



# The Prince Charles Hospital

**Research Report 2021**

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# Key Statistics

## PHDS AWARDED

- Dr Natalie Edwards** – Myocardial work assessment provides incremental information on left ventricular function across multiple pathological states.
- Dr Michael McAuliife** – Alteration of Coronal Plane Soft Tissues of the Knee by Osteoarthritis and Total Knee Arthroplasty.
- Dr Hannah O'Farrell** – Diagnostic, prognostic and therapeutic applications of extracellular vesicles in chronic obstructive pulmonary disease and lung cancer.
- Dr Barbara Page** – Retrospective cohort studies on the lung cancer diagnostic pathway: factors that influence waiting time intervals and patient experience.
- Dr Brielle Parris** – Evaluating NanoString Technology to Enhance the Molecular Characterisation of Lung Cancer.
- Dr Alison Peeler** – Provision of a new paediatric service: An investigation of staff and emergency department attendees perceptions and experience of the transition from an adult emergency department.
- Dr Clayton Semenzin** – Determination of Centrifugal Blood Pump Characteristics using CFD and Experimental Analysis.
- Dr Matthew Wells** – Peri-transplant cardiovascular dynamics in an ovine model of donor brain stem death.

MASTERS AWARDED: 8

## \$ GRANTS AWARDED



Equipment: \$66,711

Project / Innovation: \$1,055,881

New Investigator: \$128,647

Scholarships: \$85,791

Research Fellowships: \$660,000

**TOTAL: \$1,997,030 (154)**

## PUBLICATIONS



258 articles and book chapters

## PRESENTATIONS



Brisbane: 27

QLD: 3

Melbourne: 16

Perth: 1

Adelaide: 1

New Zealand: 1

Virtual: 88

## STUDENTS



Masters: 26

PhD: 64

## KEY AWARDS



**Dr Natalie Edwards**  
**Brian Haluska Award**  
American Society of  
Echocardiography



**Prof Kwun Fong**  
**Asian Pacific Society of  
Respirology (APSR) Medal**  
For commitment to the  
advancement of respirology  
in the Asia-Pacific region

## AWARDS

### Metro North HHS Research Excellence Awards

- **Prof Ian Yang**  
Researcher of the Year
- **Metro North Allied Health  
Translating Research into  
Practice (AH-TRIP) team**  
Health Services and  
Implementation Research  
Award
- **Dr Jack Bell**  
Research Support
- **A/Prof Henry Marshall**  
Rising Star
- **Critical Care Research Group**  
Discovery and Innovation  
Award

### TPCH Awards

- **A/Prof Peter Lazzarini**  
TPCH Hospital Rising Star Award
- **Dr Jacky Suen**  
TPCH Research Partnerships  
Award

### Conference presentations

- **Dr Alex Dashwood**  
Best heart failure presentation  
at Cardiac Society of Australia  
and New Zealand
- **Dr Meredith Redd**  
Ralph Reader Basic Science  
Prize – 69th Annual Scientific  
Meeting of the Cardiac  
Society of Australia and New  
Zealand
- **Ashleigh Cruikshank**  
best Presentation TSANZ-Q  
annual research meeting

### Other

- **Dr Frances Kinnear**  
ACTA Trial of the Year Award  
Winner: Pneumothorax study
- **Dr Glenn Stewart**  
American Thoracic Society,  
Early Investigator Award
- **Dr Linh Ng**  
Cardiac Society of Australia  
and New Zealand e- Fellowship
- **Prof Tony Rahman**  
Royal College of Physicians UK,  
International Award for Patient  
Excellence
- **Dr Adam Haig**  
Royal College of Physicians Fellow  
Research Awards (Australia)
- **Dr Tiang Hong**  
Royal College of Physicians Fellow  
Research Awards (Australia)

## ★ OTHER POINTS OF INTEREST

- ★ **Senior sonographer Chris Gilmore**  
is part of the team teaching Chest  
US to clinicians at TPCH and RBWH  
and achieved full Fellowship with  
the Australasian Sonographers  
Association in recognition of  
his outstanding contribution  
to ultrasound as a clinical  
sonographer and researcher
- ★ **TPCH Hip fracture Unit** –  
Australia New Zealand Hip  
Fracture Registry Exemplar Site  
For Bone Protection

- ★ **Cardiovascular Applied Research  
Groups** work on long-term  
survival after a heart attack  
published in the Medical  
Journal of Australia, received  
considerable media coverage  
and selected by the Editors as  
one of the top 10 most impactful  
publications in the MJA for 2021
- ★ **Dr Ben Symon** from ACER  
published a number of  
simulation podcasts

- ★ **The Exeter Hip** – 50 Years  
of Innovation in Total Hip  
Arthroplasty (Second Edition).
  - Several chapters by group  
members as well as editors Ross  
Crawford and Sarah Whitehouse
  - Editors: Gie GA, Timperley AJ,  
Crawford RW, Hubble MJW,  
Howell JR, Charity J, Wilson  
MJ, Kassam AM, Kolowska SA,  
Whitehouse SL. Published by  
Exeter Hip Publishing 2020  
ISBN: 978-0-9564521-3-9

# Foreword

Research continues despite adversities of a global pandemic.

The importance of medical innovation has never been more evident than during the COVID-19 pandemic. The successful development of a vaccine within a relatively short timeframe was dependent on a number of key factors including collaborations, adequate funding and the dedication of researchers.

These same factors are also crucial for the vital research occurring at The Prince Charles Hospital and this 2021 Research Report details the wonderful achievements of our research community. Notably, our researchers come from various professions including scientists, engineers, doctors, nurses and allied health professionals, and we recognise and celebrate our diverse community.

What is immediately evident in this year's Research Report is the depth of collaborations with hospitals, universities and other research institutions across Australia and the world. It is by working alongside like-minded experts, sharing successes and challenges that medical discoveries are made that benefit everyone, for the common good.

Within our community, we know that research is a long game, and the battle for ongoing funding can be a distraction to our brilliant researchers who have dedicated their careers to advancing research outcomes. Providing sustainable funding to enable research to be backed to a completion is critical to this success.

We recognise that the COVID-19 pandemic has been an especially challenging time for research, with many staff having to realign their priorities so they could respond to the frontline demands of patient care at our hospital. It is a testament to their dedication and commitment that despite the extra pressures of the pandemic that research of global significance continued unabated. In 2021 there were another eight PhDs and eight Masters awarded and 250 articles and book chapters published which is an accomplishment to celebrate.

We wish to acknowledge the dedication of our researchers who strive to make a difference to the early detection, treatment and prevention of diseases that affect 90% of the population. In many cases this research is about improving the status quo – an acknowledgement that while saving lives is crucial, improving a person's experience and their quality of life along that health journey is also of great importance.

The Prince Charles Hospital Foundation through The Common Good initiative is also very proud to provide continued support to launch the careers of researchers through funding opportunities. Since their inception, 243 New Investigator Grants have been awarded. Many of these grant recipients will go on to build upon their initial research project, evolving and developing their research ideas with 90% of New Investigator recipients remaining in research today.

Lastly, we give thanks to all those who through these past two challenging years, have still so generously given through grants, donations, public funding and precious time to enable key research projects to continue their momentum and trajectory towards success and completion.



**Christopher Morton**  
**Chair**

The Prince Charles  
Hospital Foundation



**Michael Hornby**  
**Chief Executive Officer**

The Prince Charles  
Hospital Foundation



**Tami Photinos**  
**Executive Director**

The Prince Charles  
Hospital

# Adult Cystic Fibrosis Research Group



The Adult Cystic Fibrosis Research Group offers new hope and fresh knowledge to CF patients.

## RESEARCH GROUP MEMBERS

- Professor Scott Bell
- Professor Rachel Thomson
- Associate Professor David Reid
- Dr Daniel Smith
- Dr George Tay
- Dr Megan France
- Dr Kay Ramsay
- Dr Christine Duplancic
- Dr Daniel Henderson
- Dr Ama Tawiah-Essilfie
- Dr Pramila Maniam
- Dr Graeme Mattison
- Julieta Castellini
- Sandra Phillips
- Kate MacMorran
- Michelle Wood
- Emma Ledger
- Vanessa Moore
- Tracy McMahon
- Andrea Beevers
- Angela Matson
- Karen Herd
- Robyn Cobb
- Kathleen Hall
- Kelly Burgess
- Suzanne Fox
- Paul Maplethorpe
- Peter Vardon
- Omega Chikooore
- Kim Smith
- Robyn Carter
- Thi Tham Nguyen
- Dora Ling
- Page Whible

## 2021 SNAPSHOT

- ★ **Members:** 34
- ★ **Trials and Studies:** 8+
- ★ **PHD's Awarded:** 1+

## NEW HOPE IN CYSTIC FIBROSIS

Cystic Fibrosis (CF) is an incurable, multi-system disease that predominantly affects the lungs. Infection is the biggest risk to our community, so all our work aims to better understand this process, to prevent and treat it.



Page Whibley, Michelle Wood and Beatrice Heat

Although we are a combined research team, we are three separate entities. The Clinical Research Group is focused on determining factors that influence the life expectancy of people with CF and how a better prognosis can be achieved by drugs and other interventions. The Lung Bacteria Group is focused on understanding the different pathways of lung infection. The Lung Inflammation and Infection Laboratory looks at pathogens, with the goal of developing treatments like antibiotics.

## HIGHLIGHTS

We are proud to announce that our 25-year partnership with the largest children's CF service in the world, based at Queensland's Children's Hospital, has resulted in research funding of 14 million from the United States Cystic Fibrosis Foundation to continue our worldwide research.


We published world-first research that mapped the spread of an important CF pathogen, *Mycobacterium abscessus* in Nature Microbiology. This work demonstrated previously unknown understanding about worldwide transmission of this pathogen, and critically, helps us better understand its emergence in people with CF.

Lastly in 2021, we were the first research group globally to demonstrate that airway cells in CF have altered handling of iron – and that this is a key driver of lung inflammation. This milestone paper was the culmination of several years of important research by our team.

## COLLABORATORS

The Lung Bacteria Group exists due to joint working between The Prince Charles Hospital, The Children's Hospital Research Centre, Gallipoli Medical Research Centre and University of Queensland. The Lung Inflammation and the Infection Laboratory is a joint research undertaking alongside the Queensland Institute of Medical Research.

# Adult's, Children's and Emergency Research Group

 The Adult's, Children's and Emergency Research Group aims to produce top-quality research in the field of emergency medicine.

It is jointly led by Dr Polash Adhikari and Dr Faye Jordan.

In our research, we use an evidence base that is truly unique – the day-to-day activity of the emergency department. It is our hope our results improve emergency practice in a way that is relevant to our hospital's environment and our patient's needs.



**Not every emergency room is the same. Therefore, developing a culture of curiosity in our team is key to research excellence and the ongoing advancement of emergency care at The Prince Charles Hospital.**

## RESEARCH GROUP MEMBERS

- Professor Wayne Hazell
- Dr Frances Kinnear (outgoing research lead)
- Dr Neil Grant
- Dr Alastair Newton
- Dr David Wood
- Dr Sue Hobbins
- Dr Linda Symington
- Dr Gavin Fincher
- Dr Rajeev Jarugula
- Dr Hanh Pham
- Dr Kim Hansen
- Dr Waruna De Alwis
- Dr David Elliott
- Dr Melanie Rule
- Dr Paul Fulbrook
- Virginia Blakeley
- Louise Spooner

*ACER would like to thank outgoing Head of the Research Group, Dr Frances Kinnear for her many years of service to the development of a robust and highly regarded research program in TPCH Emergency.*

## 2021 SNAPSHOT

- ★ **Members:** 16+
- ★ **Trials and Studies:** 7+
- ★ **Awards:** 2+

## THE BEST IN EMERGENCY MEDICINE

Our work has a direct impact on the quality of care given to emergency patients. Our position is unique, carrying out dynamic investigations on the frontline, at the interface between the public and health care services.

## HIGHLIGHTS

In 2021, we were proud to be part of two important projects that have changed emergency care. Most notably, a landmark study across Australia called "Less is More for Lungs" was recognised as practice changing.

This study found it better not to intervene in a lung collapse, but to treat patients with pain relief before awaiting the lung's natural recovery. This groundbreaking change to emergency medicine has been published in the New England Journal of Medicine and featured multiple times in online publications. It was awarded the Australasian College for Emergency Medicine Trial of the Year Award and Dr Kinnear was presented with the Metro North Clinical Research Excellence Award for her involvement.

Lastly, we were awarded important grant funding to roll out a new ER process for caring for children with lacerations throughout Queensland. Our study successfully demonstrated that a change in practice can impact the need for sedation, getting an injured child home sooner without compromising their recovery.

## COLLABORATORS

2021 presented some challenges to collaborative research. We would like to thank other research groups and our partner institutions Australia-wide for working hard under changing circumstances to keep our joint projects underway.



# Advanced Heart Failure and Transplant Unit

“ The Advanced Heart Failure and Transplant Unit wants to increase the global survival rate for heart failure.

It is led by Dr Scott McKenzie.

our research not only benefits individual patients, but health care systems at large.



We want to save the lives of our patients and learn important lessons that will save more people like them in the future.

## RESEARCH GROUP MEMBERS

- Associate Professor David Platts
- Dr George Javorsky
- Dr Wendy Chan
- Haunnah Rheault
- Dr Alex Dashwood
- Kellie Mikkelsen
- Dr Yee Weng Wong
- Jo Maddicks-Law
- Dr Mary Bayat
- Helen Seale
- Dr Nick Sowden
- James Walsh
- Emma Whitmore

## 2021 SNAPSHOT

- ★ **Members:** 13+
- ★ **Trials and Studies:** 5+
- ★ **Awards:** 2+

## HOPE FOR HEARTS WORLDWIDE

Heart failure is a major global health crisis. It's a devastating disease and one of the most common causes of hospitalisation in the world. The high death rate for this condition creates an overwhelming need to improve its diagnosis and treatment with urgent, impactful research.

Despite advancements in other conditions occurring thanks to big developments in modern medicine, there has been little improvement in the death rate for heart failure. Not only does this disease have little hope for survival, but it also poses a huge burden to hospitals across the world. Our goal is to find new treatments and prevent hospitalisation - and that

## HIGHLIGHTS

In 2021, the group successfully increased our emphasis on in-house research projects and fostering emerging research talent. We commenced a record number of our own projects which are expected to continue over the next few years.

Our most exciting work in 2021 was done in conjunction with the Emergency Department looking at the initial care of patients who present to the hospital with acute heart failure. This project, although only in early stages, has already highlighted areas of potential improvement in the emergency care pathway and was awarded a Metro North Innovation Grant in recognition.

Also, in conjunction with Allied Health, we completed a large part of our nutritional audit project which is demonstrating that malnutrition and obesity significantly impact on survival and length of stay in hospital. This research will deliver more important information about the wellbeing of transplant patients in 2022.

Lastly, we would also like to acknowledge emerging researcher Dr Bayat, who was awarded the New Investigator Grant from The Prince Charles Hospital Foundation for her study looking at urinary sodium levels in heart failure patients. She had never been involved in research in her career before and to have been awarded so early on is a major accomplishment.

## COLLABORATORS

In 2021, we continued our tradition of collaborating with other groups and our participation in commercially sponsored multicentre trials.

# Allied Health Research Collaborative

“ The Allied Health Research Collaborative brings together clinicians from Allied Health, Internal Medicine and Nursing to improve patient care and recovery.

It is led by Professor Norman Morris.

## RESEARCH GROUP MEMBERS

- Associate Professor Petrea Cornwell
- Associate Professor Peter Lazzarini
- Dr Tammy Aplin
- Dr Jack Bell
- Dr James Walsh
- Dr Glenn Stewart

## 2021 SNAPSHOT

- ★ **Members:** 7
- ★ **Publications:** 60+
- ★ **Awards:** 2+

## WELLBEING FROM HOSPITAL TO HOME

Our Allied Health team includes Occupational Therapists, Speech Pathologists, Nutritionists and Dietitians, Exercise Physiologists, Podiatrists and Physiotherapists. As a collective, we keep patients healthy from hospital to home, ensuring they have the best recovery possible.

Our research is centred around rehabilitation outcomes. Bringing different professions together to carry out evidence-based work is how we consistently deliver improvements across rehab and care pathways. It's also how we make our most vulnerable inpatients safer during their stay.



Our results are exciting because, by testing the effectiveness of new treatments in our clinical setting, our findings can not only be applied locally, but to hospitals all over the world.

## HIGHLIGHTS

Despite the challenges for clinicians and researchers brought about by COVID-19, our group published over 60 peer reviewed pieces of research in 2021 and continued to deliver important clinical outcomes for the hospital and patients.

We were successful in winning equipment grants from Griffith University and a large Innovation Grant from The Prince Charles Hospital Foundation. Professor Morris was a co-investigator on a \$2.35 million grant that will develop an Individualised Heat-Health Early Warning System for vulnerable Australians, which has the potential to be novel and lifesaving. The work undertaken by Dr Aplin using virtual reality to improve patient experience during surgery was considered ground-breaking.

Our staff also continued to be recognised for their dedication. Dr Stewart joined our research team having been awarded a TPCH Foundation Fellowship. Dietetics professional Dr Bell was awarded the Metro North HHS Award for Research Support and Professor Lazzarini was awarded the Rising Star Award at the Staff Excellence Awards for his ongoing work in foot disease.

