products?”

“This will happen more often when there is more engagement between researchers and industry.”

TRI accommodates six start-ups that could fold at any moment, given their dependence on grant funding and venture capital. But when these companies make valuable discoveries, they rapidly outgrow Australia’s capacity to meet their needs in terms of undertaking good manufacturing practice and the early phases of trials.

Vaxxas, a start-up-in-residence at TRI since 2014, shortly after TRI was founded, is developing a game-changing platform for the delivery of vaccinations. It applies a needle-free Nanopatch™ to the skin to deposit the vaccine among immune cells. This technology has the added benefit of not requiring refrigeration.

“This is one of the companies that Australia should want to keep and not sell off the intellectual property too quickly just because we don’t have the capability to support the further clinical trial development and manufacturing of such potential products.”

In October 2020, the Queensland Government committed to building a facility for Vaxxas in Brisbane to manufacture enough needle-free vaccine kits to deliver 300 million doses each year as part of a large international clinical trial.

“Increased clinical trials by these companies will also stimulate skilled employment growth. Clinical trials are a growing area of research and employment at TRI,” said Prof Bell.



Image: MTPCareers Symposium.

## MTPCareers Symposium

TRI held its inaugural *Medical Technology and Pharmaceutical (MTP) Symposium*, in October 2020, sponsored by SeerPharma, MTPConnect, Therapeutic Innovation Australia and UQ Pharmacy with over 320 attendees.

The event provided delegates with a wealth of knowledge about the MTP manufacturing sector, including career opportunities and training courses, accelerator programs, and specialist facilities available in Australia.

The one-day event featured 22 speakers, with scientist and media personality, Dr Joel Gilmore comparing the event. They included a wealth of experienced professionals from the MTP sector along with some of Australia’s leading course providers for the sector.

COVID-19 social distancing requirements meant that TRI could only host 100 delegates in the TRI auditorium, however, tickets for these seats sold out almost immediately along with an additional 219 virtual tickets to attend via Zoom.

Through the Symposium, TRI aimed to increase the speed at which medical research breakthroughs are translated into commercial products by supporting training opportunities for early career scientists and helping bridge the career gap between academia and industry.

The Symposium also included the official launch of TRI’s new cGMP Cleanroom and training hub, the T3 Cleanrooms – the only one of its kind in Australia. The Hon Karen Andrews MP opened the event along with speeches from TRI CEO, Prof Scott Bell; MTPConnect CEO, Dr Dan Grant; and Vaxxas CEO, David Hoey. MTPConnect and Vaxxas provided financial and in-kind support, respectively, for the new facility.

## TRI's commercial tenants

TRI has licenced out office space and wet labs to start-ups, venture capital companies, research groups and other smaller entities since it opened in 2012. In 2020, these included:



JINGANG  
MEDICINE

BRANDON CAPITAL  
PARTNERS



Vaxxas Pty Ltd, a biotechnology company working on needle-free vaccination technology

Jingang Medicine (Australia) Pty Ltd, a biotechnology company working on various vaccine technologies

Brandon Capital, a seed and venture capital company that invests in biomedical opportunities

IP Group, an intellectual property commercialisation company



Layton Vision Foundation Ltd, an eye charity dedicated to eradicating curable and incurable blindness in Australia, Oceania and South East Asia

Microba, a company working on analysis of the gut microbiome

MTPConnect, a not-for-profit organisation aiming to accelerate the rate of growth of the medical technologies, biotechnologies and pharmaceuticals (MTP) sector in Australia

Oroborus, a company founded to develop chemical technology for making peptide mimetics



Vale Life Sciences, a company that provides research technologies, products and tools for use in medical, disease and drug research with a focus on 2D and 3D cell based assays.

PA Research Foundation, a not-for-profit that funds medical research at the PA Hospital campus

Queensland Melanoma Project, a research group focussed on melanoma chaired by a leading clinical researcher at the PA Hospital.



TRI WEBSITE  
IMPRESSIONS  
FOR 2020

**235,851**  
unique page  
views

## TRI online engagement



**416**  
posts

**343**  
new followers



**274**  
new page likes

Overall reach  
across all posts was

**201,862**



**444**  
posts



**2,044**  
new followers

Impressions across  
all posts

**382,119**



**953**  
posts



**580**  
new followers

Overall  
post reach

**1,229,300**

# BUILDING A COMMUNITY

## TRI Amazing Race 2 December 2020

To celebrate the end of the year safely and build collaboration opportunities within the building, TRI held a virtual party. Over 200 people participated and were split into groups of three to five to complete challenges and overcome puzzles. The party aimed to breakdown existing barriers between building partners and forge new connections within the building. As part of the promotion TRI branded drink bottles and pre-race challenges were distributed through-out the building to build positive culture and positive affiliation to TRI.



## Clean-up for the Melbourne Cup



## Wear it Purple Day

**Blumenthal Lab** @Blumenthal\_Lab · Aug 28, 2020  
Proudly celebrating Wear it Purple Day 🌈 #WearItPurple #wearitpurpleuq @UQMedicine @TRI\_info



**UQ Dermatology Research Centre** @UQDRC · Aug 28, 2020  
Proud to support Wear it Purple Day 🌈 at UQDI today #WearItPurple #wearitpurpleuq @UQMedicine @TRI\_info @UQ\_News



## Movember



APCRCQ @apcrcq · Nov 6, 2020

Join us for our #Movember fundraising bake sale on NOW in #TRI atrium until sold out! All sales go to #movember2020 & not to mention the goodies will make your Friday morning a lot sweeter! Delicious sweet, savoury, GF & vegan options available 🍪  
@apcrcq @TRI\_info @MovemberAUS



Translational Research Institute @TRI\_info · Nov 6, 2020

If you're at #TRI or on the @pahospital campus, don't miss the chance to get some treats! #Movember #prostatecancer

Dr Lisa K Philp @LisakPhilp1 · Nov 6, 2020

Join us for our #Movember fundraising bake sale on NOW in the #TRI atrium until sold out! All sales go to #movember2020 and not to mention the goodies will make your Friday morning a whole lot sweeter! @apcrcq @PatB\_Thomas @TRI\_info @MovemberAUS  
Show this thread