## COLLABORATIONS

Our group is made up of clinicians from a diverse range of professions. We have affiliations with the major Queensland universities and supervise higher degree students at both clinical and university sites.

# Anaesthesia Research Group



The Anaesthesia Research Group exists to create a culture of forward thinking in anaesthesia research.

It is led by Dr Usha Gurunathan.

A prolific portfolio of work means our team is internationally renowned. As our research capacity grows every year, we also take on more diverse fields of study, and work with other specialists not only to ensure safety but to actively improve patient wellbeing. This work includes looking at how to reduce patients' pain after surgery or offer them a faster recovery. It's our hope all our research effort extends the reach, knowledge and understanding of anaesthetic practice across the hospital and ensures our team is at the forefront of the field.

## RESEARCH GROUP MEMBERS

- Associate Professor Ivan Rapchuk
- Associate Professor Daniel Mullany
- Dr Chris Stonell
- Dr Sophie Jayamaha
- Dr Sonia Vaughn
- Dr Alexandria Maltby
- Dr Thar Lwin
- Dr Shakeel Kunju
- Dr Lilly Ching
- Dr Michael Busser
- Joel Hines
- Paul Brady

## HIGHLIGHTS

2021 was a milestone year for our group having been well-funded by various grants and recognised by our peers for our commitment to patient care. We had close to a record number of multicentre trials and collaborative projects underway and nearing completion. In 2013, we started with one research project and since then we have gone from a small cohort to a world-renowned team.

Our biggest achievement this year was the media attention related to whole lung lavage in workers in the stone mason industry. Dr Gurunathan initiated and spearheaded the rehabilitation program in 2018, and due to its success, presented her work at the Clinical Excellence Showcase Queensland this year.

## 2021 SNAPSHOT

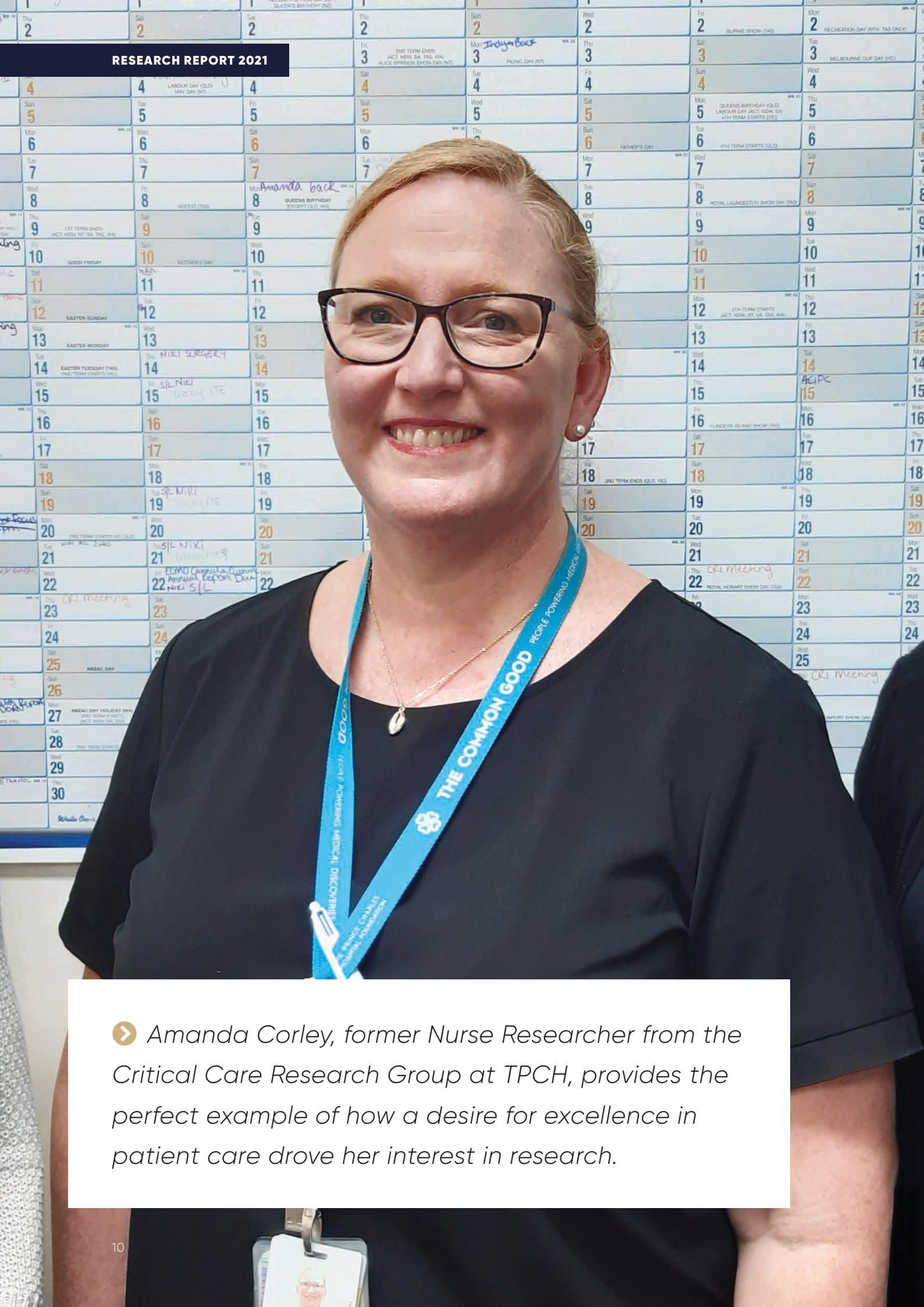
- ★ **Members:** 12
- ★ **Trials and Studies:** 7+
- ★ **Media Mentions:** 2+

## COLLABORATORS

Our work is possible with the support of other research groups, universities and research institutions across Australia.

## A CULTURE OF EXCELLENCE

Our research seeks to improve the safety and quality of anaesthetic care. Our focus is to ensure the hospital provides the absolute best care to patients before and after surgery, and that everything we do as anaesthesiologists positively impacts surgical safety.



➤ Amanda Corley, former Nurse Researcher from the Critical Care Research Group at TPCH, provides the perfect example of how a desire for excellence in patient care drove her interest in research.



## FEATURED ARTICLE

# Amanda Corley

**“While I loved my job working with critically ill patients, I started to feel like I wanted to influence care on a broader scale. I have always been passionate about evidence-based practice and looking to the current research to justify or streamline the way in which we, as nurses, care for our patients.**

With the help of a PhD scholarship from The Common Good, Amanda recently submitted her PhD on the way peripheral intravascular catheters (PIVCs) are secured.

PIVCs are the most commonly-used medical device in hospitals but the failure rate is extremely high with almost half of patient's PIVCs failing before their treatment is complete. Re-insertions of the PIVCs are painful and distressing to the patient and increase the costs of health care.

Despite there being a multitude of different PIVC dressings and securement products, no rigorous studies had been conducted on the best options. As part of her research Amanda analysed over 40,000 PIVCs.

*“PIVCs are so essential to the delivery of timely and effective health care and we know that the way in which we dress and secure them can determine how well they function. I had access to a large data set from a global cross-sectional study so it was important to pull it apart to identify any modifiable dressing and securement risk factors which could be contributing to the very high failure rate that we see globally for PIVCs”.*

After analysing the large data set, Amanda also developed two evidence-based dressing and securement bundles and pilot tested them in a randomised controlled trial.

*“While the trial was not big enough to definitively determine whether the securement bundles did a better job than standard care, there were some important findings: 1) there was less phlebitis (pain, redness and swelling at the PIVC insertion site) in the securement bundle groups; and 2) the securement bundle interventions were easy to use and had high levels of both patient and staff satisfaction”.*

Amanda is currently applying for funding to support a larger, multi-centre randomised controlled trial to determine effective ways of reducing PIVC failure.

*“I want to continue my research into PIVCs and ways that we can improve their longevity, so that the right device is chosen the first time, leading to less pain for patients and less waste in a health care organisation”.*

Amanda initially completed a Bachelor of Nursing, followed by a Masters of Advanced Practice (Health Care Research). From 2006 to 2010, she combined research and clinical work, and then in 2011, moved into a solely research role at TPCH.

*“It was one of the very few roles at the time for nurses within the health service. And the rest is history! I feel like I have found my niche and really enjoy conducting high-value, patient-centred research to improve the care we provide to our patients”.*

Amanda's research in the area of PIVCs builds on previous research she undertook as part of a New Investigator grant from The Common Good. This research investigated hospital-acquired infections that occur in the cannulae or tubing in ECMO patients and the most effective method of dressing and securing the cannulae. ECMO is a vital heart and/or lung bypass machine which provides life support to a person with severe heart and lung failure. With the support of The Common Good, Amanda is continuing her research into ECMO cannula and infection prevention.

*“On a personal note, I'm looking forward to spending more time with my 8 year old twins who have been very understanding when Mum had to hide away in the study doing her homework”.*

# Cardiology Clinical Research Centre

**“** The Cardiology Clinical Research Centre saves lives by finding lower-risk alternatives to open heart surgery.

It is led by Dr Christopher Raffel.

It is our mission to find lifesaving treatments for complex heart diseases and heart failure. In many cases our work benefits those who have run out of other options. Clinical trials, whether they are developing new technology like valves and stents, less invasive techniques or finding new drugs, are a lifeline to the critical ill.



**New interventions not only save lives today, but pave the way for more effective techniques to become the status quo in future, benefiting the next generation of patients.**

## RESEARCH GROUP MEMBERS

- Associate Professor Haris Haqqani
- Associate Professor Isuru Ranasinghe
- Professor Gregory Scalia
- Dr Scott McKenzie
- Dr Russell Denman
- Dr Yee Weng Wong
- Dr Niranjana Gaikwad
- Dr Karl Poon
- Dr Dale Murdoch
- Dr Rustem Dautov
- Dr Robert Horvath
- Dr Alexander Dashwood
- Dr Maryam Bayat
- Dr Su Hnin Hlaing
- Dr Srikanth Adusumalli
- Dr Muthanna Halim
- Haannah Rheault
- Maricel Roxas
- Estelle Beevors
- Bo Janoschka
- Megan Mearns
- Irena Rymar
- Suzanne Spencer
- Kathryn Stibijl
- Sandra Phillips
- Bernice Enever
- Julie Bailey-Bradshaw

## 2021 SNAPSHOT

★ **Members:** 27+

★ **Trials and Studies:** 38+

## WORLD FIRST CLINICAL TRIALS

The Cardiology Clinical Research Centre pioneers the latest techniques in heart surgery and is committed to delivering the most advanced techniques to seriously ill heart patients.

## HIGHLIGHTS

In 2021, our collaborative team of cardiac research experts continued to contribute to the worldwide knowledge bank and rapid evolution of technology that's leading the way in treating the critically ill.

We had 25 device and 13 drug trials underway, including three separate "world-firsts". Our acute coronary syndrome and heart failure drug trials are showing promise, including an international trial which is delivering early positive signs for heart failure.

Despite the challenges faced during the pandemic, particularly the slowing down of clinical trials, the centre has seen an unprecedented increase in trials being commenced as we move into early 2022. We continue to be proud of our international program, which is not only considered world leading, but in many cases offers a 'last chance' to the critically ill.

## COLLABORATORS

Our centre is a hub for international trials and research activities within the Cardiology Department of The Prince Charles Hospital. We provide coordination, oversight and grant application support to all cardiology research groups and thank them for their hard work and successful collaboration in 2021.

# Cardiothoracic Surgery Research Unit (CTSRU)

“ The Cardiothoracic Surgery Research Unit inspires progress and leadership in the field of Cardiothoracic Surgery.

It is led by Dr Livia Williams.

## RESEARCH GROUP MEMBERS

- Dr Andrew Clarke
- Dr Homayoun Jalali
- Dr Dong Kang
- Dr Lachlan Marshall
- Dr Jason Varzaly
- Dr Vinod Sharma
- Dr Benny Menachery
- Dr Dan (Syed) Ahmad
- Dr Doug Wall
- Dr Morgan Windsor
- Dr Bishwo Shrestha
- Dr Bruce Thompson
- Dr Charlie Liu
- Dr Joseph Hwang
- Dr Sri Suganyaperiasamy
- Dr Tovi Vo
- Dr Felicity McIvor
- Dr Bronwyn Pearse
- Dr Rishendran Naidoo
- Dr Anil Prabhu
- Dr Peter Tesar
- Susan Smith
- Donalee O'Brien

## 2021 SNAPSHOT

- ★ **Members:** 24+
- ★ **Trials and Studies:** 16+
- ★ **Media Mentions:** 2+

## INSPIRING SURGICAL PROGRESS

The Cardiothoracic Surgery Research Unit is the largest cardiothoracic surgery service in the country. We undertake collaborative research into the best way to treat heart and lung diseases. We aim to inspire progress and make innovations possible that catalyse surgical advancement across Australia.

Our research provides the evidence-base necessary for medical teams across the country to implement new surgical technology and techniques that save lives. With clinical trials, we have the chance to determine the value of new technology in a real-world setting and deliver groundbreaking research as a result.

The treatment of lung and heart patients is complex, and often their surgical care is the difference between life and death. The good news is with ongoing innovation, we are saving more lives with complex surgeries than ever before and performing interventions that would not have been possible in the past.



**Cardiothoracic surgery is life and death. Survival is how we measure success.**

## HIGHLIGHTS

Our world-renowned PEARs (Personalised External Aortic Root Support) program reached a milestone in 2021, with over 70 patients being implanted with a 3D printed aortic device. This has changed the landscape of aortic surgery within Australia with new technology significantly reducing the risk of surgical complications. The program has brought many interstate patients to The Prince Charles Hospital and attracted media attention. Our department now has one of the largest programs in the world for this procedure.

We were also proud collaborators with the Department of Physiotherapy and Anaesthetics, who have achieved outstanding patient outcomes via the Cardiac Surgery 'Pre-habilitation' program, aiming to maximise health before surgery for better outcomes. We have an expansive array of projects under this banner including on frailty, rheumatic heart disease and cardiac surgery in women. These projects will propel Cardiothoracic Surgery into a new era in 2022, whilst maintaining our department's long-standing excellent surgical outcomes.

## COLLABORATORS

In 2021, we continued our long-standing research collaborations with other cardiothoracic departments and had support from Queensland universities.

# Cardiovascular Applied Research Program

“ The Cardiovascular Applied Research Program strives to get the full picture of care for heart patients.

It is led by Associate Professor Isuru Ranasinghe.

## RESEARCH GROUP MEMBERS

- Dr Yang Peng
- Dr Linh Ngo
- Dr Karen Hay
- Dr Maryam Bayat
- Ms Sunnya Khawaja

## 2021 SNAPSHOT

- ★ **Members:** 6+
- ★ **Trials and Studies:** 6+
- ★ **Media Mentions:** 3+

## FOCUSING ON WHAT MATTERS MOST

Modern hospital care is fast-paced, complex and expensive. While new technology has undoubtedly led to better, quicker treatments for a range of illnesses, it's still important that clinicians and doctors interrogate the safety and effectiveness of the care they deliver.

For the first time in Australia, we are delivering critical research outlining the short and long-term patient outcomes for common conditions such as heart attack, heart failure and stroke. We seek to understand how clinical results vary across different hospitals and geographical regions. To support our goals, we use digital technology and 'big-data' to evaluate real-world outcomes for our patients.



Despite considerable advances in cardiovascular care, little is known about the long-term outcomes for heart patients across Australia.

## HIGHLIGHTS

In 2021, our researchers led a nationally competitive research program, providing critical information on survival and prognosis for heart patients. Our group's expertise in analysing healthcare data was recognised nationally and overseas with multiple grants, awards and publications.

We received major grant funding for our 'SAFER Hospitals' study. This nationwide project seeks to bring together hospitalisation and outcome data from all hospitals in Australia. It will estimate the incidence of adverse events, deaths and unplanned hospitalisations following admission – and look at how these outcomes vary among hospitals.

Our work on long-term survival after a heart attack received considerable media coverage and was published in the Medical Journal of Australia. It was also selected as one of its top 10 most impactful publications for 2021.

Lastly, we would like to congratulate Dr Linh Ngo for his work in atrial fibrillation. He was awarded the prestigious Paul Dudley White International Scholar award by The American Heart Association in 2021.

## COLLABORATORS

We work jointly with other cardiac research groups and with thanks to national and international research institutions.



# Cardiovascular Molecular & Therapeutics Translational Group



The Cardiovascular Molecular and Therapeutics Translational Group searches for ways to keep heart patients alive.

It is jointly led by Professor Peter Molenaar, Associate Professor Haris Haqqani, Dr Yee Weng Wong and Dr Wendy Chan.

## RESEARCH GROUP MEMBERS

- Dr Alex Dashwood
- Bianca Monzon
- Dr Andrew Battle
- Jo Maddicks-Law
- Elizabeth Cheesman
- Cassandra Vale
- Melanie Spratt

## 2021 SNAPSHOT

★ **Members:** 11+

★ **Awards:** 3+

## KEEPING FAILING HEARTS BEATING

Sadly, only 50% of heart failure patients will survive longer than 5 years. These statistics are devastating for individuals and families alike. With our research, we offer new hope by pioneering drugs that keep failing hearts beating.

Unfortunately, the number of people diagnosed with heart failure is increasing globally. In turn, this enhances the burden on hospitals, clinicians, and communities – not to mention the burden of personal loss. Our research is vital to reducing the impact of this disease and providing better outcomes for patients worldwide.

## HIGHLIGHTS

In 2021, our research looking at arrhythmias in heart failure patients has been exciting. A new drug we synthesized based on an anti-convulsant medicine, but tailored for heart patients, has shown to be effective at reducing deadly arrhythmias. Based on this early success, we have been given a green light to move to the clinical trials, meaning a new heart failure drug could be on the horizon.

During 2021, the group was awarded a Grant from the Prince Charles Hospital Foundation, along with a Vanguard Grant from The National Heart Foundation. Dr Dashwood was awarded the best heart failure presentation from the Cardiac Society of Australia and New Zealand and the best overall presentation from the Queensland Cardiovascular Research Network.

Researcher Melanie Spratt was a finalist at the QUT School of Biomedical Science Three Minute Thesis Competition and she was awarded a New Investigator Grant from The Prince Charles Hospital Foundation. Ms Spratt was born with a heart condition which has ignited her passion for research. She has been in front of media on several occasions promoting the importance of our work, networking at a community level, and engaging with potential donors on our behalf.

Lastly, an interesting story from 2021. Our team registered for the Tour de Brisbane to fundraise and keep fit as a team. Despite all our training efforts, we were unable to ride. Ironically, we were all needed in the laboratory the night before and didn't make it to the starting line. This is an example of how researchers demonstrate a commitment to their work – and to the lives it might save.

## COLLABORATORS

We worked locally with other cardiac research teams, universities across Australia and internationally with support from research institutions across the globe.

# Critical Care Research Group

 The Critical Care Research Group is a world-renowned research facility and global leader in biomedical engineering and ICU research.

It is led by Professor John F Fraser.

## RESEARCH GROUP MEMBERS

- Adrian Barnett
- Amelia Zhang
- Andrew Haymet
- Andrew Thomas
- Anil Prabhu
- Anna Beel
- Anna-Liisa Sutt
- Bailey Schneider
- Brooke London
- Bruce Garlick
- Carmen Ainola
- Charles MacDonald
- Chloe James
- Chris Hoi Houn Chan
- Christopher Raffel
- Clayton Semenzin
- Cynthia Taylor
- Dan Dai
- Daniel McGuire
- David McGiffin
- David Platts
- Declan Sela - Medical Student
- Dhayananth Kanagarajan
- Donna Faulks
- Dylan Flaws
- E-Peng Seah
- Emily Wilson
- Gabriele Fior
- Gabriella Abbate
- Gianluigi Li Bassi
- Hannah Marrinan
- Hollier O'Neill
- India Pearse
- Jacky Suen
- Jiville Latu
- Jo Pauls
- Jon Fanning
- Jonathan Chan
- Karin Wildi
- Kei Sato
- Keibun Liu
- Kieran Hyslop
- Kris Skegg
- Lauren Kelly
- Lavienraj Premraj
- Lawrence Caruana
- Lawrence Yanxi Lu
- Louise See Hoe
- Lucia Gandini
- Lynnette James
- Mahe Bouquet
- Margaret Passmore
- Maryam Memar
- Meredith Redd
- Monique Tucker
- Dr Nchafatso Obonyo
- Nicole Bartnikowski
- Nicole White

- Noriko Sato
- Oystein Tronstad
- Pelin Ho
- Raymond Ho
- Robert Holdsworth
- Sainath Raman
- Sam Huth
- Samantha Livingstone
- Samia Farah
- Silver Heinsar
- Simon Forsyth
- Susan Lynch
- Taylor Sing
- Toni Hammond
- Vikash Dhanapathy
- Wendy Strugnell

## 2021 SNAPSHOT

- ★ **Media Mentions:** 6+
- ★ **Publications:** 89+
- ★ **PhD's Awarded:** 2

## A BRIGHTER FUTURE FOR ICU PATIENTS

The Critical Care Research Group is a world leader in critical care and ICU research, dedicated to improving patient care and outcomes for the critically ill. We are Australia's largest critical care research facility with 7 purpose-built laboratories and the largest preclinical ICU in the southern hemisphere.

Increasing our understanding of the issues that face ICU patients and finding improved treatment methods for life-threatening diseases is key to saving lives. With our research, we improve survival rates and quality of life for patients with hard-to-treat diseases like heart disease, lung disease, sepsis, and as of 2020, COVID-19.

In moments of severe illness, our patients are at their most vulnerable and require extensive medical support. Whilst deaths rates for critical illnesses are reducing across the globe, survival can come with devastating impacts on mental and physical wellbeing. Our research is important as we focus on innovations that mean our patients not only survive but thrive after recovery.

By sharing information, developing and applying new technologies, and interrogating current standards of care we aim to overhaul our current understanding of intensive care practices and make both survival and quality of life the expected outcome for more and more patients.

## HIGHLIGHTS

In 2021, we published 89 papers in leading journals in Australia and overseas. We received many staff awards and international recognition in the form of grants, cross-collaborations and media mentions.

Our most notable achievement was from our COVID-19 research team who developed the world's most in-depth database of COVID-19 ICU patient outcomes. This research project collected real-time patient data from all over the world.

After six years of research, our "living heart" project reached a major milestone with the first human heart transplant using our new device known as 'Hypothermic Ex-Vivo Perfusion' (HEVP) technology.

HEVP is designed to increase the number of hearts that are viable for transplantation. It allows the donor heart to be kept 'alive' with a solution rich in oxygen and nutrients. The result is an increase in the number of hearts available to those in need, healthier transplants and faster recoveries.

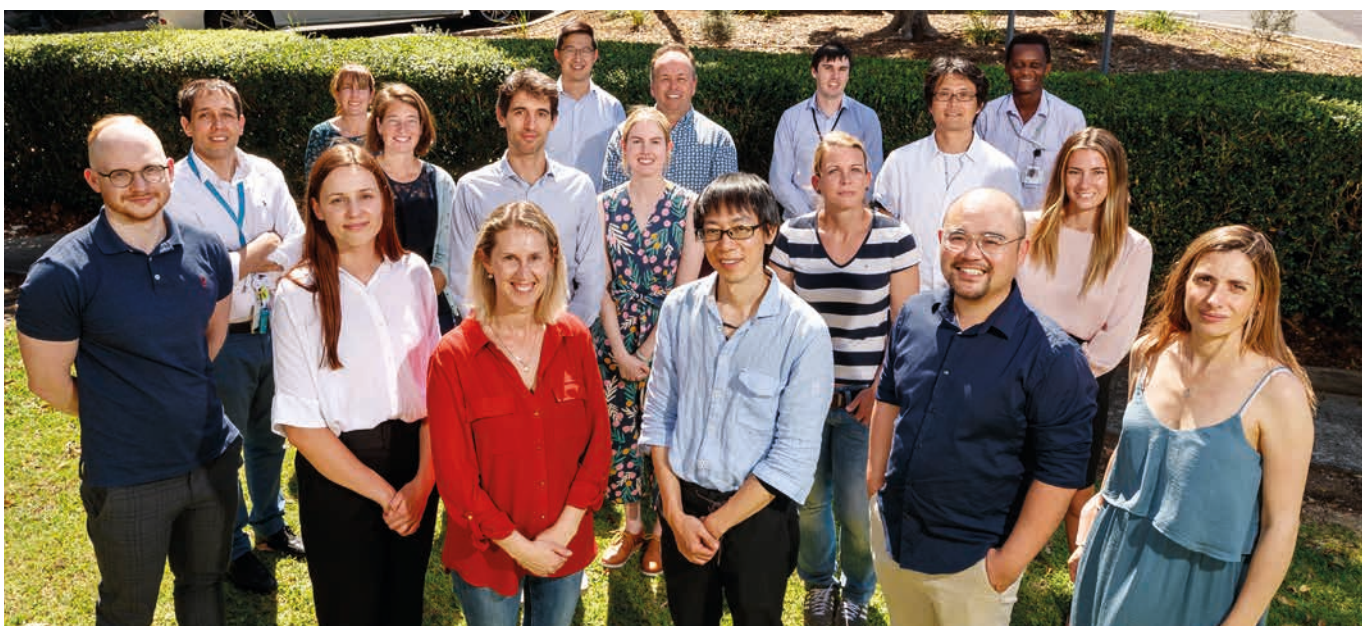
This research helped secure a new world record for the longest period a heart has been kept 'alive' outside a donor and led to an American surgical team using the same system in a historic pig heart to human transplant.

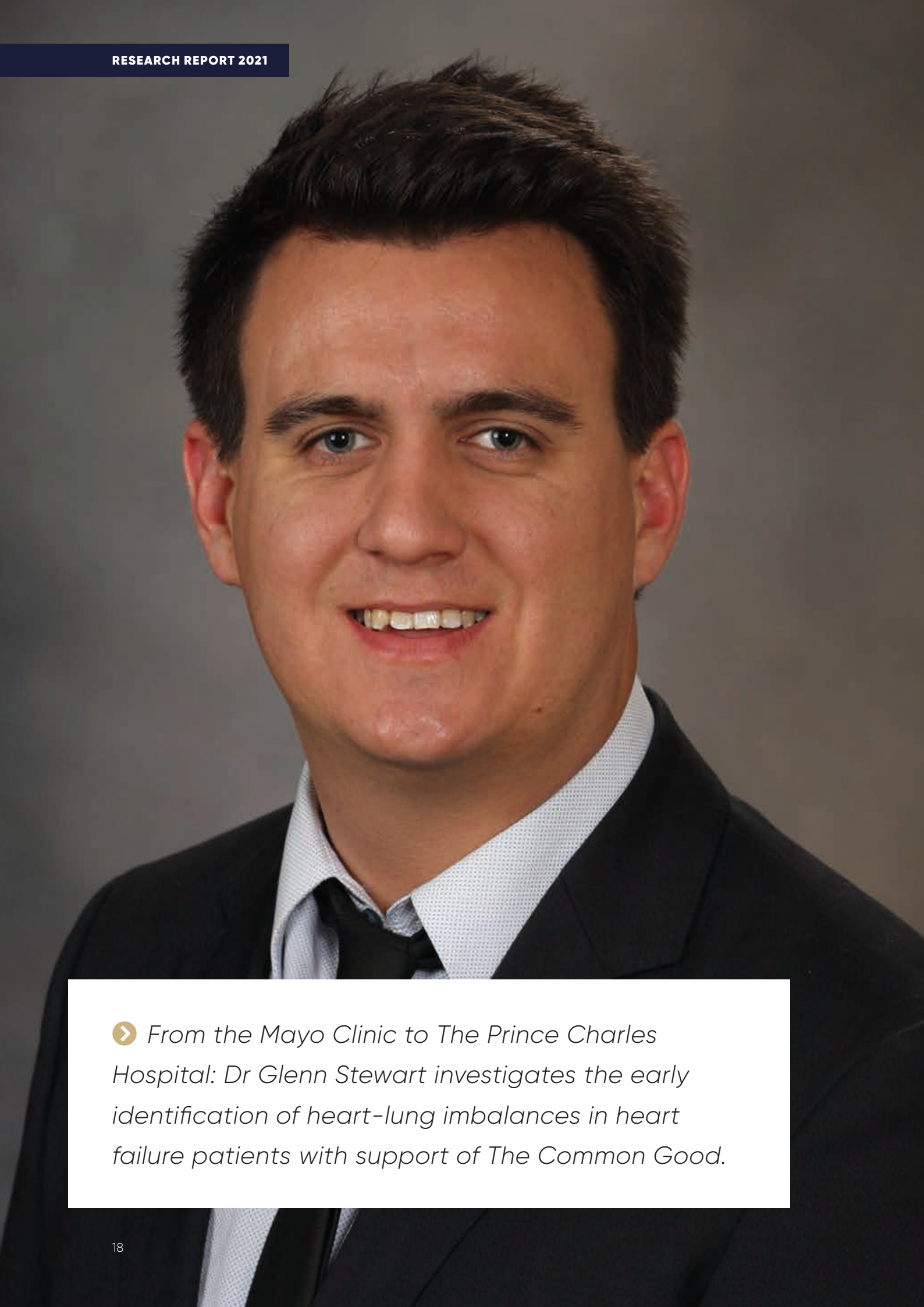
Also notably in 2021, the "ICU of the Future" project, which is developing an improved ICU experience and long-term financial benefits to the hospital, launched with two new, patient-centred design bedspaces being built. This project was awarded approximately \$850,000 in various grants as well as raising over \$100,000 through other fundraising efforts. The project was presented at 5 international conferences, featured on an ABC podcast and in various media articles.

On behalf of the Critical Care Research Group, Founder and Director Professor Fraser was awarded a Fellowship of the Extracorporeal Life Support Organisation – one of only two awarded world-wide.

## COLLABORATORS

The Critical Care Research Group is a truly international collaborative with members from 20+ countries across six continents.



A professional headshot of Dr. Glenn Stewart, a man with dark hair and a friendly smile, wearing a dark suit, light blue shirt, and dark tie. The background is a neutral, light grey.

➤ *From the Mayo Clinic to The Prince Charles Hospital: Dr Glenn Stewart investigates the early identification of heart-lung imbalances in heart failure patients with support of The Common Good.*



## FEATURED ARTICLE

# Glenn Stewart

**When Glenn Stewart started his Bachelor of Exercise Science undergraduate degree at Griffith University in Brisbane, he wouldn't have predicted it would take him to the forefront of medical innovation, the prestigious Mayo Clinic in the United States.**

Glenn's interest in research developed while volunteering for numerous exercise physiology research studies and assisting PhD students with their data collection during his undergraduate degree. This interest culminated in Glenn pursuing his own undergraduate research project, before graduating with Honours in 2012.

Glenn went on to complete his Doctor of Philosophy at Griffith University where he studied the effect of endurance exercise training on cardiac function. It was during his PhD that he met Professor Bruce Johnson, the head of the Human Integrative and Environment Physiology Lab at the Mayo Clinic.

*"Due to our overlapping research themes, Professor Johnson invited me to join his lab and undertake a post-doctoral position within the department of cardiovascular diseases at Mayo Clinic. I was subsequently awarded an American Heart Association Fellowship and a Career Development Award. Working at Mayo Clinic was an amazing opportunity to be immersed in both clinical, translational, and environmental research simultaneously. My time at Mayo Clinic was split between clinical studies in the hospital to develop novel heart and lung measurements and treatments in patient populations, and expedition style studies to better understand how humans adapt to extreme environments (such as altitude) and exercise."*

The receipt of a three-year Research Fellowship from The Common Good has seen Glenn recently transition his program of research back to Australia, where he is based in a joint collaborative role between Menzies Health Institute Queensland and Griffith University, at The Prince Charles Hospital. His research will bring together an integrated team of world leaders with specialised skills and assessment techniques to keep

The Prince Charles Hospital at the forefront of novel diagnostic and therapeutic treatment options.

Glenn's Research Fellowship is developing innovative strategies that target the early identification and treatment of heart-lung imbalances in patients with heart failure or pulmonary hypertension.

*"A major concern for patients with these diseases is failure of the lungs and right side of the heart to support daily activity. This worrisome prognosis often goes undetected until the latter stage of disease when treatment options are limited and leads to a downward spiral of physical inactivity and worsening disease."*

Cardiovascular diseases encompass one of the largest healthcare burdens, in terms of both the personal and societal costs, facing Australians. By providing clinicians with better tools for identifying early signs of heart and lung issues, and better interventions to improve such issues before it is too late, Glenn's research will help reduce both the personal and economic burden of diseases such as heart failure.

*"With the prevalence of cardiovascular disease growing each year, there is a greater need than ever for novel ways to reduce the burden of disease. By partnering with industry groups and clinicians, the future goal for our research is to integrate our novel research methods into clinical practice around Australia where it can make a difference to the everyday lives of everyday Australians."*

# Core Thoracic Research Group

**“** The Core Thoracic Research Group supports lifesaving research into lung disease.

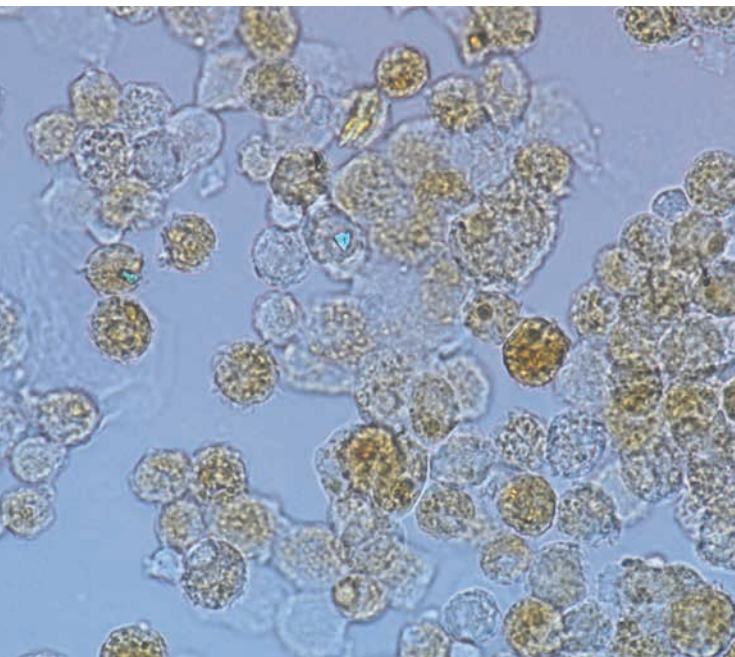
It is led by Associate Professor Philip Masel.