## RUOK Day 10 September



## TRI Foundation Breast Cancer Appeal Launch



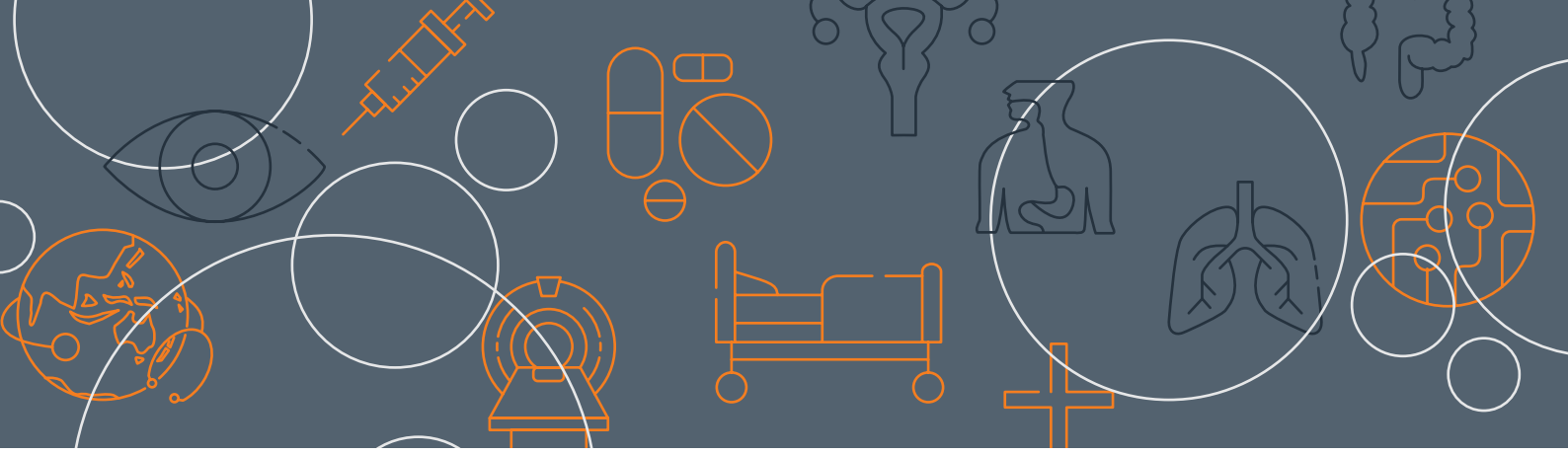
# Goal 5

## Generate health workforce capability in the translation of innovation

### OUTCOME

The next generations educated in how best to innovate, translate and interface with industry. Expansion of Australia's medical technology, healthcare delivery and export industries, generating new jobs and economic growth.





## 2020 HIGHLIGHTS

In Australia, discovery research and early-stage translation are a strength. However, there is a growing realisation of the need to develop skills and capability in areas like understanding the commercial viability of an innovation and MedTech manufacturing.

One way of developing these skills is for researchers to consider spending part of their career in the commercial sector.

Last year, TRI hosted a symposium and a number of seminars designed to provide postgraduate and early career researchers with a wealth of knowledge about career opportunities in industry. The registration of over 300 for the MTPCareers Symposium demonstrated a strong interest in building knowledge, gaining experience and career prospects in the start-up and commercial sectors.

TRI also hosted a pilot program of Translation and Entrepreneurial Training for 16 senior TRI-based researchers.

The course ran for six weeks and offered tools for identifying and marketing medical innovations to potential industry collaborators and investors.

TRI is dedicated to building the entrepreneurial skills of scientists and clinicians and the translational skills of start-ups. TRI is also increasing its capacity to offer training and skills development for early-stage researchers.

At the 2020 launch of TRI's cGMP cleanroom and training facility in October 2020, MTPConnect CEO Dr Dan Grant said, "We know that Australia has a workforce skills shortage in cleanroom processes and advanced manufacturing, so setting up the clinical manufacturing training hub at the TRI is a targeted way to build our sovereign capabilities and develop more career opportunities for our best and brightest talent."

In total, there were 145 seminars and conferences at TRI in 2020, most of these online but some with a mix of online and face-to-face where possible.



Image: Dr Kate Irvine.

## Translation & Entrepreneurial Training Program

TRI piloted a 'Translation & Entrepreneurial Training Program' in 2020, which targeted early to mid-career researchers and clinicians based at the institute.

The program was designed to develop entrepreneurial innovation and practices; upskill participants in industry engagement; help accelerate research outcomes; and drive discovery-driven research at TRI.

In total, 16 researchers were selected by TRI to take part in the program. Over a two-month period, they participated in online group workshops, self-guided online learning and one-on-one mentoring and coaching.

The feedback from the research was overwhelmingly positive.

Mater Research's Dr Kate Irvine said of the course: "I thought the program was excellent – it highlighted the importance of having early conversations with a variety of potential 'stakeholders', conceptualising our research as a solution to their problems, and provided useful tools to prepare for and develop those relationships."

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"I thought the program was excellent – it highlighted the importance of having early conversations with a variety of potential 'stakeholders'..."

While The University of Queensland's Dr Aideen McNerney-Leo said: "It has really reframed my thinking about the potential commercial value of my research, and which partners might be interested."

## Directors' Choice Seminars

From June 2020, TRI ran a series of six seminars presented to both an internal and external audience. Topics were identified by TRI's partner Directors with a focus on building the current skillset and opportunities for researchers.

This was achieved by curated speakers who could showcase success stories, provide industry insight and discuss program and mentoring opportunities.

The first series of four seminars was developed by Prof Scott Bell, TRI CEO and focussed on Publishing. Journal editors based at TRI provided an insight into publishing in a particular journal.

There was also a debate about the new forms of online publishing and open access. The final seminar focused on how to market your research and was presented by the Communication and Marketing teams from TRI's four partners.

The second series of Directors' Choice seminars was on how to make connections and improve capability in the translation and commercialisation of medical innovations, including how to access mentoring and workshops.

Overall the seminars were a great success with two seminars receiving over 200 registrations and another seminar receiving over 300 registrations.



# Cancer Seminar Series

**TRI CANCER SEMINAR SERIES**

**Thursday 5 March | 9am - 10am | Room 2003**



**Dr. Brittney Harrington** (NIH, Maryland)  
Drugs targeting ovarian cancer tumour-initiating cells enhance oxidative stress and prevent disease recurrence.



**Professor John Hooper** (Mater Research Institute)  
"Standing on the outside looking in - models and molecular targets for advanced ovarian and pancreatic cancer"

For more events visit [tri.edu.au/events](http://tri.edu.au/events)



# Lessons in Leadership

**Student Seminar Series Panel Discussion**  
**Lessons in Leadership**

Date: Thursday 5 November | 3:00pm to 4:00pm  
Location: TRI Auditorium  
Zoom: 812 3647 0623



**Speakers:**  
**Professor Ian Frazer**, Founder, CEO and Former Director of TRI  
**Professor Gabrielle Belz**, Molecular and Viral Immunologist with UQDI  
**Dr Rodney Cusack**, CARP Commercialisation Executive Officer  
**Gabrielle Button**, CEO of Australian Institute of Leaders and Entrepreneurs






Info: [tri.edu.au/events](http://tri.edu.au/events)

# Queensland Clinical Sciences Symposium








**Prof Alan Mackay-Sim**  
Stem cell biologist and 2017 Australian of the Year

**Prof Pamela McCombe**  
Neurology

**Prof Dietmar Huttmacher**  
Regenerative Medicine

**Prof Tammy Hoffmann**  
Clinical Epidemiology

**QUEENSLAND CLINICAL SCIENCES SYMPOSIUM**

**Saturday 28<sup>th</sup> March, 8:15am – 5:30pm | Translational Research Institute**  
Book your tickets: [bit.ly/QCSS\\_2020](http://bit.ly/QCSS_2020)



**Obstetrics and Gynaecology**  
**Prof Sailesh Kumar**



**Geriatrics and Aging**  
**Dr Eamonn Eeles**



**Tumour Pathology**  
**Dr Cameron Snell**



**Medicine**  
**Dr Monica Ng**



**A/Prof Clair Sullivan**  
Medical Informatics



**Dr David Cavallucci**  
Hepato-pancreato-biliary Surgery



**Dr Michelle Roets**  
Anaesthetics



## Governance

### TRI BOARD

As a private company, TRI Pty Ltd is governed by a Board of Directors who have duties under the Corporations Act. The Shareholders' Agreement dated 16 June 2009 specifies the governance structure of the Board and requirements in relation to who can make certain decisions. Specifically each Shareholder has the right to appoint one nominee director. The Chair must be independent of the Shareholders and is appointed by a unanimous decision of the Shareholders. A further two independent directors may be appointed to the Board, however, to date, TRI has only had an independent Chair.



**Emeritus Professor David Siddle, BA (Hons), PHD, FASSA, Chair**

Emeritus Professor David Siddle obtained his PhD from the University of Queensland in 1971. As an academic psychologist, he worked in universities in England,

Canada and Australia. After appointments at Macquarie University, University of Tasmania, and the University of Queensland, he was appointed as Pro-Vice-Chancellor (Research) at the University of Sydney in 1997.

He served as Deputy Vice-Chancellor (Research) at the University of Queensland from 2001 to 2009 where he was responsible for the development and implementation of policy designed to enhance the university's performance in research and research training.

He was Chair of the Humanities and Social Sciences Panel of the Australian Research Council in 1993 and 1994 and after retirement, served on the Australian Research Council's Advisory Council. He has served as a Board member for many Cooperative Research Centres, was a Director of the Australian Synchrotron Company and from 2011 to 2014, served as a member of the Higher Education Standards Panel. Until 2017, he was Chair of Brisbane Diamantina Health Partners.



**Professor Aidan Byrne  
Provost and Senior Vice President of The University of Queensland**

Professor Aidan Byrne commenced as the Provost and Senior Vice-President of The University of Queensland on 4 October 2016. Prior

to this appointment Professor Byrne was the Chief Executive Officer (CEO) of the Australian Research Council (2012-2016), a position in which he delivered increased knowledge and innovation through managing funding schemes, measuring research excellence and providing policy advice to Government.

Before that, he was Dean of Science and Director of the Australian National University (ANU) College of Physical and Mathematical Sciences (2008-2012). He was also Head of the ANU Department of Physics (2003-2007). Professor Byrne is a member of the MBIE Science Board (New Zealand) and the National Research Foundational Scientific Advisory Board (Singapore). He is also a fellow of the Australian Institute of Physics.



**Emeritus Professor Carol Dickenson  
AM BUS (MGT) QIT, PHD UQ  
Queensland University of Technology**

Emeritus Professor Carol Dickenson AM is in the Chancellery Division, Office of the Vice-Chancellor and

President. Previous to this, she was Senior Deputy Vice-Chancellor at the Queensland University of Technology (QUT). QUT's six faculties and its research institutes report to the Senior Deputy Vice-Chancellor. The role includes responsibility for strategic planning, academic staffing and enterprise bargaining. Professor Dickenson is Chair of University Academic Board.

Prior to her appointment as Senior Deputy Vice-Chancellor, Professor Dickenson served as QUT's Registrar for 10 years and possesses a unique set of skills honed during extensive experience across academic, consulting, government, HR, and executive management roles.

Carol's external roles include: Elected Member, AHEIA Executive Committee; Member, Universities Australia D/PVC (A) Group; Member, ATN DVC (A) Group; Member, Chairs of Academic Boards; Chartered Member – Australian Human Resources Institute (AHRI); Member – AHRI National Certification Council; Director, Translational Research Institute.



**Dr Peter Bristow**  
**Chief Executive, Metro South Health**

Prior to commencing as the Chief Executive Officer for Metro South Health, Dr Bristow was the Chief Executive Officer for Health Support Queensland, where he was responsible for a

wide range of diagnostic, scientific, clinical and payroll services to enable the delivery of frontline healthcare across Queensland. While in this role, Dr Bristow was a part of the Department of Health Leadership Team.

Dr Bristow has also held the positions of Chief Executive Officer for Darling Downs Hospital and Health Service and Chief Executive Officer of Townsville Hospital and Health Service. From 2015 to 2017 he was Chair of the Queensland Health Service Chief Executive Forum and has also previously worked as Director of Intensive Care and Executive Director of Medical Services at Toowoomba Hospital.

Dr Bristow trained and worked as an intensive care physician at Liverpool Hospital in Sydney before moving to the Alfred Hospital in Melbourne. He is a fellow of the Royal Australasian College of Physicians, Fellow of the College of Intensive Care Medicine, Fellow of the Australian and New Zealand College of Medical Administrators, and a Graduate of the Australian Institute of Company Directors. Dr Bristow also holds a Graduate Certificate in Management.



**Jim Walker, AM**  
**Non Executive Director**

Until recently, Jim Walker was the Vice President and Managing Director of Rockwell Collins Asia Pacific. Employing over 20,000 people, Rockwell Collins is one of the largest suppliers of avionics and

communications' products to the global aerospace and defence industries.

Jim has over 30 years' experience in engineering, manufacturing and technology development in the aerospace industry. He has been the CEO of a number of companies and was also General Manager of The Boeing Company's Network Enabled Systems Business Unit in Australia. Prior to this, Jim served in the Royal Australian Air Force working in the areas of satellite operations, communications, intelligence, engineering and training.

## TRI EXECUTIVE LEADERSHIP TEAM



**Professor Scott Bell, Chief Executive Officer**

Scott is a leading clinician and researcher in Cystic Fibrosis (CF). He recently co-led the development of a new global blueprint for the care of people with the fatal genetic disorder. His work will help the 3500 Australians

with the incurable condition to live decades longer. Professor Bell has over 250 peer reviewed publications and has received grant support in excess of \$22 million over the past 10 years. He is a Senior Thoracic Physician at the Prince Charles Hospital and Editor-in Chief of the Journal of Cystic Fibrosis. Prior to his appointment as TRI CEO, Professor Bell was the Executive Director of Research at Metro North Health and the head of QIMR Berghofer's Lung Bacteria laboratory.



**Michelle Richards, Director, Building Operations**

Michelle commenced as Director of Building Operations at TRI in 2016, after four years in WH&S and Facilities roles during the development of the TRI. Currently this role oversees

Building Operations, Core facilities, Work Health & Safety, Scientific Services and Central Stores and Sterilisation functions. After completing a Bachelor of Science and Postgraduate diploma in Cardiovascular Medicine, Michelle worked for more than 10 years in Australia and the UK in medical research, gaining a broad foundation in areas including molecular biology, immunology, developmental biology and clinical trials.



**Kirsten Kiel-Chisholm, Director, Legal Services**

Kirsten commenced at TRI in July 2009 and is an experienced General Counsel and Company Secretary. As Director of Legal Services, Kirsten is responsible for managing the Institute's legal requirements and providing

legal advice to the Board and management across a range of areas. She also oversees human resources and internal audit for the Institute. Kirsten holds degrees in Law (First Class Hons) and International Business

Relations as well as having a Graduate Diploma in Applied Corporate Governance. She is In-House Counsel Certified by the Association of Corporate Counsel and a Fellow of the Governance Institute of Australia.



**Louise Morland, Director, Communications and Marketing**

Louise commenced at TRI in May 2014. She is an experienced Marketing and Communications Director with a demonstrated history of working in the research, government and the

commercial sectors. She has over 40 years' experience in-house and in consultancies managing large teams (over 200 professionals) and budgets delivering communication, marketing and media functions.



**Sue Davis, Finance Director**

Sue joined TRI in July 2020 as Finance Director with strategic oversight of Finance, IT and Quality Management. Prior to joining TRI Sue held senior finance and operational roles with TAFE Queensland, Bond

University and Infinite Aged Care Group.



**Professor David Theile, AO, Chair, Clinical Research Facility Committee**

David has had a long career in clinical practice with progressive involvement in professional affairs and hospital administration, culminating in his previous

appointment as District Chief Executive Officer (CEO) of the Metro South Health Service District, which incorporated Princess Alexandra Hospital.



**Professor Graham Galloway, Director, Imaging Infrastructure**

Graham is the Chief Executive Officer of the National Imaging Facility and is seconded by UQ to TRI as the Director – Imaging Infrastructure (0.5FTE). He is also Academic Lead for

the Preclinical Imaging Core facility at TRI. Graham's research is defined by finding innovative solutions to novel problems, of breaking new ground, of pushing the envelope of research using Magnetic Resonance.