## RESEARCH GROUP MEMBERS

- Dr David Reid
- Dr Daniel Smith
- Dr Daniel Chambers
- Lisa McCarthy

## 2021 SNAPSHOT

- ★ **Members:** 5+
- ★ **Publications:** 3+
- ★ **Trials and Studies:** 4+



## IMPROVING CARE FOR COMMON LUNG CONDITIONS

Our work hopes to deliver new advances in the field of lung disease and improve the care available for patients with serious respiratory conditions.

Lung diseases such as bronchiectasis, chronic obstructive pulmonary disease and pneumonia are relatively common, and yet there are still large gaps in knowledge when it comes to their diagnosis and management. As a group, we cover a range of diseases in our projects, but our focus is on improving treatment for chronic obstructive pulmonary disease and bronchiectasis – with these conditions representing a huge burden to individual quality of life and community health.


## HIGHLIGHTS

In 2021, we had 4 trials in progress and published 3 papers. Ordinarily, we would have more research activity occurring, but our progress was slowed by COVID-19. Despite this, we were proud to collaborate on the COVID-19 projects happening at the hospital, lending our expertise to the worldwide research effort. We also continued to support important crossover studies, such as the hospital's world-renowned work in silicosis and the far-reaching projects done by the cystic fibrosis team.

## COLLABORATORS

We are a joint working group delivering our research both independently and alongside the other lung and heart cohorts.

# Echocardiography & Catharsis Program

 The Catharsis Research Group stands for The Catheterisation Laboratory, Haemodynamics and Echocardiography Group.

It is led by Professor Gregory Scalia.

## RESEARCH GROUP MEMBERS

- Professor Jonathon Chan
- Associate Professor David Platts
- Associate Professor Darryl Burstow
- Dr Natalie Edwards
- Dr Vinesh Appadurai
- Dr Stephen Tomlinson
- Dr Karen Rausch
- Maricel Roxas
- Robert Chamberlain

## 2021 SNAPSHOT

- ★ **Members:** 9+
- ★ **Awards:** 2+
- ★ **PhD's:** 2+

## EXCELLENCE IN ULTRASOUND

Our research group is delivering the world's largest comparative study in echocardiography, driving excellence and innovation in ultrasound.

Over the last 50 years, ultrasound technology has allowed cardiologists to answer important questions about heart health. Whilst this has been an important step in making modern medicine less invasive, further innovation is always possible to make this field safer, find new techniques and improve patient care. Our program keeps pushing forward the development of ultrasound technology and ensuring clinical excellence for heart patients.

## HIGHLIGHTS

2021 marked 4 years of data recruitment for the Catharsis study. In that time, we have brought three exciting innovations to echocardiography, techniques which are now used in many countries. This year, we continued to bring new ideas to the field and helped keep many heart patients on top of their health and off the operating table, wherever possible.

Our most notable achievement this year was the completion of our foundational work in myocardial work imaging. This research, that is delivering a new way to evaluate the function of the heart muscle, saw Dr Edwards win the Brian Haluska Award from the American Society of Echocardiography, considered the premier award for sonographer research. Our team was also given a Hospital System Research Award and a Discovery and Innovation award from Metro North Health.

## COLLABORATORS

We worked very closely with other cardiac departments to deliver joint outcomes alongside Critical Care, Cardiology and Medical Imaging.

# Gastrointestinal Health Research Group

 The Gastrointestinal Health Research Group delivers high quality gastroenterological, cancer and liver disease research to improve public health.

It is led by Professor Tony Rahman.

As our research capacity grows, and the landscape of healthcare changes, we also aim to make new and exciting avenues of investigation part of our forward-thinking culture. In the modern era of healthcare, this has included research into remote, tele and digital health and examining how data driven technology can help us innovate to diagnose, treat and cure disease more effectively.



**We are leaders in our field, influencing standards of healthcare across Gastroenterology.**

## RESEARCH GROUP MEMBERS

- Dr Ruth Hodgson
- Dr Antony Pan
- Dr Samapriya Hewasam
- Dr Peter Ko
- Dr Adam Haig
- Dr Yuming Ding

## 2021 SNAPSHOT

- ★ **Members:** 11+
- ★ **Trials and Studies:** 4+
- ★ **Awards:** 2+

## PUTTING PUBLIC HEALTH FIRST

The goal of our group is to perform impact-driven gastroenterological, cancer and liver research. We deliver improved patient outcomes, state-wide and national improvements to patient care, and raised standards of public health.

Finding ways to identify conditions earlier, search for new treatments and encourage individuals to better manage their health is important to our patients as well as our clinicians, who strive to deliver a research culture that puts public health first.

## HIGHLIGHTS

In 2021, we were most proud of the recognition received for our GEO Platform, a digital video platform available to patients and staff educating them about a colonoscopy. This platform won a prestigious International Award for Excellence from the Royal College of Physicians in the UK. It has been used by over 6000 patients and is being implemented at hospitals Australia-wide. Most importantly, it has made significant headway into improving the detection of colon cancer.

We also continued to be proud of our remote treatment project for Hepatitis C which has cured over 700 community-based patients and over 400 clients in correctional centres - all without one hospital attendance. This is a landmark achievement in remote healthcare.

## COLLABORATORS

Our lab research in coeliac disease, Crohn's disease and ulcerative colitis is made possible with support from James Cook University, and our work in oesophageal cancer by the Queensland University of Technology. We thank these institutions and all our important collaborators for making our work possible.



# Infective Endocarditis Queensland Research Group

“ The Infective Endocarditis Queensland Research Group hopes to learn more about a rare and deadly version of sepsis.

It is jointly led by Dr Robert Horvath and Dr Yong Shen Wee.

At least 1 in 10 Queenslanders with this disease won't survive, with others facing serious consequences. Endocarditis is rare, but deadly, so there is urgent need to know more about it, to improve its treatment and save lives.



We are part of a global effort to expand knowledge about Endocarditis.

## RESEARCH GROUP MEMBERS

- Professor Greg Scalia
- Professor Isuru Ranasinghe
- Dr John Sedgwick
- Dr Alex Chaudhuri
- Dr David Godbolt
- Dr Rishendran Naidoo
- Dr Peter Pohlner
- Dr Al Alghamry
- Dr Joseph Lee
- Maricel Roxas
- Bo Janoschka

## 2021 SNAPSHOT

★ **Members:** 13+

★ **Trials and Studies:** 4+

## JOINING THE FIGHT AGAINST SEPSIS

Endocarditis a deadly version of sepsis caused by bacteria entering the heart. We are Australia's first research team supporting lifesaving research into this condition.

## HIGHLIGHTS

2021 was a milestone year for us as we set the building blocks needed to make an impact in years to come. Our biggest achievement was starting the very first Australian Infective Endocarditis Registry and Biobank for Endocarditis. It's anticipated this will provide a strong basis for future research into everything from biomarkers to genetics, through to epidemiology and health service delivery.

## COLLABORATORS

We would like to thank the research departments and institutions who supported us, especially TPCH Foundation, and expressed interest in our uniquely collaborative work in 2021.



Prof Greg Scalia, Irena Rymar, Maricel Roxas, Dr Yong Wee, Dr Robert Horvath, Bo Janoschka, Suzanne Spencer, Dr David Godbolt



## FEATURED ARTICLE

# COVID-19 Critical Care Consortium

***With COVID-19 now a familiar part of everyday life, it's hard to remember a time when the virus was unheard of. A time when it hadn't yet been named, let alone identified as a pandemic by the World Health Organization.***

ICUs around the world were seeing patients presenting with symptoms that wouldn't respond to traditional treatments for influenza, leaving healthcare professional perplexed. Clinical experts were having to make assumptions and educated guesses for patients in their care.

As president of the Asia Pacific Chapter of the Extracorporeal Life Support Organisation (APELCO), Professor John Fraser, and colleagues Associate Professor Gianluigi Li Bassi and Dr Jacky Suen from the Critical Care Research Group, recognised the need to systematically capture, store, analyse and share information on COVID-19 globally in order to understand the virus's impact on patients.

Sharing information and experiences and ensuring this 'learning on the go' could be captured and made available would mean that crucial patterns would emerge faster and treatment adaptations made.

COVID-19 Critical Care Consortium (COVID Critical) was rapidly established with one clear aim – to equip all intensive care clinicians, regardless of nationality or affiliation, with the best and most up-to-date information to help them improve outcomes for COVID-19 patients.

At the time, Queensland was fortunate enough not to have experienced a large outbreak. It was, therefore, in a good place to co-ordinate the project.

Two years and many hours of data entry later, the COVID-19 Critical Care Consortium has created the world's most in-depth database of COVID-19 ICU patient information in collaboration with Oxford University. The COVID Critical database holds detailed information of every aspect of ICU admission and care from close to 20,000 cases of COVID-19. The study is analysing all aspects of a patient's ICU

journey including brain function, and cardiac and kidney health.

COVID Critical is a truly global network of healthcare professionals and researchers from more than 380 centres within 54 countries, spanning 6 continents.

The deidentified data is incredibly rich and helps clinicians better understand the impact of COVID-19 for patients. It encompasses everything from age, gender, height, weight, blood pressure, heart rate, lung and kidney function, existing medical conditions and medical history. In addition, it includes information on the treatments provided such as medications, ventilation and/or organ bypass therapy.

The greatest challenge, however, was in being able to deliver the information safely and securely to where it would have an immediate impact. With the initial financial backing of The Common Good, the COVID-19 Critical Care Consortium sought investors to help. Public donations, corporate philanthropy and in-kind support from the Qld Government and other international governments and organisations contributed over 6 million dollars in donations.

The data continues to be analysed and forms the basis of several sub-studies investigating the effects of COVID-19 on the brain, heart, blood and kidneys. The publication of key findings will continue to support the global community of researchers and healthcare professionals in their fight against COVID-19.

# Internal Medicine Dementia Research Unit

**“** The IMDRU combines the Internal Medicine Research Group and the Dementia Research Unit. It is the only unit of its kind in Queensland.

It is led by Dr Chrys Pulle.

## RESEARCH GROUP MEMBERS

- Dr Gurudev Kewalram
- Dr Carolina Ling
- Dr Lucy Dakin
- Dr Alisa Crouch
- Dr Eamonn Eeles
- Dr Kannan Natarajan
- Dr Debbie Lee
- Dr Donna Pinsker
- Dr Emma Sganzerla
- Dr Lemya Abdalla
- Tracey Palu
- Margaret Morton
- Maureen Morgan
- Robyn Riley
- Andrew Trotter
- Celia O'Meara
- Marita Prior
- Wayne Brady
- Rebecca Greenwood

## 2021 SNAPSHOT

- ★ **Members:** 20+
- ★ **International Clinical Trials:** 4+
- ★ **Other Trials and Studies:** 2+
- ★ **Awards:** 1+

## A HELPING HAND FOR DEMENTIA SUFFERERS

Dementia is the second leading cause of death in Australia. There is no cure and very limited treatments are available. The focus of our unit is to provide dementia patients with support and life changing treatments via clinical trials.

We are the only unit in Queensland undertaking national and international pharmaceutical clinical trials in dementia and other forms of memory loss. We play an important role in supporting the dementia community by providing them the opportunity to access the very latest in therapeutics that could change the course of their disease.



**Unfortunately, when people are diagnosed with dementia, it greatly impacts their quality of life. They lose the ability to work, enjoy family life and look forward to their future.**

## HIGHLIGHTS

2021 marked the 23rd year of our group's commitment to dementia research. In that time, several clinical trials have resulted in treatments being marketed and made available for the symptoms of dementia. This year was no different with four international clinical trials underway. We are proud to continue to pioneer with industry leaders to progress our research from discovery to treatment stage.

This year we were excited to launch an innovative research project with The University Of Queensland and The Queensland Art Gallery and Gallery of Modern Art (QAGOMA). The research examines the benefits of QAGOMA's Art and Dementia Program which is aimed at people living with dementia and their care partners.

Another highlight for us in 2021 was one of our team winning the Research Support Award at the Staff Excellence Awards.

## COLLABORATORS

Special thanks to our international collaborators and industry partners who continue to make our research possible and keep hope alive for dementia patients.



# IMDRU – Network for Orthopaedic and Fracture Education and Research

**“** The Network for Orthopaedic and Fracture Education and Research manages the complex care of hip fracture and orthopaedic patients.

It is jointly led by Dr Chrys Pulle, Dr Jack Bell, Dr Alisa Crouch and Dr Catherine McDougall.

## RESEARCH GROUP MEMBERS

- Dr Scott Crawford
- Dr Ross Crawford
- Dr Ivan Rapchuk
- Dr Sophie Jayamaha
- Dr Usha Gurunathan
- Dr Jack Bell
- Alex Maltby
- Madonna Dalton
- Rebecca Ferrier
- Sarah Whitehouse
- Kay Black
- Lisa Bullock

## 2021 SNAPSHOT

★ **Members:** 16+

★ **Awards:** 2+

## NEW WAYS TO CARE FOR OLDER PATIENTS

We look after the hospital's frail and ageing fracture patients. Our focus is sharing knowledge to improve their health outcomes and assessing the current benchmarks in our field.

Our publications have demonstrated to hospitals in Australia and across the world that there are opportunities for improved health and financial outcomes for this patient group. Since our unit's inception, we have had a direct impact on local and global healthcare policy through our work.

## HIGHLIGHTS

In 2021, in recognition of our ongoing commitment to improving care, we were named a top 10 site for clinical outcomes by the Australia New Zealand Hip Fracture Registry and awarded a Metro North Safety and Quality Award for Complex Care.

Notable other highlights include the commendable work of Dr Bell. He has led the ANZ Hip Fracture Registry Nutrition Sprint Audit across Australian and New Zealand, been appointed a board position at the Fragility Fracture Network and co-edited a paper on Nutritional Management that was downloaded over 50,000 times in 3 months.

## COLLABORATORS

Our research group is truly multi-disciplinary and includes representation from geriatricians, orthopaedic surgeons, anaesthetists, nurses and allied health professionals.



# Medical Imaging Research Program

**“** The Medical Imaging Research Program aims to provide safer, faster, more accurate diagnoses of medical conditions using imaging.

It is led by Dr Rachael O'Rourke.

## RESEARCH GROUP MEMBERS

- Rachael O'Rourke
- Katrina Hopcraft
- Allan J Wesley
- Aaron Lin
- Christian Hamilton-Craig
- Johanne Neill
- Jim Crowhurst
- Stanley Redmond
- Robyn Riley
- Andrew Trotter

## 2021 SNAPSHOT

- ★ **Members:** 10+
- ★ **Trials and Studies:** 7+

## DRIVING EXCELLENCE IN IMAGING TECHNOLOGY

The Medical Imaging Research Program progresses the field of medical imaging and drives improvements to diagnostic techniques such as X-Ray, Magnetic Resonance Imaging (MRI) and computerised tomography (CT) scanning.

Improvements in how we treat and diagnose health problems and an ability to identify life-threatening

conditions earlier are important outcomes made possible by our work. It is our vision that all Australians, especially those with life-threatening diseases, benefit from access to the very best in medical imaging technology, combined with cutting-edge expertise from imaging professionals.

## HIGHLIGHTS

In 2021, our group continued to support various clinical areas with multiple research projects and several publications. A highlight this year was a study we published into common interpretation errors by radiology trainees. The focus on the study was how to prevent mistakes in the future. It was internationally recognised, making its way into a popular European radiology magazine.

*"Learning from mistakes is an important tool to become a better radiologist."* Drs. R.X.-G. Man and A. Varma.

We were also proud to announce that Sonographer, Chris Gilmore, was awarded a full fellowship with the Australasian Sonographers Association in recognition of his outstanding contribution to ultrasound.

## COLLABORATORS

Special thanks to Cardiology, Thoracic, Critical Care and Dementia research teams for collaborating on important projects that improve patient care and wellbeing outcomes.

# Medical Oncology Research Group

“ The Medical Oncology Research Group is at the forefront of cancer research.

It is led by Associate Professor Brett Hughes.

## RESEARCH GROUP MEMBERS

- Associate Professor Brett Hughes
- Associate Professor Zarnie Lwin
- Dr Matthew Burge
- Dr Po Inglis
- Kirsten Popplewell

## 2021 SNAPSHOT

- ★ **Members:** 6+
- ★ **Trials and Studies:** 12
- ★ **Publications:** 30+

## DELIVERING HOPE WITH NEW MEDICINES

We hope to improve survival rates and long-term outcomes for patients with cancer, with a specific interest in hard-to-treat lung cancers.