## LEADERSHIP TEAMS OF TRI'S PARTNERS

### The University of Queensland, Diamantina Institute



#### Professor Paul Clarke

Paul is Director of The University of Queensland Diamantina Institute (UQDI), a leading translational medical research centre studying cancer, autoimmune diseases, infection and immunity, and the genetic basis of disease.

Professor Clarke joined UQ in 2017 from the University of Dundee in Scotland where he was Professor of Cancer Cell Biology and Associate Dean (Research) in the School of Medicine. Professor Clarke's current research interests are the molecular mechanisms of cell division, chromosome instability and mitotic cell death. He also carries out research into the cellular responses to anti-cancer drugs.



#### Jill Penridge

Jill is the Institute Manager of the University of Queensland Diamantina Institute. She previously practised as a lawyer, with a strong background in intellectual property and commercial law, particularly in the research sector. Jill has undertaken a

number of leadership roles across the university including with the Sustainable Minerals Institute, the Australian Institute for Bioengineering and Nanotechnology, the Institute for Teaching and Learning Innovation and the Queensland Brain Institute. She is primarily responsible for providing strategic and operational management for UQDI including responsibility for long-term planning, strategic budget management, coordination of professional support services and management of shared research infrastructure.

The UQDI Management Committee includes:

- Professor Ranjeny Thomas
- Professor Peter Soyer
- Professor David Evans
- Associate Professor Raymond Steptoe

### Queensland University of Technology, Institute for Health and Biomedical Innovation



#### Distinguished Professor Lyn Griffiths

Lyn is the Executive Director of the Institute for Health and Biomedical Innovation and the Director of the Genomics and Personalised Health Research Centre at QUT. An active and respected molecular geneticist with more than 28 years' experience, Prof Griffiths has brought a translational focus to genomics research to increase QUT's influence and its impact on human health. Currently she is also Director of the nationwide, industry supported Bridge and BridgeTech programs, which provide commercialisation training for the pharmaceutical and medical devices industries, respectively.



#### Professor Erik (Rik) Thompson

Rik is Associate Director of QUT's Institute of Health and Biomedical Innovation (IHBI) and Professor of Breast Cancer Research at QUT. He leads translational research studies on epithelial mesenchymal transition (EMT), the pathobiology of mammographic density (MD), cancer treatment with cold atmospheric plasma, and the predictive value of circulating tumour cells. In 2019 he created the MRFF RART-funded Centre for Personalised Analysis of Cancers (CPAC), a network of clinician-researcher partnerships in 13 tumour streams across Brisbane, to establish representative cultures of tumours towards the ultimate goal of informing treatment choices.

## Mater Research



### Professor Maher Gandhi

Maher is the Executive Director and Director of Clinical Research at Mater Research, the Group Leader of the Blood Cancer Research Group and a pre-eminent senior staff haematologist. As the Director of Clinical Research,

Professor Maher's role is to set strategy and create a clinical research program that influences future national and international health policy and practice through the full integration of Mater Research with clinical care. Whilst centred on Mater Research, the role also has close involvement with Mater Health, Mater Education and Mater Foundation.



### Professor Allison Pettit

Allison is the Director of Biomedical Research at Mater Research, an Australian Research Council Future Fellow and the Group Leader of the Blood and Immunology Research Group. As the Director of Biomedical Research, Allison provides

oversight, leadership, and guidance in the management and execution of clinical and biomedical research activities at Mater. She is involved in strategic planning, framing the organisational structures and support, embedding research within the hospital, recruitment of biomedical and clinical researchers, mentoring researchers across the career spectrum and improving the funding and impact of our research.



### Dr Maree Knight

Maree holds the executive position of Director of Operations, overseeing a portfolio which is responsible for the operational management of Mater Research (including finance, facilities and compliance), continuing to

strengthen existing and new partnerships, and research commercialisation activities. The principal existing partnerships involve The University of Queensland (UQ), as part of the Mater Research-University of Queensland (MRI-UQ), and the Translational Research Institute (TRI). Maree manages the strategic and operational aspects arising from these partnerships.

## Metro South Research



### Professor John Upham

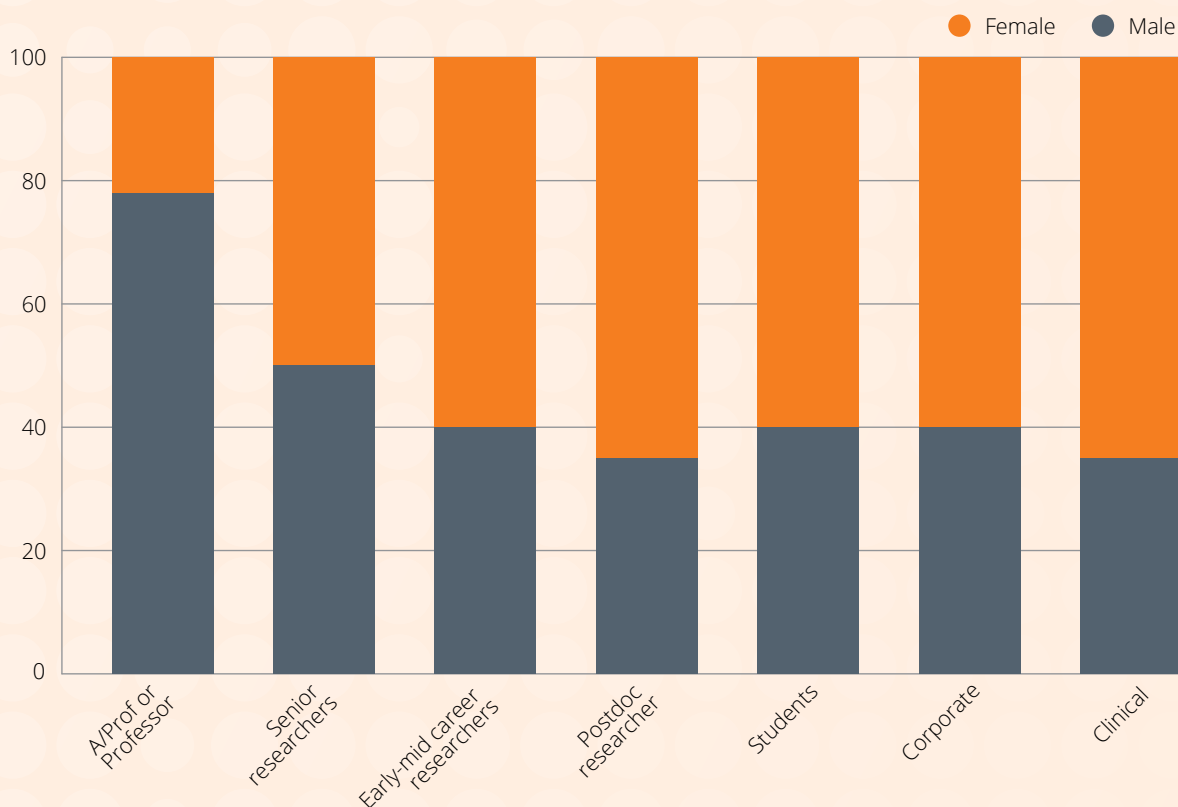
John is the Chair of Metro South Research and a respiratory physician and clinician scientist who is interested in immune dysfunction in lung diseases, vaccination and innovative approaches to improving patient care. After clinical

training in Brisbane, John undertook research training in Western Australia and Canada. He currently holds appointments with Princess Alexandra Hospital and the University of Queensland and is the Chair of Metro South Research. John is the President of the Thoracic Society of Australia and New Zealand.

John's team includes:

- Human Research Ethics Committee – Mary Boyde (Chair)
- Research Development – Paul Dall'Alba (Director)
- Erica Wright (Manager)
- Research Integrity and Compliance – Sonia Hancock (Manager)
- Clinical Research Facility – Todd Gumbleton (Manager)

## TRI-WIDE GENDER DISTRIBUTION



### COMMITTEE RESTRUCTURE

During 2020, Executive Leadership Team (ELT) and the Directors of TRI's partners worked closely on a redesign of the TRI Committee structure to ensure that it supports two-way communication between TRI and partner leadership.

#### The new committee structure is:

A **Shared Leadership Committee (SLC)** to facilitate two-way communication between the committees and TRI more broadly. The SLC is chaired by the TRI CEO and is comprised of the most senior member of each of the Shareholders' research institutes at TRI. The SLC is a source of advice to the TRI CEO; a forum for planning collaborative activities; and, in some cases, a decision-making body, except for those matters which are the responsibility of the Executive Leadership Team).

A **Shared Operations Committee (SOC)** supports the overarching operational direction and oversees the TRI facilities that are aligned with the TRI and its partners' strategic plans. This committee was created in 2020 to replace the Equipment & Infrastructure Committee. It is chaired by the TRI Director of Building Operations, and consists of the operational leads from each of the partners along with TRI's Finance Director and Core Facilities Manager.

The **Research Translation Committee (RTC)** is chaired by a senior TRI-based researcher clinician, and consists

of a number of TRI-based researchers with translation expertise; development/engagement representatives from TRI and each of the partners; and an industry partner representative. The RTC has three key roles:

- Supporting the TRI Shared Leadership Committee to facilitate and develop the opportunities for translation at TRI.
- Supporting the development of translational pathways, training and career development in translation for TRI researchers and staff.
- Identifying opportunities for research engagement with industry.

The **Clinical Alliance Network (CAN)**, which is set to meet in 2021 after the appointment of the Director, Clinical Translation, will work to establish strong linkages between TRI researchers and clinicians in the partner organisations and across Brisbane to provide opportunities for clinicians to be actively and sustainably engaged in translational research. The Clinical Research Facility Committee will become a sub-committee of the CAN.

The **TRI Hub Advisory Committee** was created to engage with partner Chief Information Officers as the transition of IT services moved from UQ to TRI. This committee has an independent chair and meets up to six times a year in coordination with Board Meetings.

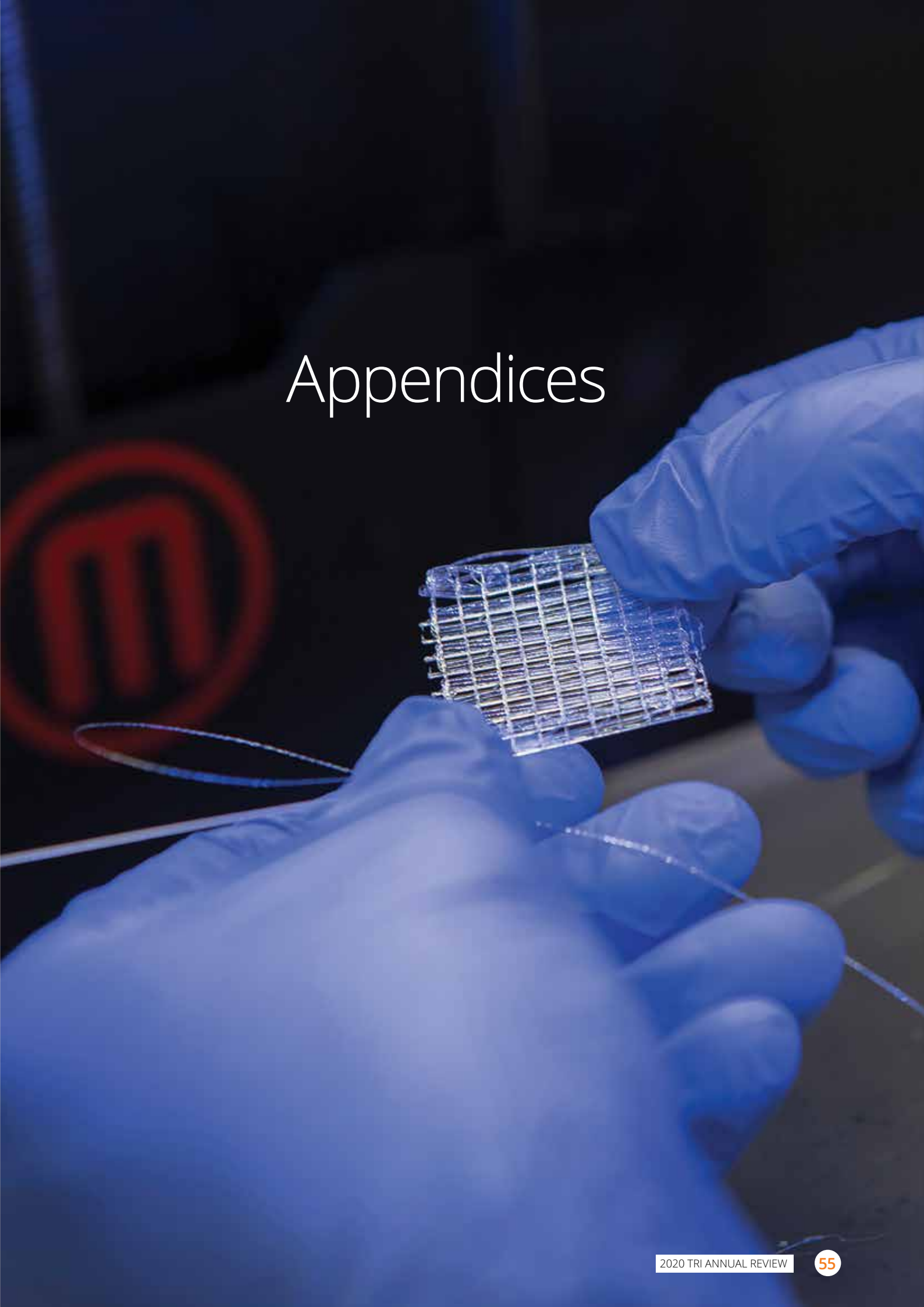
**The new Committee structure is illustrated as follows over page:**

## NEW COMMITTEE STRUCTURE





# Appendices



# Appendix 1

## 2020 TRI Partner Team Leaders

Institute	Group/Centre	Position	Name
Mater Research-UQ	Stem Cell Biology	Program Leader Group Leader	Professor Jean-Pierre Levesque
Mater Research-UQ	Blood Cancer Research	CEO & Director of Research Group leader Pre-eminent Senior Staff Haematologist	Professor Maher Gandhi
Mater Research-UQ	Bones & Immunology	Group Leader	Dr Anju Sehgal
Mater Research-UQ	Cancer Cell Biology Research	Group Leader	Professor John Hooper
Mater Research-UQ	Translational Bioinformatics	Group Leader	Dr Adam Ewing
Mater Research-UQ	Stem cells & cancer	Group Leader	Associate Professor Ingrid Winkler
Mater Research-UQ	Cancer Immunotherapy	Group Leader	Associate Professor Kristen Radford
Mater Research-UQ	Smiling for Smiddy Cancer Cell Cycle Biology	Group Leader	Professor Brian Gabrielli
Mater Research-UQ	Therapies for Diabetes	Program leader – Chronic Disease Biology & Care	Professor Josephine Forbes