Whilst advancements in cancer treatment have been remarkable in the past decade, there is always more we can do to save our patient's lives. Our research is important as we progress the latest generation of immunotherapy drugs. Sophisticated, targeted care that has been responsible for the huge leaps in available cancer treatments, and drugs that are setting new benchmarks for survival.

## HIGHLIGHTS

In 2021, we had 12 studies in progress at various stages and delivered 30 publications, many of which received critical acclaim. We measure success in line with improvements to the health and well-being of our patients via their participation in our research and in 2021, we continued to have many positive outcomes.

## COLLABORATORS

We would like to thank all the research institutions and pharmaceutical companies who enable us to push forward our ideas and all those who play a part in making new cancer treatments available to our patients.



A/Prof Brett Hughes, A/Prof Zarnie Lwin, Vani Sathiaselvan, Kirsten Popplewell, Emma Wynd.

# Nursing Research and Practice Development Centre

**“** The Nursing Research and Practice Development Centre is a nurse-led team inspiring quality research into patient safety.

It is led by Professor Paul Fulbrook.

## RESEARCH GROUP MEMBERS

- Dr Sandra Miles
- Dr Adam Burston
- Dr Vainess Mbuzi
- Josephine Lovegrove
- Saroeun Ven
- Amanda Griffin
- Jacob Butterworth



*Dr Vainess Mbuzi, Josephine Lovegrove, Prof Paul Fulbrook, Dr Sandra Miles.*

## 2021 SNAPSHOT

- ★ **Members:** 8+
- ★ **Publications:** 8+
- ★ **PhD's:** 1+

## SUPPORTING NURSING DRIVEN RESEARCH

Unfortunately, hospital related injuries are common, and they lead to significant pain and trauma. We are committed to reducing these injuries and the personal costs associated with them.

We aim to change the face of patient safety at The Prince Charles Hospital using a nursing-led approach. Our core work is about stopping pressure injuries, but also combines falls prevention and emergency care. As a collective, we contribute to improved clinical outcomes for patients and drive excellence in nursing, whilst working in collaboration with other disciplines.

## HIGHLIGHTS

In 2021, our pressure injury prevention work was multifaceted and complex leading to far reaching collaborations across Australia, in Spain and China. Our team continued to contribute to national and international peer reviewed journals including writing, co-writing and supporting 8 journal publications and 4 conference papers. We also supported and supervised 2 PhD candidates and 3 honours students.

## COLLABORATORS

We collaborated closely with several partners on local, state and international projects including Australian Catholic University, CSIRO, Royal Hobart Hospital, Charles Darwin University, Shanghai Tenth People's Hospital and San Cecilio University Hospital.

# Orthopaedic Research and Data Management Unit

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**“** The RESORT Research Group is the Orthopaedic Research and Data Management Group. It collects important data from every orthopaedic surgery performed by the hospital.

It is led by Professor Ross Crawford.

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## RESEARCH GROUP MEMBERS

- Sarah Whitehouse
- Louise Tuppin
- Rose Seddon
- Katie Conradie
- Sue Grice
- Catherine McDougall
- Bill Donnelly
- Richard Hanly

## 2021 SNAPSHOT

★ **Members:** 8+

★ **Trials and Studies:** 3+

## IMPROVING PATIENT CARE ONE SURGERY AT A TIME

As many as 1400 orthopaedic surgeries take place at The Prince Charles Hospital each year. We collect surgery data to use in research that supports orthopaedic surgeons, registrars, fellows and residents improve the quality of their practice and patient care.

Our work is also used for audit purposes and sent to the Australian Orthopaedic Association National Joint Replacement Registry and the Australian and New Zealand Hip Fracture Registry for use in future publications.

## HIGHLIGHTS

In 2021, we were excited to learn that medical technology group Stryker will establish its first Australian research and development facility in Brisbane. This is an opportunity for those in orthopaedics to drive forward medical innovation in this field from our home state. It's a remarkable boost to researchers and professionals in biomedical engineering, including our research group. We're excited to be part of this rapidly developing area and to have acquired funding for a research nurse to explore the use of a Stryker made robotic arm in hip and knee surgery.

## COLLABORATORS

Special thanks to our collaborators including Queensland University of Technology, University of Queensland, National Association Joint Replacement Registry and The Australian and New Zealand Hip Fracture Registry.



➤ *The dangers of asbestos are well known, with exposure to its fibres causing asbestosis and the deadly lung cancer, mesothelioma. Decades on and we are facing a new industrial health crisis, silicosis, which is proving to be just as deadly.*

**Dr Simon Apte, Queensland Lung Transplant Service**



## FEATURED ARTICLE

# Tackling the epidemic of silicosis.

***Silicosis is a severe, progressive dust-related lung disease caused by inhaling toxic silica dust such as that from popular engineered stone products, such as kitchen and bathroom benchtops.***

When inhaled the silica dust settles in the lungs, and the immune system goes into overdrive, causing inflammation and scarring (fibrosis). This means the lungs can't function properly and the person cannot breathe. Despite the high-silica content of engineered stone, there has been a failure to recognise the risk and provide adequate preventive measures.

The group most at risk of silicosis are stonemasons who cut, grind and sand the engineered stone products, inhaling the dangerous silica dust particles. A screening by WorkCover Queensland of over 1,000 stonemasons exposed to crystalline silica dust found that almost 1 in 5 had silicosis. Additionally, 1 in 30 had progressive massive fibrosis (PMF), a more advanced form of the disease which is potentially fatal.

Importantly, those affected by silicosis are relatively young with much of their lives still ahead of them. In addition to the impact on individuals, a diagnosis of silicosis has enormous economic and societal impacts.

For those impacted by silicosis, however, there is hope. The Queensland Lung Transplant Service (QLTS) at The Prince Charles Hospital (TPCH) is at the forefront of tackling this insidious condition. The QLTS is an internationally renowned research centre aimed at improving the outcomes for patients with advanced lung diseases.

Research by Dr Simon Apte, a Research Fellow of The Prince Charles Hospital Foundation and Chief Scientist at QLTS has led to the development of a world-first test to directly measure the amount of silica in a person's lungs.

*"We knew these young men had been exposed to this highly-toxic material, but there was no direct way of measuring how much was actually in their lungs. Our first task was to invent a new method to quantify the crystal load in these patients. This method has recently been published in a highly*

*respected scientific journal and we are already seeing other research centres start to use our method".*

The ability to calculate the amount of silica in the lungs has also played a vital role in being able to develop a ground-breaking treatment for silicosis as it is able to provide a measure of success.

Following Dr Apte's research, Professor Dan Chambers, senior thoracic physician and head of research at QLTS developed a revolutionary treatment for mild forms of silicosis, called whole lung lavage. Essentially the treatment involves washing a patient's lungs, one at a time, with 25 litres of a salt-water solution over a three-to-four hour period, under general anaesthetic.

Results of early trials have seen a 16-fold reduction in silica dust in the lungs of patients after the whole lung lavage procedure and a significant improvement in radiological assessment. The protocol developed at TPCH is now being rolled out to clinicians in both NSW and Victoria.

It is important that silica crystals are removed from the lungs early as the longer they are present, the more scarring occurs which reduces the function of the lungs, making it hard for the person to breathe.

The importance of this research is not just limited to Australia but has the potential to save lives worldwide, with the use of engineered stone products now being used extensively in many countries.

The QLTS is also working towards finding treatments for those with PMF, the more advanced form of silicosis.

*"We are now working on new ways to find drugs that can help treat patients with PMF. We have a two-pronged approach: we're using a rational-targeted approach to find existing approved drugs that can be re-purposed for the job; and we are also testing natural products from Australian flora and fauna in collaboration with Nature Bank at Griffith University. This second approach has already identified exciting lead compounds extracted from the roots of a native Queensland rainforest tree that may prove to have anti-fibrotic properties".*

# Queensland Lung Transplant Service Research Centre

“ The Queensland Lung Transplant Service Research Centre is a global pioneer in treating lung failure.

It is led by Professor Daniel Chambers.

disease, survival windows are short, and we need new treatments now. This urgency led our group to become pioneers in first-in-human trials, seeking to bridge the 'bench-to-bedside' research gap with our world leading approach.

“

**Treating patients who don't have time to lose means you don't want to spend years in the lab, you want to see your ideas save lives today.**

## RESEARCH GROUP MEMBERS

- Professor Peter Hopkins
- Associate Professor Brendan O'Sullivan
- Dr John Mackintosh
- Dr Chandima Divithotawela
- Dr John Feenstra
- Dr Simon Apte
- Dr Chandima Divithotawela
- Dr Viviana Lutzky
- Maxine Tan
- Penelope Groves
- Tharushi De Silva
- Debra Enever
- Maria Pietsch

## 2021 SNAPSHOT

★ **Members:** 14+

★ **Clinical Trials:** 3+

## SAVING LIVES TODAY WITH THE RESEARCH OF TOMORROW

Lung transplantation is often the only way to save a patient with severe lung disease. We have been responsible for numerous world first studies in this field with internationally renowned research and clinical trials.

Our research advances treatments, increases the success of transplants and ensures positive long-term outcomes for patients. In advanced lung

## HIGHLIGHTS

In 2021, we were focused on improving outcomes for lung fibrosis, silicosis and post-transplant rejection. The work was a mix of research-driven projects and clinical trials, the latter receiving significant support from new grants, media attention and international partnerships.

Most notably, our work in silicosis received widespread media attention and we were awarded grant funding of more than \$2 million to conduct an Australia-wide study to help develop a new treatment.

Our "ASSIST CLAD" study, the world's largest ever study of a unique stem cell therapy for lung disease, hit a huge milestone with recruitment passing 50 participants. If successful, this research will mark a fundamental change in the way organ transplant recipients are managed worldwide.

Finally, we started a world-first trial treating the underlying cause of the most severe forms of pulmonary fibrosis. This research led to an exciting collaboration with a US company developing mRNA technology to assist with treating this disease.

## COLLABORATORS

Our essential collaborations come from all over the globe. Most importantly, we thank our trial participants for their ongoing support and trust.

# Sleep Health Research Group

“ The Sleep Health Research Group delivers effective care for patients with sleep related disorders.

It is led by Dr Deanne Curtin.

## RESEARCH GROUP MEMBERS

- Dr Dan Henderson
- Dr George Tay
- Dr Peter Robinson
- Nicola Dunn
- Dr Irene Szollosi
- Jan Robinson

## 2021 SNAPSHOT

- ★ **Members:** 6+
- ★ **Trials and Studies:** 12+
- ★ **Publications:** 3+

## INNOVATING IN SLEEP HEALTHCARE

Good sleep is vital to wellbeing and quality of life. Our focus is effective care for patients with sleep diseases like sleep apnea, and other conditions that adversely impact sleep health.

Our key research interests include dementia, neuromuscular disorders and sleep related breathing disorders with projects that help us understand how sleep disorders impact individual wellbeing and public health.

With increasing awareness of sleep disorders and technological advances in sleep health, our group is a leader in sleep healthcare for patients living in regional and remote areas. We do our best to ensure all those with sleep disorders have access to the newest treatments and strive to find the best way to care for them in the community.

## HIGHLIGHTS

2021 was a busy year for the team with 12 studies in progress. We published 3 articles, including a paper in the prestigious Journal of Clinical Sleep Medicine.

We won a Metro North Seed Grant to pilot a new 'hub-and-spoke' organisational model for the Sleep Disorders Services. This will arrange our full service via the hospital, complemented by smaller remote services which will either support patients remotely, or direct patients needing more intense care to the hospital.


## COLLABORATORS

We collaborated internally with other research departments and had support from Metro North Hospitals and The Queensland Brain Institute.



Dr Deanne Curtin, Jan Robinson,  
Dr Dan Henderson, Dr Irene Szollosi.

# University of Queensland Thoracic Research Centre

 The University of Queensland Thoracic Research Centre is a leader in lung healthcare.

It is led by Professor Kwun Fong.

## RESEARCH GROUP MEMBERS

- Associate Professor Rayleen Bowman
- Professor Ian Yang
- Dr Henry Marshall
- Dr Annette Dent
- Maria Martins
- Kelly Chee
- Dr Hannah O'Farrell
- Dr Barbara Page
- Dr Brielle Parris
- Janet Shaw
- Eloise Shaw
- Dr Annalicia Vaughan
- Linda Passmore
- Meredith Carroll
- Gerry Olive
- Stephen Leong
- Pamela Fung

## 2021 SNAPSHOT

- ★ **Members:** 18+
- ★ **Awards:** 4+
- ★ **PhDs:** 3+

## HEALTHY LUNGS, HEALTHY COMMUNITIES

Our aim is to improve public lung health. We hope to develop new approaches to understanding lung diseases and reduce the global burden of lung healthcare.

With each research outcome, we are improving the treatment and supporting the prevention of lung cancers, mesothelioma and chronic lung diseases linked to smoking and pollution. Our impact areas include disease prevention, early detection, innovation in diagnostics, sophisticated genetic research and public health initiatives.

## HIGHLIGHTS

In 2021, our research group was privileged to contribute to many publications in respiratory medicine. Professor Kwun Fong was awarded three major grants to trial new lung cancer screening projects. These grants gained significant media coverage, including a virtual presentation from the Governor General on behalf of the Australian Cancer Research Fund.

We also won the following awards; Congratulations to:

- ★ **Professor Yang**  
*(Metro North Researcher of the Year)*
- ★ **Dr Marshall**  
*(Metro North Rising Star of Research)*
- ★ **Nikita Patel**  
*(Best e-poster Australasian Musculoskeletal Imaging Group and Best Oral Presentation, Thoracic Society of Australia and New Zealand)*

## COLLABORATORS

Many successful collaborations made our work possible in 2021, but most importantly we thank our patients for their participation.





*Eloise Shaw, Dr Hannah O'Farrell, Zoe Frazer, Kelly Chee, Samuel Tait, Maria Martins, Dr Annalicia Vaughan, Dr Brielle Parris, Janet Shaw.*

“

**We strive for research that is embedded into the clinical program, ensuring our research questions are highly relevant and we are rapidly translating findings into something that becomes available to more patients.**

**—University of Queensland Thoracic Research Centre**





**Associate Professor Petrea Cornwell,  
Principal Research Fellow at TPCH and Griffith University**

## FEATURED ARTICLE

# Citizen's jury informs stroke rehabilitation services.

***The Prince Charles Hospital (TPCH) treats approximately 200 people for stroke every year. Improvements in medical and surgical interventions mean that people who have a stroke are developing less severe disabilities and are being discharged home quicker than before.***

For example, around 40% of patients are discharged early, on average in 5 days, without the need for inpatient rehabilitation.

Associate Professor Petrea Cornwell, Principal Research Fellow at TPCH and Griffith University, explains: "Some of the subtle changes after stroke often arise when people return home and have lost contact with hospital services. Stroke patients who are discharged early, therefore, can struggle to receive the services and support they need".

Supported by an Innovation Grant from The Common Good, Petrea led a study which used an innovative methodology to inform research into stroke rehabilitation services. The study involved those who had a stroke and their carers identifying stroke research priorities, referred to as a citizen's jury. A citizen's jury is an example of participatory action research aimed at engaging the public in direct policy or decision-making. The citizen's jury participants were supported by stroke experts who provided current stroke knowledge to the jury.

*"This novel research technique placed stroke survivors and their carers in the expert position for the first time, giving them a platform to highlight their unique insights for consideration. Stroke survivors and their carers assisted in identifying the stroke research priorities which resulted in more targeted research and services that will be valued,"* explains Petrea.

The citizen's jury identified their top five priorities for future stroke rehabilitation research including wellbeing and support; return to work, and changes in cognition and communication. The top research priority revolved around determining a model of care that supports people with stroke and their families, taking into consideration the roles of the general practitioner, community rehabilitation services and other formal and informal supports.

In the words of one of the jurors: *"...more research needs to be put into the need for community support services for stroke survivors...this gives them a best practice guideline as to when what sort of time period the wheels might fall off kind of thing as well."*

Jurors also identified a need for further research to support people who have had a stroke return to work or other meaningful activities. This included determining barriers to people returning to these activities, whether that be changes to the person's ability to work (e.g. fatigue, changes in cognition and/or communication) or the availability of services to return to work.

Petrea's citizen's jury study builds on her previous research in stroke rehabilitation. A recipient of an Experienced Researcher Grant in 2015, Petrea investigated communication and cognitive impairments after strokes in the right side of the brain.

Petrea's next step is to draw the findings of the citizen jury together with other stroke rehabilitation work her and her team have undertaken to develop models of rehabilitation focused on improving outcomes for people with stroke and their families. The focus of these models is the transition from hospital to community and ongoing rehabilitation and support needs. The team is looking at models of care that incorporate telepractice, augmented reality and linkages with primary health care.

Without the funding received from The Common Good this preliminary work would not have been possible. The research conducted provides platform for future stroke rehabilitation research that has the potential to change the lives of the approximately half a million people living with the effects of stroke and their families.