Institute	Group/Centre	Position	Name
Mater Research-UQ	Pregnancy & Development	NHMRC Senior Research Fellow Program leader (joint) Group leader	Professor Vicki Clifton
Mater Research-UQ	Disease Biology & Therapeutics Research	Group leader	Associate Professor Sumaira Hasnain
Mater Research-UQ	Infection, Immunity & Metabolism	Principal Research Fellow Group leader	Associate Professor Katharina Ronacher
Mater Research-UQ	Macrophage Biology	Professorial Research Fellow Group co-leader	Professor David Hume
Mater Research-UQ	Developmental Disorders Research	Program Leader	Associate Professor Paul Dawson
Mater Research-UQ	Cognitive Health Genomics	Group leader	Dr Jacob Gratten
Mater Research-UQ	Genome Plasticity and Disease Research	Group leader	Professor Geoffrey Faulkner
Mater Research-UQ	Neural stem cell biology	Group leader	Dr Dhanisha Jhaveri
Mater Research-UQ	Genetics, Genomics and Transcriptomics of Disease	Professorial Research Fellow	Professor Kim Summers
Mater Research-UQ	Inflammatory Bowel Diseases (IBD)	Group Leader	Associate Professor Jakob Begun
Mater Research-UQ	Breast Physiology & Cancer group	Group Leader	Dr Felicity Davis
QUT	GU Precision Cancer Medicine	Head of Biomedical Sciences	Professor David Waugh
QUT	Australian Prostate Cancer Research Centre – Queensland (APCRC-Q)	Executive Director Prostate Cancer Research Group	Professor Colleen Nelson
QUT	APCRC-Q	NHMRC Principal Research Fellow; Cancer Program Director; Scientific Director APCRC-Q	Distinguished Professor Judith Clements
QUT	APCRC-Q	Postdoctoral Research Fellow; Group Leader	Dr Nathalie Bock
QUT	APCRC-Q	Advance Queensland Fellow	Associate Professor Jyotsna Batra
QUT	APCRC-Q	Senior Research Fellow; Group leader	Dr Brett Hollier
QUT	APCRC-Q	Postdoc Research Fellow; Group leader	Dr Jennifer Gunter
QUT	APCRC-Q	Group Leader/Head- Tumour Models	Associate Professor Elizabeth Williams
QUT	APCRC-Q	Urologic Oncologist - PAH & Mater Private Redland Member: APCRC-Q Senior Research Fellow QUT	Associate Professor Ian Vela

Institute	Group/Centre	Position	Name
QUT	Cancer and Ageing Research Program (CARP)	Scientific Director CARP Chenhall Research Scientist Member: APCRC-Q	Professor Derek Richard
QUT	Cancer and Ageing Research Program (CARP)	Strategic Research Fellow	Dr Mark Adams
QUT	CARP	Advance Queensland Research Fellow	Dr Laura Croft
QUT	CARP	Advance Queensland Industry Fellow	Dr Neha Gandhi
QUT	CARP	Senior Research Fellow	Dr Emma Bolderson
QUT	CARP	Research Fellow	Dr Shivashankar Hiriyur Nagaraj
QUT	CARP	Professor, Medical Oncology Qld Senior Clinical Research	Professor Kenneth O'Byrne
QUT	IMU Breast Cancer	Associate Director (TRI)	Professor Erik Thompson
QUT	Stem Cells & Cancer	Group Leader	Associate Professor Michael Doran
QUT	Gherlin Research	Group Leader	Professor Lisa Chopin
QUT	Protein Ablation Cancer Therapeutics Group (PACT)	Group Leader	Associate Professor Sally-Anne Stephenson
QUT	Endometrial Cancer	Principal Research Fellow	Associate Professor Pamela Pollock
QUT	Peptide Therapeutics & Membrane Biology	ARC Future Fellow Group Leader	Dr Sonia Henriques
QUT	Melanoma	Group Leader	Dr Aaron Smith
QUT	Translational Genomic	Deputy Director ATGC Senior Bioinformatician	Associate Professor Paul Leo
QUT	Cardiovascular Disease, diabetes & cancer	Group Leader Principal Research Fellow	Associate Professor Chamindie Punyadeera
QUT	Cardiovascular Disease, diabetes & cancer	Peter Doherty NHMRC Early Research Fellow	Dr Arutha Kulasinghe
QUT	Microbial Ecology, Metagenomics, Metatranscriptomics, Evolution	Chief Scientist – Microba Pty Ltd	Professor Gene Tyson
QUT	Neuroplasticity, Addiction & Neuroscience/ Psychology	Group leader	Professor Selena Bartlett
QUT	Medical Biochemistry & metabolomics	Senior Lecturer	Dr Andrew Battle
QUT	Tissue Density Mechanics	Postdoctoral Research Fellow; Group Leader	Dr Honor Hugo
QUT		CEO DatChem Pty Ltd; Professor of Radiology	Professor Carolyn Mountford

Institute	Group/Centre	Position	Name
QUT	Genomics & Infomatics	Senior Lecturer in Genetics and Informatics	Dr Pascal Dujif
UQ		UQDI Director	Professor Paul Clarke
UQ-PAH-Mater	Surgical oncology	Senior Lecturer, School of Medicine Professor; General Surgery: Upper Gastrointestinal	Professor Andrew Barbour
UQ	Dermatology Research Centre	Director UQDRC Head – Dermatology Department, PAH MRFF-NG Practitioner Fellow	Professor Peter H. Soyer
UQ	Dermatology Research Centre	Deputy Director, Principal Research Fellow	Associate Professor Rick Sturm
UQ	Dermatology Research Centre	UQ Amplify Researcher	Dr Mitchell Stark
UQ	Dermatology Research Centre	Senior Research Fellow Director of Immunology	Associate Professor James Wells
UQ	Experimental Melanoma Therapy Group	Group Leader	Professor Nikolas Haass
UQ	Cancer therapy	Principal Research Fellow Group leader	Associate Professor Fiona Simpson
UQ	Children's Brain Cancer Centre	Co-Director	Professor Brandon Wainwright AM
UQ	Skin cancer immunotherapy	Senior Research Fellow, Director (Research Training) Research Strategy and Support (Medicine) Group leader	Associate Professor Graham Leggatt
UQ	Epithelial Cancers	Group Leader, NHMRC Leadership Fellow	Professor Ian Frazer AC
UQ	Blood Stem Cell	Senior Research Fellow Group leader	Dr Christopher Slape
UQ	Genomic Medicine	Group Leader, NHMRC Senior Research Fellow	Professor David Evans
UQ	Genomic Medicine	NHMRC Senior Emerging Leadership Fellow	Dr John Kemp
UQ	Genomic Medicine	Senior Research Fellow	Dr Nicole Warrington
UQ	Dermatology Research Centre	NHMRC Early Career Fellow	Dr Aideen McInerney-Leo
UQ	Innate Immunology	Chair in Immunology, NHMRC Research Fellow	Professor Gabrielle Belz
UQ	Autoimmunity & tolerance	Principal Research Fellow Group leader	Associate Professor Raymond Steptoe
UQ	T-cell immune mechanism, monitoring & modulation (TIM3)	Group Leader	Professor Di Yu