# The Prince Charles Hospital Foundation Grants 2021

Grant Type	Recipient	Title	Amount Awarded
Board Project Development	Cardiovascular Molecular and Therapeutics Translation Research Group	Cardiovascular Molecular and Therapeutics Translation Research Group	\$100,000.00
Board Project Development	Dr Eamonn Eeles	Predicting cholinesterase inhibitor response in patients with dementia	\$60,443.00
Board Project Development	Infective Endocarditis Qld Collaborative	Infective Endocarditis Qld Collaborative	\$90,000.00
Board Project Development	ICU of the Future	Project funding	\$40,000.00
Board Project Development	Prof Kwun Fong	Matched SEED funding Virtual Lung Nodule Project	\$54,804.00
Board Project Development	Dr Isuru Ranasinghe	Cardiology PhD Scholarships	\$90,000.00
Equipment Grant	Ms Courtney Bennie	Pegaso A-Cough Perc	\$10,630.00
Equipment Grant	A/Prof Stephen Parker	Digital output and recording capacity and Remote treat handle for Electro-Convulsive Therapy (ECT)	\$5,239.00
Equipment Grant	Ms Margaret Passmore	ULT (ultra low temperature) -80C freezer	\$15,250.00
Equipment Grant	Prof Gregory Scalia	Echo Strain Workstations	\$12,672.00
Equipment Grant	Mrs Maxine Tan	Ultra low temperature freezer -80C	\$22,920.00
Innovation Grant	Dr Maryam Khorramshahi Bayat, A/Prof Isuru Ranasinghe, Dr Wendy Chan, Scott McKenzie	Risk stratification of hospitalised heart failure patients using a simple urinary sodium test	\$65,645.00
Innovation Grant	Dr Hoi Hiong Chan, Ms Margaret Passmore, Mr Oystein Tronstad, Ms Helen Seale, Dr Nicholas Sowden, Dr Wendy Chan, Dr Alex Dashwood, Dr Jacky Suen, Prof John Fraser	Investigate the effect of exercise training on blood haemostasis in patients with a durable mechanical ventricular assist device	\$49,913.00
Innovation Grant	Dr Wendy Chan, Dr Louise See Hoe, Mr Kieran Hyslop	Development of 'cardiac specific cell-free DNA quantitation in blood' as a highly sensitive biomarker to detect heart failure patients most at risk of re-hospitalisation.	\$49,594.20
Innovation Grant	Dr Nadeeka Dissanayaka, Prof Andrew Teodorczuk, Dr Eamonn Eeles, Dr Peter Worthy	Dementia connect My eLife	\$39,310.63
Innovation Grant	Miss Lenore Irvine, Dr Annette Dent	The diagnostic power of exhaled breath condensate and salivary extracellular vesicles for lung cancer	\$49,157.36

## Grants 2021 continued...

Grant Type	Recipient	Title	Amount Awarded
Innovation Grant	Dr Keibun Liu, Dr Jacky Suen, Prof John Fraser	A Double-Blinded Randomised Controlled Trial of a Novel Therapeutic Strategy using Hydrogen Gas via Extracorporeal Membrane Oxygenation for Refractory Severe Acute Respiratory Distress Syndrome in a Sepsis Ovine Model ~HYDRO RESCUE~	\$49,986.00
Innovation Grant	Dr Nchafatso Obonyo, Dr Sainath Raman, Dr Charles McDonald, Dr Jacky Suen, Prof John Fraser	Microvascular endotheliopathy: A final common pathway in critical illness?	\$65,902.32
Innovation Grant	Ms Margaret Passmore, Mr Kieran Hyslop, Dr Rishendran Naidoo, Dr Katrina Ricker, Dr Anil Prabhu, Dr Ivan Rapchuk, Dr Jacky Suen	Rogue mitochondrial DNA: The elusive mediator of inflammatory complications in cardiac surgery	\$43,922.36
Innovation Grant	Ms Hannah Rigby, Mr Jack Bell, Ms Jenna Stonestreet, Mrs Lucy Dakin, Mrs Alisa Crouch, Mr Kannan Natarajan, Mr Chrys Pulle	Nutrition Status of Outpatients with Dementia- forget nutrients and focus on the patient?	\$39,924.05
Innovation Grant	Dr Kei Sato, Dr David Platts, Dr Nchafatso Obonyo, Prof Jonathan Chan, Dr Jacky Suen, Prof John Fraser, Dr Maithri Siriwardena, Dr Jayshree Lavana, Prof Rishendran Naidoo	A clinical investigation of the utility of cardiac assessment using Speckle-Tracking Echocardiography in veno-arterial ECMO patients	\$33,069.00
Innovation Grant	Dr Glenn Stewart, Prof Greg Scalia, Prof Norman Morris	The ventricular strain gradient: A novel imaging biomarker of the adapting and maladapting heart	\$59,428.00
Innovation Grant	Dr Jacky Suen, Dr Nicole Bartnikowski, Prof John Fraser, Dr Andrew Haymet	Ex-Vivo Protection of Endothelium For Autologous Grafts (EX-VIPER) study	\$39,469.00
Innovation Grant	Mr Oystein Tronstad	eDIS-ICU – an international validation study to improve accuracy of screening for delirium in the ICU	\$35,312.17
New Investigator	Ms Carmen Ainola	Electrical Impedance Tomography to evaluate pulmonary distribution of nebulised antibiotics	\$9,916.00
New Investigator	Dr Maryam Khorramshahi Bayat	Evaluating the role of urinary sodium in the management of acute heart failure	\$10,000.00
New Investigator	Miss Hollie Bendotti	Smoking cessation chatbot: Prototype testing and feedback from consumers, clinicians and academics	\$10,000.00
New Investigator	Mr Ryan Choo	Does hypothermic ex vivo perfusion modify expression of cell survival and death signalling in hearts post transplantation?	\$10,000.00
New Investigator	Dr Ramsy Dsouza	Epidemiology of Right Ventricular dysfunction in Australian Intensive care units – a pilot study	\$9,766.64
New Investigator	Julian Garzon	Development of a statistical multivariate tool to design less-invasive and long-term Ventricular Assist Devices	\$9,916.00
New Investigator	Ms Halah Hassan	Investigating the effects of pulsatile and continuous flow veno-arterial extracorporeal membrane oxygenation on kidney outcomes following cardiogenic shock	\$9,958.58
New Investigator	Mr Archibald Lightbody-Gee	Development of a High-Performance Blood Shear Device for Blood Trauma Investigations in Artificial Organs	\$9,468.41



Grant Type	Recipient	Title	Amount Awarded
New Investigator	Dr Samantha Livingstone	The differences in coagulation disturbances of the Acute Respiratory Distress Syndrome subphenotypes	\$9,804.00
New Investigator	Dr Nikita Patel	Comparison of DXA to CT-based methods (L1HU and QCT) to detect osteoporosis and predict vertebral fracture in lung cancer screening participants	\$10,000.00
New Investigator	Dr Kei Sato	A novel speckle-tracking echo parameter estimating intrinsic cardiac function under VA-ECMO	\$9,960.00
New Investigator	Miss Melanie Spratt	Developing a novel class of RyR2 stabilising antiarrhythmics to prevent sudden death in patients with heart failure, repurposing phenytoin as a lead compound.	\$9,856.62
New Investigator	Mr Edward Stephens	Inflammatory changes in 'onion skin' tissue layers surrounding the tumour site in lung cancer.	\$10,000.00
PhD Scholarship	Maryam Memar	Development of a Driveline-Free Energy System for Ventricular Assist Devices (VADs): An Un tethered Patient-Centred Approach	\$85,791.00
Research Fellowship	Dr Nchafatso Obonyo	Understanding endotheliopathy in critical illness through improved microvascular monitoring	\$330,000.00
Research Fellowship	Dr Viviana Lutzky	Targeted molecular approaches for the treatment of idiopathic pulmonary fibrosis	\$330,000.00





# Active Grants 2021

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Ainola C	TPCH Foundation	Electrical Impedance Tomography to Track Pulmonary Biofluids and Characterization of Noxious Capability of ARDS Biofluids	2021-2022	\$9,916		New Investigator Grant
Aitken C., Morris N.R., Sabapathy S., Walsh J.	TPCH Foundation	Towards Individualising Rehabilitation: Identifying factors which limit exercise tolerance in chronic heart and lung disease. The Prince Charles Hospital Foundation PhD Stipend.	2018-2020	\$81,246	\$27,082	PhD stipend
Apte S	TPCH Foundation	IPF and viruses 2019-01	2019-2021	\$96,000		Innovation
Bayat M	TPCH Foundation	Evaluating the role of urinary sodium in the management of heart failure	2021	\$10,000	\$10,000	New Investigator Grant
Bayat M	TPCH Foundation	Evaluating the Role of Urinary Sodium in Heart Failure	2021-2022			Innovation
Bayat M, Ranasinghe I, Chan W, McKenzie S	TPCH Foundation	Risk stratification of hospitalised heart failure patients using a simple urinary sodium test	2022	\$65,000	\$0	Innovation grant
Bell J	MRFF	Scaling, spreading, and sustaining The Systematised, Interdisciplinary Malnutrition Program for Implementation and Evaluation (SIMPLE) – a multi-site implementation program. APP1168080	2019-2021	\$183,000	\$20,000	Translating Research Into Practice Fellowship
Bell, Wainwright, Reid, Sly et al	CF Foundation (USA)	NTM: understanding acquisition and transmission pathways	2020-2022	\$1,230,000	\$USD410,000	Project
Bendotti H, Marshall H	TPCH Foundation	Smoking cessation chatbot: Prototype testing and feedback from consumers, clinicians and academics:	2021	\$10,000		New Investigator
Bianca Monzoon	Queensland University of Technology	Simultaneous use of two beta-blockers, carvedilol and bisoprolol, for effective and safe treatment of heart failure.	2021-2022	\$57,708	\$28,854	PhD Scholarship
Chambers D	Perpetual	Macrophages and drug discovery- IPAP2012-0768	2021	\$30,000		Project grant
Chambers D	TPCH Foundation	Drug discovery IPF	2021	\$129,052	\$64,526	Project grant
Chambers D	TPCH Foundation	Silicosis	2019-2021	\$90,000		Innovation
Chambers D	TPCH Foundation	Macrophages 2016-34	2016-2021	\$44,000		Project grant
Chambers D, Corte T, Jaffe A, Glaspole I, Hopkins P, Goh N, Grainge C, Mackintosh J, Selvadurai H	NHMRC	The TELO-SCOPE Study - Attenuating Telomere Attrition with Danazol. Is there Scope to Dramatically Improve Health Outcomes for Adults and Children with Pulmonary Fibrosis?	2020-2025	\$1,828,446	\$310,000	MMRF

## Active Grants 2021 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Chambers D, Hopkins P, O'Sullivan B, Sinclair K	TPCH Foundation	Prevention and treatment of idiopathic and post-transplant pulmonary fibrosis	2019-2021	\$600,000	\$200,000	Team grant
Chambers D, Hopkins P, Westall G, Holmes M, Glanville A	NHMRC	Conquering the final frontier in lung transplantation – Mesenchymal stromal cell therapy for chronic lung allograft dysfunction	2016-2022	\$1,200,140	\$462,830	Project grant
Chambers D, Westall G, Goh N, Corte T, Apte S, Powell J, Bozinovski S, Newbiggin K, Wimalawaran H, Pattaroni C	NHMRC	Silicosis - Harnessing new ideas to conquer the re-emergence of an ancient lung disease - The SHIELD Study	2021-2023	\$2,216,631	\$551,591	MMRF
Chan HH, Passmore M, Tronstad O, Seale H, Sowden N, Chan W, Dashwood A, Suen J, Fraser J	TPCH Foundation	Investigate the effect of exercise training on blood haemostasis in patients with a durable mechanical ventricular assist device (Understanding the effect of exercise on blood-clotting profile in patients with a mechanical heart pump)	2022	\$49,913		Project Grant
Chan W	Metro North	Streamlined Pathway for Acute Heart Failure	2022-2023			Metro North SEED grant
Chan W	TPCH Foundation	Development of cardiac specific cell-free DNA quantitation in blood	2022-2023	\$49,594		Innovation
Chan W, See Hoe L, Hyslop K	TPCH Foundation	Development of 'cardiac specific cell-free DNA quantitation in blood' as a highly sensitive biomarker to detect heart failure patients most at risk of re-hospitalisation	2022	\$49,594		Innovation Grant
Cheesman E	TPCH Foundation	Determination of heart failure patients that are at most risk of b-adrenoceptor mediated ventricular arrhythmias	2020-2021	\$9,765	\$9,765	New Investigator Grant
Choo R	TPCH Foundation	Does Hypothermic ex Vivo Perfusion Modify Expression of Cell Survival and Death Signalling in Hearts Post Transplantation	2021	\$10,000		New Investigator Grant
Crawford R	AOA Research Foundation	Number of Osteoarthritis phenotypes to identify new treatment approaches.	2021	\$27,079	\$27,079	Research
Crawford R	Dept Of Environment and Science (Qld)	Joint Research Center for the Development of Functional Biomaterials in Advanced Manufacturing of Human Tissues and Organs-Strategic Queensland and Shanghai Scientific Collaboration Department of Environment and Science (QLD)	2021		\$50,000	Research
Crawford R	Medibank Private Limited	Partnering for high value prosthesis selection and better patient outcomes	2021	\$270,000	\$270,000	Research
Crawford R	Monash University	The Arthroplasty Surgical Antibiotic Prophylaxis (ASAP) Study	2017-2021	\$3,509,985		Research Support
Crawford R	Osteoarthritis Research Fund	Osteoarthritis Research Fund	2021	\$2,935	\$2,935	Research

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Crawford R	QUT Development Office Medical and Healthcare Robotics		2021	\$1,485	\$1,485	Research
Crawford R	Royal Devon and Exeter NHS Foundation Trust	Statistical support for the Exeter hip research team	2021	\$150,444	\$150,444	Research
Crawford R	Stryker	A prospective non-interventional cohort study examining functional patient outcomes and patient satisfaction of mako robotic and conventional joint arthroplasty: FASTRAC-JA Function And Satisfaction Tracking for Robotically Assisted and Conventional Joint Arthroplasty	2021-2022	\$80,900	\$80,900	Research
Crawford R	TPCH	Chair in Orthopaedic Research	2021	\$410,725	\$410,725	Research
Crawford R	TPCH	Development of Effective Prevention and Treatments for Metabolic Osteoarthritis	2021	\$25,000	\$25,000	Research
Crawford R, Brunello R	Stryker Aust Pty Ltd	Stryker Fellow	2021	\$75,000	\$75,000	Commercial Research
Crawford R, Prasadani I, Xiao Y	QAS	How does Plantar Fasciopathy Manifest in Athletes?	2021	\$20,000	\$20,000	Research
Critical Care Research Group	MRFF	Transfusion Triggers in Cardiac Surgery Australia trial (TRICS-IV)	2020-2023	\$869,566		International Clinical
Critical Care Research Group	MRFF	Australasian Resuscitation in Sepsis Evaluation: Fluid or Vasopressors in Emergency Department Sepsis (ARISE: Fluids) Trial	2020-2025	\$2,335,540		Research Grants
Doring A, Bell J	TPCH Foundation	Malnutrition in dementia outpatients	2019-2021	\$6,000	\$3,104	New Investigator
Dr Nchafatso Obonyo, Dr Sainath Raman, Dr Charles McDonald, Dr Jacky Suen, Professor John Fraser	TPCH Foundation	Microvascular endotheliopathy: A final common pathway in critical illness? (Novel investigation to reduce inflammatory injury to the blood vessels in critical illness)	2022	\$65,902		Project Grant
English H, Donnelly H	Stryker Aust Pty Ltd	Stryker Fellow	2021		\$75,000	Commercial Research
Fong K	IASLC	Lung Cancer Staging Project	2020 -2022	\$56,666		Project Grant
Fong K	Metro North LINKSEED /TPCH Foundation	Virtual Pulmonary Nodule Model of Care	2021-2022	\$109,607		SEED Funding
Fong K	NHMRC	Early diagnosis and treatment of lung cancer Fellowship	2019-2024	\$487,893		Fellowship



## Active Grants 2021 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Fong K, Bowman R, Tammemagi M, Lam S, Berg C, Steinke K, McWilliams A, Manser R	NHMRC	Low Dose Computed Tomography (LDCT) to diagnose lung cancer	2016– 2021	\$3,032,884		Project Grant
Fong K, Lwin Z	NHMRC	Early lung cancer biomarkers	2020–2023	\$754,893		Ideas
Fong K, Moeller A, Bowman R, Lwin Z	NHMRC	Novel Biomarkers for Lung Cancer	2018–2021	\$610,591	\$125,197	Project Grant
Fong K, Yang I, Marshall H, Bowman R, O'Rourke R, Valery P, Stone E, Canfell K, Weber M, Garvey G, Lam S, Tammemagi M, Otty Z, Sabesan S, Brims F, McWilliams A	Australian Cancer Research Foundation	Lung Cancer Screening CENTRE OF EXCELLENCE	2022–2025	\$2,000,000		Equipment
Fong K, Yang I, Marshall H, Tammemagi M, Lam S, Toombs M, Manser R, McWilliams A	MRFF	Lung cancer screening for early detection	2021– 2024	\$2,836,143		MRFF
Fong K, Yang I, Bowman R, Marshall H, Valery P, Garvey G, Toombs M, Otty Z, O'Rourke R	Cancer Council Queensland	Lung Cancer Screening in Queensland	2022 – 2026	\$2,00,000		Accelerating Collaborative Cancer Research (ACCR)
Franks L, Morris N.R., Walsh J	The Queensland Cardiovascular Research Network	Physiotherapist and patient perspectives about airway clearance in bronchiectasis.	2021	\$8,500	\$8,500	Project grant
Fraser J	Fisher & Paykel Healthcare	COVID-19 Critical Care Consortium Observational Study	2020	\$250,000		Industry collaboration
Fraser J	NHMRC	Centre for Research Excellence in Advanced Cardio-respiratory Therapies improving organ Support (ACTIONS)	2014–2021	\$2,491,450		Research Grants
Fraser J	TPCH Foundation	Ex-Vivo Protection of Endothelium For Autologous GRafts (EX-VIPER) study	2020	\$50,000		Project Grant
Fraser J et al	The Bill and Melinda Gates Foundation	Establishing the COVID-19 Critical Care Consortium app with Aridhia. Developing ICODA (International COVID-19 Data Alliance) a research workbench platform in support of one the 10 Grand Challenge Projects from the Bill and Melinda Gates Foundation focusing on COVID-19.	2021 – 2022	\$1,600,000		Project Grant
Fraser J, Dyer W, Tung JP, Irving D, Pedersen S	National Blood Authority	Novel fluid alternatives to blood transfusion to treat acute and chronic blood loss	2019 – 2021	\$119,315		Project Grant
Fraser J, Haymet A	Wesley Medical Research	EXVIPER	2021–2022	\$15,667		Clinical Research Grant