Institute	Group/Centre	Position	Name
UQ	Type 1 diabetes pathogenesis and therapy	Director (Research Training) Research Strategy and Support (Medicine) Principal Research Fellow Group leader	Associate Professor Emma Hamilton-Williams
UQ	Experimental and translational immunology	Senior Research Fellow Group leader	Dr Fernando Fonseca Guimaraes
UQ	Dendritic cell biology	Arthritis Qld Chair of Rheumatology Group leader	Professor Ranjeny Thomas
UQ	T-Wells Group	Senior Research Fellow & Senior Research Fellow in HMR Group leader	Dr Timothy Wells
UQ	Infection & Inflammation	Principal Research Fellow Group Leader	Professor Antje Blumenthal
UQ	Kumari Group	Senior Research Fellow	Dr Snehlata Kumari
UQ	Microbial Biology and Metagenomics	Chair & Group Leader Metagenomics	Professor Mark Morrison
UQ	Experimental dermatology Centre for Clinical Research	Professorial Research Fellow Group Leader	Professor Kiarash Khosrotehrani
UQ	Cytokine Receptor Signalling	Senior Research Fellow Group Leader	Dr Andrew Brooks
UQ	UQ Dermatology Research Centre (UQDRC)	Course Coordinator, Primary Care Clinical Unit Associate Professor Dermatology	Associate Professor Helmut Schaidler
UQ-PAH	Lung & Allergy Research Centre (LARC)	Honorary Professor Head LARC Professor of Respiratory Medicine - PAH	Professor John Upham
UQ	Cancer immunotherapy	Research Chair – Cancer Medicine Group leader	Professor Riccardo Dolcetti
UQ	Centre for Kidney Disease Research (CKDR) Collaborative Kidney Cancer Research Group	Research Director Group leader (Joint)	Associate Professor Glenda Gobe
UQ	Therapeutics Research Centre	Chair Clinical Pharmacology & Therapeutics NHMRC Senior Principal Research Fellow Director	Professor Michael Roberts
UQ-TRI	National Imaging Facility	Director of Imaging CEO, National Imaging Facility	Professor Graham Galloway
UQ-PAH	Radiation Oncology Research (PAH)	Director of Radiation Oncologist Research Professor of Medicine	Professor Sandro Porceddu
UQ-PAH	Endocrine Hypertension Research Centre	Director, Endocrine Hypertension Research Centre, Greenslopes Hospital & Princess Alexandra Hospital; Director, Hypertension Unit, PAH	Professor Michael Stowasser

Institute	Group/Centre	Position	Name
UQ-PAH	Department of Gastroenterology & Hepatology	Director of Clinical Innovation – UQ Faculty of Medicine Associate Dean (Clinical) – Faculty of Health & Behavioural Sciences PAH – Director of the Department of Gastroenterology & Herpetology	Professor Gerald Holtmann
UQ-PAH	Australasian Kidney Trials Network	Senior Staff Specialist Director Chair for the Australasian Kidney Trials network (AKTN)	Professor Carmel Hawley
UQ-PAH	Centre for Kidney Disease Research	Director of the Metro South and Ipswich Nephrology and Transplant Service (MINTS) and Medical Director of the Queensland Renal Transplant Service; NHMRC Leadership Fellow; Centre for Kidney Disease Research Director	Professor David Johnson
UQ-PAH	Centre for Kidney Disease Research	Associate Professor, Centre for Kidney Disease Research The University of Queensland; Senior Scientist, Princess Alexandra Hospital	Associate Professor David Vesey
UQ-PAH	Centre for Liver Disease Research	Herpetologist Senior Staff Specialist in the Department of Gastroenterology and Herpetology PAH Director	Professor Elizabeth Powell
UQ-PAH	Department of Nutrition and Dietetics	Principal Research Fellow Director of Research	Dr Ingrid Hickman
UQ-PAH	Australian Centre for Complex, Integrated Surgical Solutions (ACCISS)	Director ACCISS Deputy Director of the Department of Plastic and Reconstructive Surgery – PAH Senior Lecturer UQ	Dr Michael Wagels
PAH	Kidney Cancer Research	Group leader (joint) Director of Urology Renal Transplant surgeon	Dr Simon Wood

# Appendix 2

## 2020 TRI Partner Research Grants

Recipient	Institution	About the research	Value
Dr Nathalie Bock	QUT	Improving guidance on breast cancer therapy	\$300,000.00
A/Prof Jyotsna Batra	QUT	A more sensitive blood test for prostate cancer	\$300,000.00
A/Prof Kristen Radford	Mater Research	New techniques and expertise to develop vaccines for a variety of cancers	\$40,000.00
Dr Shiv Nagaraj (& Dr Aideen McInerley-Leo)	QUT	Genomic architecture of chronic disease in Australia's First Peoples	\$1,368,256.00
Dr Adam Ewing	UQ	The history of the human genome and the mechanisms of genomic disease	\$1,554,485.00
Dr Colm Keane	Mater Research	Immuno-genetic biomarkers of response in a prospective study of immune checkpoint therapy in primary CNS lymphoma	\$1,393,575.00
Prof David Johnson	MSH-UQ	Increasing global equity in access to end-stage kidney disease care through better peritoneal dialysis affordability, practice, quality and outcomes	\$2,511,960.40
Prof John Hooper (CI: Dr Carlos Salomon)	Mater Research	Ovarian cancer early detection, monitoring and therapeutic intervention using extracellular vesicles	\$1,213,467.50
Prof John Hooper	Mater Research	A new radio-imaging agent to guide targeted therapy for epithelial ovarian cancer	\$1,893,306.20
Prof David Johnson (CI: A/Prof Andrew Mallett)	MSH-UQ	Implementation of Metformin therapy to Ease DEcline of kidney function in PKD – the IMPEDE-PKD trial	\$2,572,402.50



Recipient	Institution	About the research	Value
Prof Gerald Holtmann	MSH-UQ	Targeting the gut microbiome as a treatment for Primary Sclerosing Cholangitis: The Queensland Clinical Network Study	\$1,631,020.00
Dr Mark Muller	Vaxxas-UQ	Evaluating the Nanopatch for delivering vaccines	\$300,000.00
Dr Lisa Philp	QUT	New drugs to prevent and cure respiratory failure [in COVID19 patients]	\$150,000.00
Dr Mark Adams	QUT	Repurposing a promising anti-cancer drug [for COVID19]	\$150,000.00
Dr Mitchell Sullivan	Mater Research	Protecting people with kidney disease and diabetes [from COVID19]	\$300,000.00
Dr James Wells, Prof Ian Frazer, Prof Peter Soyer	UQ	Preclinical development of Q2361, a transforming new drug for skin cancer prevention in organ transplant recipients	\$724,957.00
Dr Jatin Patel	QUT	Defining novel mechanisms of vascular disease and developing revolutionary stem cell treatments	\$116,000.00
Dr Arutha Kulisinghe, Dr Joan Rohl & Dr Nataly Stylianou	QUT	COVID-19	\$90,000.00
Dr Camille Guillerey	Mater Research	Understanding crosstalks between Natural Killer cells and Dendritic Cells.	\$429,450.00
Prof Kiarash Khosrotehrani, Dr Mitchell Stark, Prof Andrew Barbour, Prof Peter Soyer, Dr Quan Nguyen	UQ	Advanced technological approach to predicting survival in patients diagnosed with locally invasive cutaneous melanoma (2021–2024)	\$2,000,000.00
Prof David Hume & Dr Katharine Irvine	Mater Research	Bringing Archaeal biodiversity to life from native Australian herbivores	\$564,601.00
Professor Mark Morrison; Dr Rochelle Soo; Dr Paul Evans	UQ	Decoding the spatiotemporal control of DNA replication and repair	\$467,000.00
Dr Mathew Jones; Professor Paul Clarke	UQ	Mobile DNA activity in the mammalian primordial germline	\$472,000.00
Dr Sandra (Sandy) Richardson; Dr Adam Ewing; Professor Azim Surani	UQ – Mater	Diabetes and non-alcoholic fatty liver disease: implementing the right care, in the right place, at the right time	\$466,508.00
Ms Stacey Bartlett	Mater Research	Identifying novel treatments for respiratory infections (winner)	\$100,000.00
Professor Elizabeth Powell	QUT-MSH	Diabetes and non-alcoholic fatty liver disease: implementing the right care, in the right place, at the right time (NAFLD-RRR Study)	\$100,000.00
Ian Frazer, Ahmed Mehdi, E Walpole, J Chandra, T Hassain, E McCaffrey	UQ-MSH	Assessment of predictors of response to checkpoint blockade	\$100,000.00
Ben Panizza, Jazmina Gonzalez-Cruz, Christopher Perry, Ian Frazer, Quentin Wright, Quan Nguyen	UQ-MSH	High-resolution mapping of oropharyngeal squamous cell carcinomas to allow personalization of immunotherapies	\$100,000.00
Rahul Ladwa, Arutha Kulinsghe, H Liu, Gabrielle Belz, Sandro Porceddu, Helmut Schaidler, J Bowerman	UQ-QUT-MSH	Cutaneous squamous cell carcinoma and tumour Microenvironment Multiplex Spatial Profiling (cMIC)	\$100,000.00