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Fraser J, McGiffin D, MacDonald P	NHMRC	The Dead Heart Project: Hypothermic ex Vivo Perfusion (HEVP)		\$1,672,053		Project Grant
Fulbrook P, Mile S, Williams D, Nowicki T	Wounds Australia	The Prince Charles Hospital Skin Integrity Program	2018-2021	\$4,000		Project
Fulbrook P, Miles S	TPCH Foundation	Fast screening and assessment in the emergency department: A clinical innovation to prevent falls in older people	2019-2021	\$48,950		Innovation Grant
Fulbrook P, Williams D	Smith & Nephew	Pilot Study: Evaluation of a silicone gel adhesive hydrocellular foam dressing for the prevention of sacral pressure injuries in hospitalised elderly patients	2014-2021	\$12,141		Industry sponsored
Godfrey M, Sharma S, Aplin T	AH-TRIP Start Up grant	Meeting real needs of clients with cognitive impairment in Rehab Day Therapy through "CO-OP"eration	2021-2022	\$7,000	\$7,000	Start up
Golledge J, Fernando M, Hure-Little D, Sangla K, Herreen J, Velu R, Taylor S, Lazzarini PA, Moxon J, Drovandi A	Tropical Australian Academic Health Centre	Efficacy and acceptability of custom-made footwear in people with a history of diabetes-related foot ulcers	2020-21	\$50,000	\$50,000	Project grant
Gurunathan U	Perpetual's IMPACT funding	Surgical prehabilitation program for colorectal cancer patients	2021	\$73,259		Philanthropic funding
Gurunathan U	Queensland Health and University of Queensland	Hip Fracture Cohort Surgery Linking Obesity to Thromboembolism post-surgery	2021-2024	\$130,000	\$49,605	Advancing Clinical Research Fellowship
Gurunathan U, Stanton L, McKenzie S, Pearce B, Raju N	TPCH foundation	Use of preoperative ROTEM assays to detect postoperative thrombotic complications following total hip and knee arthroplasty in overweight and obese patients	2018-2022	\$57,126		Innovation grant
Gurunathan U, Parker S, Crawford R, Roberts J, Medcalf R, Wallis S	Metro North HHS	Pharmacokinetics of tranexamic acid in adult patients undergoing elective primary hip replacements: an in-vivo study (ORACLE)	2020-2022	\$49,566		Collaborative research grants
Hassan H	TPCH Foundation	Investigating the Effect Pulsatile and Continuous Flow Veno-arterial Extracorporeal Membrane Oxygenation on Kidney Outcomes Following Cardiogenic Shock	2021	\$9,807		New Investigator Grant
Horvath R	TPCH Foundation	ieQBiobank/POET2	2021	\$90,000	\$72,365	
Irvine L, Dent A	TPCH Foundation	The diagnostic power of exhaled breath condensate and salivary extracellular vesicles for lung cancer	2021	\$49,357		Innovation Grant
Jüttner M, Fulbrook P	TPCH Foundation	A descriptive, exploratory study of mucosal pressure injury 5-year reported incidence and characteristics using a retrospective quality audit	2019-2021	\$9,811		New Investigator Grant

## Active Grants 2021 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Kei Sato	TPCH Foundation	A Novel Speckle-tracking Echo Parameter Estimating Intrinsic Cardiac Function Under VA-EMCO	2021	\$9,960		New Investigator Grant
Lazzarini PA	NHMRC	NHMRC Early Career Fellowship	2018-2022	\$322,952	\$80,738	Fellowship
Lazzarini PA, Perrin B, Prentice J, Fitridge R, Russell A, Wischer N, Twigg S.	National Diabetes Services Scheme	The Australian Diabetes-related Foot Disease Guidelines & Pathways Project	2020-2021	\$103,100	\$103,100	Project grant
Ledger, E	TPCH Foundation	Prevalence and clinical importance of inhibitory antibodies in patients with cystic fibrosis and chronic Pseudomonas aeruginosa infections	2020-2022	\$10,000	\$5,000	Project
Ledger, E	University of Queensland	The impact of helpful and harmful immune responses in the cystic fibrosis lung	2020-2023	\$90,000	\$30,000	PhD Scholarship
Liu K	Senko Medical Instrument Mfg. Co., Ltd.	A randomised controlled trial of a novel therapeutic strategy using hydrogen gas via extracorporeal membrane oxygenation for refractory severe acute respiratory distress syndrome in a sepsis ovine model	2021-2022	\$60,000		Industry sponsor
Liu K, Suen J, Fraser J	TPCH Foundation	A Double-Blinded Randomised Controlled Trial of a Novel Therapeutic Strategy using Hydrogen Gas via Extracorporeal Membrane Oxygenation for Refractory Severe Acute Respiratory Distress Syndrome in a Sepsis Ovine Model. (Hydrogen Gas as a Novel and Innovative Treatment for Acute Respiratory Failure)	2021	\$49,986		Project Grant
Livingstone S, Fraser JF	TPCH Foundation	The differences in coagulation disturbances of the acute respiratory distress syndrome subphenotypes.	2020	\$28,092		PhD Scholarship
Lord R, Fulbrook P, Williams D, Miles S, Kinnear E, Rowland J	ACU Faculty Grant	A double blind trial of the application of 0.2% glyceryl trinitrate ointment for the healing of chronic venous leg ulcers	2013-2021	\$9,915		Project grant
Lord R, Williams D, Fulbrook P, Miles S	Wounds Australia	A double-blind trial of the application of 0.2% glyceryl trinitrate (GTN) for the healing of chronic venous leg ulcers	2018-2021	\$5,000		Project
Lovegrove J, Fulbrook P	TPCH Foundation	Matching preventative interventions to risk level to reduce pressure injury in critically ill patients: An international Delphi study and cluster randomised crossover trial	2019-2022	\$82,788	\$27,596	PhD Scholarship
Lovegrove J, Fulbrook P	TPCH Foundation	Assessment of pressure injury risk and intervention planning for hospitalised patients: a comparison of nurses' clinical judgement with and without the use of a standardised pressure injury risk assessment tool	2017-2021	\$9,796		New Investigator Grant
Lutzky V	TPCH Foundation	Telemonitoring and IPF 2019-41	2019-2021	\$23,000		Emerging Researcher
Mackintosh J	IPF CRE	MDM2.0	2021	\$149,000		Project grant

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Mahero J, Bell J	TPCH Foundation	Nutrition in stroke – Qualitative study	2019-2021	\$9,886	\$9,886	New Investigator
Marshall H	Queensland Advancing Clinical Research Fellowships	CO-RiQUIRE (COmorbidity, Risk, QUIT, REach) – addressing lung cancer screening knowledge gaps:	2020 –2023	\$300,000		Fellowship
Marshall H		Enhancing smoking cessation with an innovative mobile health avatar	2020-2022	\$444,875		
Mattison G	Digital Health Cooperative Research Centre	Integrating Wearable Devices into the Patient-Centred Digital Healthcare Environment	2021-2024	\$135,000	\$45,000	PhD Scholarship
McKenzie S	TPCH Foundation	MOTER-HF	2019-2022	\$100,000	\$11,335	
Miles S, Fulbrook P	ACU Faculty Grant	Risk assessment and clinical judgement	2019-2021	\$7,431		Project grant
Miles S, Fulbrook P	TPCH Foundation	Fast screening of patients that present to the emergency department following a fall: a feasibility and prevalence study	2016-2021	\$9,762		New Investigator Grant
Molenaar	The University of Queensland	In vitro human heart Stimulator	2021	\$17,620	\$17,620	Equipment Grant
Molenaar	The University of Queensland	In vitro human Water tank and water heater	2021	\$20,544	\$20,544	Equipment Grant
Molenaar	The University of Queensland	In vitro human Biomedical Fridge/ Freezer	2021	\$6,000	\$6,000	Equipment Grant
Molenaar P	National Heart Foundation (NHF)	Development and testing of new medicines in a human model of ventricular arrhythmia to keep heart failure patients alive	2019- 2021	\$148,556	\$74,278	Project Grant
Molenaar, Haqqani, Wong	TPCH Foundation	New Medicines To Keep Heart Failure Patients Alive	2021	\$100,000	\$100,000	Project Grant
Morris NR. Walsh, J.W., Bellet, N, Louis M., Sabapathy, S.	TPCH Foundation	Small muscle training for big gains: Using high intensity single muscle group training in heart failure.	2018-22	\$48,318	\$0	Innovation Grant
Morris, N.R.	Metro North HHS	The Prince Charles Hospital Joint Research Fellowship	2016-22	\$613,948	\$130,000	Fellowship
Morris, N.R.	Physiotherapy Research Fellowship: Health and Research Office of Queensland	Exercise Training in Pulmonary Hypertension (ExTra_PH): A Randomised Controlled Trial of Exercise Training in Pulmonary Hypertension.	2015-19	\$247,000	\$37,000	Project Grant



## Active Grants 2021 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Morris, N.R., Sabapathy, S., Scalia, G., Walsh, J., Balmain, B., Chan, J., Benjamin, A., Roberts, L.	TPCH Foundation	Hot Legs For Heart Failure: Using lower limb heating to improve exercise tolerance in heart failure.	2021-23	\$63,905	\$12,689	Innovation Grant
Morawaska, Bell SC et al	ARC Linkage Grant	Making Australia resilient to airborne infection transmission	2021-2023	\$868,513	\$289,504	Linkage
Naidoo R, Ki K, McDonald C, Suen J	MNHHS	Confronting knowledge in cardiac surgery-associated organ complications: Confronting the dark side of cell-free mitochondrial DNA	2020-2021	\$47,880	\$22,785	MN Collaborative Research Grant
Naidoo R, Ki K, McDonald C, Suen J	TPCH Foundation	Confronting knowledge in cardiac surgery-associated organ complications: Confronting the dark side of cell-free mitochondrial DNA	2021-2022	\$43,922		Innovation grant
Obonyo N	TPCH Foundation	Microvascular endotheliopathy: A final common pathway in critical illness? (Novel investigation to reduce inflammatory injury to the blood vessels in critical illness)	2021-2024	\$330,000		Fellowship
Obonyo N, Raman S, McDonald C, Suen J, Fraser J	Emergency Medicine Foundation	Microvascular endotheliopathy: A final common pathway in critical illness? (Novel investigation to reduce inflammatory injury to the blood vessels in critical illness)	2021	\$99,945		Project Grant
Palpant N, King G, Macdonald P, Kaye D, Fraser J, Cullen L	NHMRC	Development of a first-in-class therapeutic for protecting the ischemic heart	2020	\$926,673		Development Grant
Passmore M, Hyslop K, Naidoo R, Ricker K, Prabhu A, Rapchuk I, Suen J	TPCH Foundation	Rogue mitochondrial DNA: The elusive mediator of inflammatory complications in cardiac surgery. (The link between circulating DNA, inflammation, and poor patient outcomes in open-heart surgery patients)	2022	\$43,922		Innovation Grant
Patel N, Marshall H	TPCH Foundation	Comparison of DXA to CT-based methods (LIHU and QCT) to detect osteoporosis and predict vertebral fracture in lung cancer screening participants	2021	\$10,000		New Investigator
Pearse B	CSL Behring (Australia) Pty Ltd	Use of three-factor prothrombin complex concentrate in cardiac surgery	2021	\$10,000	\$10,000	Research and Education grant
Rahman T	ABBVIE	Hepatitis C - Community Treatment Program	2020-2021	\$32,000	\$32,000	Educational Grant
Rahman T	MRGG	Optimising the use of Colonoscopy in Queensland	2021	\$47,666	\$47,666	Research Grant
Ranasinghe I	National Heart Foundation of Australia	Leveraging Big Data to Inform Cardiovascular Healthcare Outcomes.	2017-2021	\$520,000	\$90,000	National Heart Foundation Future Leader Fellowship

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Ranasinghe I	Queensland Advancing Clinical Research Fellowship	Urinary Sodium Guided Titration of Diuretic Therapy.	2022-2024	\$350,000	\$0	Fellowship
Ranasinghe I	University of Queensland	ORION Big data	2021	\$121,000	\$121,000	
Ranasinghe I, Woodman R, Kaambwa B, Kotwal S, Aliprandi-Costa B	NHMRC	Safety, effectiveness of care and resource use among Australian hospitals (Safer Hospitals).	2021-2024	\$1,108,000	\$250,000	NHMRC IDEAS Grants
Rankin N, Stone E, Silverstone E, Williamson J, Marshall H, Fong K	NHMRC	Accelerating translation: Acceptability and feasibility of potential lung cancer screening implementation in Australian communities.	2019 -			Ideas
Reid D, Henderson I, Torres V	University of Queensland	New lung function: old infections: The effect of CFTR modulators on the microbiology of the cystic fibrosis lung	2021	\$50,000	\$50,000	Project
Reid D, Smith D, Bell SC	TPCH Foundation	A Multi-modality, multi-disciplinary program of research to improve disease outcomes in Cystic Fibrosis	2018-2021	\$600,000	\$200,000	Project
Reid DW , et al.	QIMR-Berghofer Institute of Medical Research	COVID-19; Prognostics and Diagnostics	2020 -2021	\$200,000		
Reid DW, et al.	TPCH Foundation	COVID-19 research; Prognostics and Diagnostics	2020-2021	\$100,000		
Reid, D	QIMR Berghofer Institute of Medical Research	COVID-19; Prognostics and Diagnostics	2020-2021	\$200,000	\$100,000	Project
Reid, D	TPCH Foundation	COVID-19 research; Prognostics and Diagnostics	2020-2021	\$100,000	\$50,000	Project
Rogers, Crotty, Morawska, Bell SC, Qiao, Woodman, Whitehead, Papanicolas, Inacio, Miller	MRFF	Prevention of SARS-CoV-R transmission in aged care: effective evidence-based measures for rapid translation	2021-2023	\$1,330,000	\$440,000	Project
Rushton A, Bell J	TPCH Foundation	Barriers and enablers to delegating malnutrition care activities to assistant staff across a QLD context - a qualitative exploratory multisite evaluation	2020/2021	\$8,781	\$8,781	New Investigator
Rutherford, S., Binnewies, S., Bach, A., Tjondronegoro, Morris, N.R., Moyle W, Torrisi G, Nghiem S, Phung D, Zhang F, MacQuarrie S, Gabric A.	Wellcome Trust	Individualised Heat-Health Early Warning Systems: a novel digital solution.	2022-25	\$2,351,841	\$0	Project Grant

## Active Grants 2021 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Sato K, Platts D, Obonyo N, Chan J, Suen J, Fraser J, Siriwardena M, Lavana J, Naidoo R	TPCH Foundation	A Clinical Investigation of the Utility of Cardiac Assessment using Speckle-Tracking Echocardiography in Veno-arterial ECMO Patients (A new assessment using heart ultrasound in patients receiving artificial heart-lung support)	2022	\$33,069		Project Grant
Savage M	CAHRLI	Sex differences in STEMI	2022	\$5,000		
Savage M	TPCH Foundation	Wall motion score in STEMI	2021	\$4,450	\$4,450	New Investigator
Sly, Wainwright, Bell, Reid et al	CF Foundation (USA)	Early life origins of CF lung disease	2019-2021	\$1,650,000	\$USD550,000	Project
Smith S	TPCH Foundation	EMBRACE: Exploring the relationship between EMotional well-Being with health outcomes and patient pReferences for resources and support in cArdiaC surgEry	2020-2022	\$10,000		New Investigator Grant
Spratt M	TPCH Foundation	Arrhythmias in human heart failure: relating clinical and laboratory-generated arrhythmias and regionality of arrhythmic responses.	2019-2022	\$86,562	\$28,854	PhD Scholarship
Spratt M	TPCH Foundation	Developing a novel class of RyR2 stabilising antiarrhythmics to prevent sudden death in patients with heart failure, repurposing phenytoin as a lead compound.	2021-2022	\$9,857	\$9,857	New Investigator Grant
Stephenson A, Stanojevic, Burgel, Bell SC	CF Canada	International Comparisons of Clinical Characteristics, Health Outcomes and Survival between Canada, France, and Australia	2019-2022	\$255,194	\$85,065	Project
Stewart G, Morris N, Sabapathy S.	Griffith University	Portable Physiology: Creating a cart and battery backup to support multi-site and remote physiology research.	2021	\$6,857	\$6,857	Project grant
Stewart G, Simmonds M, Sabapathy S	Griffith University	GU research infrastructure award	2021	\$296,000	\$291,000	Infrastructure grant
Stewart G., Chan J., Morris, N.R. and G. Scalia.	TPCH Foundation	The ventricular strain gradient: A novel imaging biomarker of the adapting and maladapting heart.	2021-2	\$59,428	\$0	Project grant
Stewart G., Edwards N., Chan J., Morris, N.R. and G. Scalia.	Metro North Collaborative Grant	Quantifying novel measures of speckle-tracking derived myocardial work during exercise stress echocardiography testing to aid differential diagnosis in complex cardiomyopathies.	2021-2	\$49,688	\$0	Project grant
Stewart GM	Griffith University	New Researcher grant	2021-22	\$19,762	\$0	New Investigator
Stewart, GM	TPCH Foundation	TPCH Fellowship	2021-23	\$300,000	\$100,000	Fellowship
Suen J	AQIRF	Early detection	2020 - 2023	\$600,000		Fellowship