Recipient	Institution	About the research	Value
Shannon Leftwich, Blerida Banushi, Fiona Simpson, Ben Panizza	UQ-MSH	Increasing the number of breast cancer therapeutic antibody possibilities, patient choices and success rates	\$100,000.00
Ms Emma Ledger	UQ	Her research aims to explore the prevalence and clinical importance of cloaking antibodies in patients with cystic fibrosis and chronic Pseudomonas aeruginosa infections	\$10,000.00
A/Pr Fiona Simpson	UQ	The Ins and Outs of Endocytosis inhibition: Providing diverse opportunities for treatment of incurable cancers	\$912,353.00
Prof Gabrielle Belz	UQ	Coordinating neuroimmune sensory networks in health and disease	\$884,405.40
A/Pr Emma Hamilton-Williams	UQ	Tolerising antigen-specific immunotherapy for type 1 diabetes	\$1,395,549.30
Dr Felicity Davis	UQ	A cellular identity crisis: Deciphering how mammary epithelial cells form and maintain their identity	\$843,825.80
Prof Gerald Holtmann	UQ	A practice change for patients with severe chronic, clinically unexplained gastrointestinal symptoms: A randomised, controlled intervention to assess efficacy and cost-effectiveness	\$1,276,080.10
A/Pr Chamindie Punyadeera	QUT	Biosensor based clinical-decision support for patients with heart failure	\$691,933.40
Prof Gene Tyson	QUT	Strain-level characterisation and visualisation of the mucosal microbial communities associated with Inflammatory Bowel Disease (IBD) for the development of novel biotherapeutics	\$1,181,877.50
Dr Quan Nguyen (Dr Laura Genovesi & Prof Brandon Wainwright TRI)	UQ	Identification of therapy-resistant cells driving relapse in Medulloblastoma from integrated spatial transcriptomics and tissue imaging	\$749,272.00
Dr Colm Keane	Mater Research	Novel immune based approaches to improve survival for patients with Primary Central Nervous Lymphoma	\$393,000.00
A/Prof Pam Pollock	QUT	Endometrial cancer: FGFR2 variant in PORTEC-3 patient samples	\$50,383.00
Chloe Yap	Mater Research	A 'big data' analysis on genetic studies of the human brain in relation to autism and work on a proposed clinical trial.	Fullbright Scholarship
Dr Fernando Guimaraes	UQ	US Department of Defense	\$985,964.00
<b>TOTAL</b>			<b>\$31,969,596.10</b>



# Appendix 3

## 2020 TRI Partner Research Awards

Award	Recipient	Institution
Paul Korner Innovation Award	Dr Jatin Patel	QUT
WIT Qld Outstanding Achievement Science Award	Professor Vicki Flenady	Mater Research
Queensland Young Tall Poppy Science Award	Dr Fernando Guimaraes	UQ
Queensland Young Tall Poppy Science Award	Dr Laura Bray	QUT
Queensland Young Tall Poppy Science Award	A/Prof Sumaira Zia Husnain	Mater Research
Queensland Birthday Honours	Prof Ranjeny Thomas	UQ
Georgina Sweet Award for Women in Quantitative Biomedical Science	A/Prof Antje Blumenthal	UQ
QUT Graduate Research Student Showcase Three Minute Thesis (3MT) winner	Ferran Nadal-Buffi	QUT
Bridge Program Pitch Winner	Dr Fernando Guimaraes	UQ
Leader of Tomorrow, Gap Summit 2020	Eamon McKenna	QUT
Mater Research Strategic Grant for Outstanding Women	Dr Camille Guillerey	Mater Research
LSQ Lifesciences QIMR Berghofer Women of Influence	Prof Lynn Griffiths	QUT
McCullough Robertson LSQ Industry Excellence	Prof Derek Richard	QUT
Early Career Award, Head and Neck Cancer Conference	Dr Arutha Kulasinghe	QUT
Best Talk - BDHP: Child Health Precinct Research Week	Dr Ran Wang	Mater Research
The Australian 'Research' award	UQ Dermatology Research Centre	UQ
Jian Zhou pre-doctoral Travel Scholarship	Clare Primero	UQ
Finalist in the Australian Museum Eureka Prize in the Outstanding Early Career Researcher section	Dr Nathalie Bock	QUT

Award	Recipient	Institution
Mater Research Sisters of Mercy medals Sr Madonna Josey winner	Dr Julie Cichero	Mater Research
Mater Research Sisters of Mercy medals Sr Michaelleen Ahern winner	Prof John Hooper	Mater Research
Australian MedTech Industry Outstanding Achievement Award	Prof Lynn Griffiths	QUT
Web of Science most highly cited researchers for 2020	Prof Di Yu	UQ
Web of Science most highly cited researchers for 2020	Prof Gabrielle Betz	UQ
Web of Science most highly cited researchers for 2020	Prof Gene Tyson	QUT
QUT Centre for Data Science 2020 Trans-disciplinary research excellence Award	Dr Pascal Duijf	QUT
UQ Medicine 2020 Capturing the "Spirit of Reconciliation" Award	Ryan Galea	UQ
UQ Medicine 2020 Leader of the Future Award (Academic)	Dr Aideen McNerney-Leo	UQ
Australian and New Zealand Society for Immunology Clinical & Translational Immunology Social Impact Award	A/Prof Kristen Radford	Mater Research
Australian and New Zealand Society for Immunology Carer's Awards – COVID-19 Support	Dr Kavita Bisht	Mater Research
Australian and New Zealand Society for Immunology Gordon Ada Career Advancement Award	A/Prof Sumaira Zia Hasnain	Mater Research
Australian and New Zealand Society for Immunology Gordon Ada Career Advancement Award	Dr Fernando Guimaraes	UQ
Australian and New Zealand Society for Immunology Jared Purton – ASI Award winners	Dr Camille Guillerey	Mater Research
Florey Next Generation Award - Runner Up	Priscila Oliverira de Lima	UQ
UQDI Academic leader	Prof Kiarash Khosrotehrani	UQ
UQDI Rising Star	Dr Fernando Guimaraes	UQ
UQDI Outstanding Contribution	Dr Aideen McNerney-Leo	UQ
UQ Medicine HDR 2020 symposium, People's Choice Winners	Clare Primiero	UQ
AusBiotech and Johnson & Johnson Innovation Excellence Award: COVID-19 Life Science Sector Collaboration Award and Industry's Choice Award	The University of Queensland (including Dr Arutha Kulasinge)	UQ-QUT
Fullbright Australia, Fullbright Scholarship	Chole Yap	UQ







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