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Suen J, Li Bassi G, Fraser J	Wesley Medical Research	The ECMOCARD Study - Global Characterisation of 2019 novel Coronavirus Acute Respiratory Disease	2020-2023	\$100,000		Project Grant
Szollosi I	MN SEED/LINK	Piloting a hub-and-spe model for Sleep Disorders Services	2021-2022	\$113,545		Project Grant
Szollosi I, Curtin D, Winter S	Servatus	A Phase I/II Randomised, Double-Blind, Placebo-Controlled Study to Assess Safety and Efficacy of a Live Biotherapeutic Product (SVT-4A1011) in Participants with Clinically Diagnosed Insomnia	2021-2022	\$215,946	\$84,404	Industry Sponsored
Tan HL, Loh V, Aplin T, Gullo H, McAuliffe T	Digital for Life Fund (Singapore)	Co-designing Smartphones and Apps Training and Resource toolkit for People with vision impairment (PVI)	2022-2024	\$154,710	\$0	project grant
Tarique, Sly, Fantino, Wainwright, Bell	Australian CF Research Trust through TSANZ	NTM: macrophages and novel therapies	2020	\$80,000	\$80,000	Project
Terrill A, Woodruff M, Lazzarini PA.	NHMRC	NHMRC Postgraduate scholarship	2021-25	\$110,702	\$0	Fellowship
Terrill A, Woodruff M, Lazzarini PA.	Urgo Foundation (Asia-Pacific Diabetic Foot Disease Grants)	Patient specific 3D printing of metamaterials to improve personalised offloading and healing of diabetes-related foot ulceration	2021-23	\$15,000	\$0	Project grant
Wainwright, Bell, Reid, Sly et al	CF Foundation (USA)	FORMAT adaptive study of Mycobacterium abscessus in lung disease	2020-2024	\$USD4 million	\$USD1.3 Million	Project
Wells, Goldberg, Smith D, Apte	CF Foundation (USA)	Impact and treatment of cloaking antibodies in CF	2021-2023	\$USD 130,000	\$USD 430,000	Project
Wells, Smith D, Henderson	NHMRC	Paradoxical antibody: the role of antibody in exacerbating Pseudomonas lung infection	2019-2021	\$662,389	\$220,796	Project
White N	AQIRF	Statistical modelling to support clinical decision making for critically ill COVID-19 patients	2020 - 2021	\$80,420		Fellowship
Wildi K, Li Bassi G, Fraser J	Wesley Medical Research	Long-term impact in intensive care survivors of Coronavirus disease 19 (AFTERCOR)	2020-2022	\$119,980		Project Grant
Williams D, Fulbrook P	TPCH Foundation	Adhesive silicone foam dressing versus meshed silicone interface dressing for the management of skin tears: a comparison of healing rates, patients' and nurses' satisfaction	2012-2021	\$9,938		New Investigator Grant





# Higher Degree Students Supervised During 2021

Full Name	Postgraduate Course	Research Project Title	University affiliation	Supervisors
Salma Ahmed	PhD	Maternal and childhood health and air pollution	The University of Queensland	L. Knibbs, Ian Yang
Carmen Ainola	MPhil	New imaging technology to appraise pulmonary distribution of nebulized medications	The University of Queensland	John Fraser, Gianluigi Li Bassi, Jacky Suen, Jayesh Dhanani
Elizabeth Ainsworth	MPhil	Improving home modification evaluation practice: Stakeholder perspectives on important home modification outcomes within the Australian context	The University of Queensland	Tammy Aplin, Sally Bennett
Chanika Alahakoon	PhD	Secondar prevention of diabetic foot disease	James Cook University	J Golledge, M Fernando, J Moxon, Peter Lazzarini
Shahnewaz Ali	PhD		Queensland University of Technology	Ross Crawford
Anne Alverado	MRes	Biofilm in diabetic foot ulcers study	Queensland University of Technology	F Huygens, M Malone, Peter Lazzarini
Maria Antico	PhD		Queensland University of Technology	Ross Crawford
Vinesh Appadurai	MPhil		The University of Queensland	Greg Scalia
Artur Banach	PhD		Queensland University of Technology	Ross Crawford
Maryam Khorramshahi Bayat	MPhil	Evaluating the role of urinary sodium in the management of heart failure	The University of Queensland	Isuru Ranasinghe, Wandy Chan
Hollie Bendotti	PhD	Artificial Intelligence for Smoking Cessation: Development and Effectiveness of Quin, a Smoking Cessation Smartphone Chatbot	The University of Queensland	Henry Marshall, C Gartner, D Ireland, S Lawler
Daniel Bogale	PhD	Household and ambient air pollution and childhood morbidity and mortality in LMICs	The University of Queensland	L. Knibbs, Ian Yang
Andrew Burke	PhD	Pharmacokinetics of Antimycobacterial Drugs in Patients with Cystic Fibrosis and Latent Tuberculosis	The University of Queensland	Scott Bell, Daniel Smith
Donglin Cai	PhD		Queensland University of Technology	Ross Crawford
Saion Chatterjee	MPhil		Queensland University of Technology	Ross Crawford
Tian Mun Chee	PhD	Evaluation of Pleural Fluid Extracellular Vesicles for Diagnostic Utility in Malignant Pleural Mesothelioma	The University of Queensland	Rayleen Bowman, Ian Yang, Kwun Fong, L. Krause
Josh Chinchilla	MPhil	A computational fluid dynamic study of scaffolds under perfusion flow	Queensland University of Technology	John Fraser
Mark Clayton	PhD	Acquisition pathways of Mycobacterium abscessus infection from drinking water	The University of Queensland	Scott Bell

## Higher Degree Students supervised during 2021 continued...

Full Name	Postgraduate Course	Research Project Title	University affiliation	Supervisors
Connolly	MMR	The Impact of Lower-limb Heating on Exercise Capacity, Vascular and Metabolic function in patients with Heart Failure.	Griffith University	Norm Morris, S Sabapathy
Alexander Dashwood	PhD	Understanding how phosphyrylative and oxidative stress on the cardiac ryanodine receptor type 2 contributes to malignant arrhythmias in advanced heart failure.	The University of Queensland	Peter Molenaar, Harris Haqqani
Ainslie Davies	PhD	Risk factors for diabetic peripheral neuropathy study	Queensland University of Technology	P Bennett, H Edwards, N Pritchard, Peter Lazzarini
Tharushi De Silva	PhD	Dynamics of regulatory T lymphocytes in lung transplant patients	Queensland University of Technology	Brendan O'Sullivan, Daniel Chambers, Simon Apte, J Voisey J, Kirsten Spann
Sophie Deeth	PhD	Nutrition Care in Older Hospital Inpatients	The University of Queensland	Jack Bell, Alison Mudge
Nimantha Durage	PhD	Investigating cognitive functioning in people with diabetes-related foot ulcers in Queensland, Australia; A prospective longitudinal study	Queensland University of Technology	K Finlayson, C Parker, Peter Lazzarini
Natalie Edwards	PhD		Griffith University	Greg Scalia
Xiwei Fan	PhD		Queensland University of Technology	Ross Crawford
Andrew Lewis Foster	PhD		Queensland University of Technology	Ross Crawford
Rose Ann Gariel Franco	PhD		Queensland University of Technology	Ross Crawford
Gautam Garg	MRes	The supine non-weight bearing position of the knee in the operating theatre and its position in upright weight-bearing stance – is there a correlation?	Queensland University of Technology	Ross Crawford, Sarah Whitehouse
Michelle Garrett	PhD	New Zealand podiatrist's alignment with current international best practice guidelines for the diabetic foot: The New Zealand Diabetic Foot assessment and management survey	Auckland University of Technology	T Kenealy, Peter Lazzarini
Thomas Georgeson	PhD	Detecting risk of dementia in people with sleep apnoea	The University of Queensland	Irene Szollosi
Tasnuva Hamid	PhD		Queensland University of Technology	Ross Crawford
Halah Hassan	PhD	Characterising the role of early mitochondrial dysfunction and injury in the development of Acute Kidney Injury in Critical Care	The University of Queensland	John Fraser
Andrew Hayment	PhD	The Biology of Vascular Injury Associated with Mechanical Circulatory Support Devices	The University of Queensland	John Fraser
Silver Heinsar	PhD	An experimental ovine model of cardiogenic shock comparing the effect of pulsatile- to continuous-flow VA-ECMO (A comprehensive Pre-clinical evaluation of Pulsatile-flow VA-ECMO)	The University of Queensland	John Fraser, Jacky Suen
Raymond Ho	PhD	Evaluation of aortic cannula using emboli during cardiopulmonary bypass: A numerical study	Queensland University of Technology	Zhi young Li, Jo Phillip Pauls

Full Name	Postgraduate Course	Research Project Title	University affiliation	Supervisors
Greta Hollis	MPhil	Investigating the feasibility of implementing a pre-operative Very Low Calorie Diet weight loss program into the pre-operative model of care for general elective surgical patients.	The University of Queensland	Judith Bauer, Jack Bell
Xin Huang	PhD		Queensland University of Technology	Ross Crawford
Samuel Huth	PhD	Novel Imaging Biomarkers for Defending Cerebral Perfusion During Noncardiac Surgery	Griffith University	John Fraser
Lenore Irvine	PhD	Non-invasive biomarkers for early diagnosis of benign and malignant lung disease	The University of Queensland	Annette Dent, Ian Yang, Kwun Fong
Hannah Jepson	MRes	Identifying early warnings and system changes that may reduce the burden of diabetes related foot complications in Aotearoa/New Zealand	Auckland University of Technology	M Carroll M, M Garrett, Peter Lazzarini
Lisa Jurak	PhD	Using proteomics to understand the mechanisms of asthma exacerbations and how macrolides can reduce exacerbations	The University of Queensland	John Upham, Ian Yang, Jodie Simpson, Michelle Hill
Tracey Kaczmarek	MRes	Effects of Training Podiatrists in Motivational Interviewing	Queensland University of Technology	Peter Lazzarini, JJ van Netten, David Kavanagh
Dhayananth Kanagarajan	PhD	CFD Study of Mixing Zones in Extra Corporeal Membrane Oxygenation Circuits to Prevent Brain Injury	Griffith University	Geoff Tansley, Jo Pauls, Van Dau, John Fraser
Emma Ledger	PhD	Helpful and harmful immune responses in the cystic fibrosis lung	The University of Queensland	Daniel Smith, David Reid
Keibun Liu	PhD	A randomised controlled trial of a novel therapeutic strategy using hydrogen gas via extracorporeal membrane oxygenation for refractory severe acute respiratory distress syndrome in a sepsis ovine model	The University of Queensland	John Fraser
Samantha Livingstone	PhD	The differences in coagulation disturbances of the acute respiratory distress syndrome subphenotypes	The University of Queensland	John Fraser
Josephine Lovegrove	PhD	Development of an international risk-stratified pressure injury prevention bundle for intensive care	Australian Catholic University	Paul Fulbrook, Sandra Miles, Michael Steele, Angel Cobos Vargas
Kathryn Martin	MPhil	Home modifications and assistive technologies: Are our mobs getting what they need?	The University of Queensland	Tammy Aplin, Jenny Fleming
Graeme Mattison	PhD	Integrating Wearable Devices into the Patient-Centred Digital Healthcare Environment	The University of Queensland	Doug Forrester, David Reid
Matula	MMR	Artificial stone silicosis: Lung function, radiological findings and occupational history among stonemasons in Queensland.	Griffith University	Norm Morris, Dan Chambers
Michael McAuliffe	PhD	Alteration of Coronal Plane Soft Tissues of the Knee by Osteoarthritis and Total Knee Arthroplasty.	Queensland University of Technology	Ross Crawford, Sarah Whitehouse
Bianca Monsoon	MPhil	Simultaneous use of two beta-blockers, carvedilol and bisoprolol, for effective and safe treatment of heart failure.	Queensland University of Technology	Peter Molenaar
Yuqing Mu	PhD		Queensland University of Technology	Ross Crawford



## Higher Degree Students supervised during 2021 continued...

Full Name	Postgraduate Course	Research Project Title	University affiliation	Supervisors
Samantha Ness	PhD	Contemporary Management of Malnutrition in patients with Chronic Obstructive Pulmonary Disease (COPD)	The University of Queensland	Jack Bell, Peter Collins, Phil Masei
Linh Ngo	PhD	National Outcomes of Atrial Fibrillation	The University of Queensland	Isuru Ranasinghe, Ian Yang
Hannah O'Farrell	PhD	Diagnostic, prognostic and therapeutic applications of extracellular vesicles in chronic obstructive pulmonary disease and lung cancer	The University of Queensland	Ian Yang, Kwun Fong, Rayleen Bowman, Annalicia Vaughan
Gerard Olive	MPhil	Interventional bronchoscopy	The University of Queensland	Kwun Fong, Henry Marshall, Rayleen Bowman, Ian Yang
Barbara Page	PhD	Retrospective cohort studies on the lung cancer diagnostic pathway: factors that influence waiting time intervals and patient experience	The University of Queensland	Kwun Fong, Rayleen Bowman, Ian Yang
Brielle Parris	PhD	Evaluating NanoString Technology to Enhance the Molecular Characterisation of Lung Cancer	The University of Queensland	Kwun Fong, Ian Yang
Nikita Patel	MPhil	Osteoporosis Diagnosis and Fracture Prediction using CT Vertebral Attenuation in Lung Cancer Screening	The University of Queensland	Henry Marshall, Kwun Fong, Ian Yang, Racheal O'Rourke, Katrina Hopcraft
Maureen Peasey	MPhil	Pulmonary Rehabilitation and Physical Activity in COPD	Griffith University	Norm Morris, James Walsh
Alison Peeler	PhD	Provision of a new paediatric service: An investigation of staff and emergency department attendees perceptions and experience of the transition from an adult emergency department	Australian Catholic University	Paul Fulbrook, Sandra Miles, Karen-Leigh Edward, Frances Kinnear
Hoang Son Pham	PhD		Queensland University of Technology	Ross Crawford
Lucian Quach	MRes		Queensland University of Technology	Ross Crawford
Antony Rapisarda	PhD		Queensland University of Technology	Ross Crawford
Karen Rausch	MPhil		Griffith University	Greg Scalia
Andrew Razjigaev	PhD		Queensland University of Technology	Ross Crawford
Alita Rushton	MPhil	Investigating and exploring delegation to dietitian assistants in malnutrition care within the hospital setting	The University of Queensland	Jack Bell, Judith Bauer
Kei Sato	PhD	Speckle-Tracking Echocardiography in intensive care	The University of Queensland	John Fraser, Jonathan Chan, Jacky Suen
Clayton Semenzin	PhD	Determination of Centrifugal Blood Pump Characteristics using CFD and Experimental Analysis	Griffith University	Geoff Tansley, Benjamin Simpson, Shaun Gregory
Shafullah Shajib	PhD		Queensland University of Technology	Ross Crawford
Eloise Shaw	PhD	Screening For Biomarkers in Non-small Cell Lung Cancer	The University of Queensland	Kwun Fong, Rayleen Bowman, Ian Yang

Full Name	Postgraduate Course	Research Project Title	University affiliation	Supervisors
Janet Shaw	PhD	The lung microbiome in COPD	The University of Queensland	Ian Yang, Kwun Fong, Rayleen Bowman, Paul Zimmerman
Smith	MPhil	Relationship between post-exercise oxygen kinetics and outcomes in chronic cardiorespiratory disease.	Griffith University	Norm Morris, Annette Dent, Glenn Stewart
Melanie Spratt	PhD	Arrhythmias in human heart failure: relating clinical and laboratory-generated arrhythmias and regional variability of arrhythmic responses.	Queensland University of Technology	Peter Molenaar, Andrew Battle, Haris Haqqani
Ruby Elizabeth Strauss	MPhil		Queensland University of Technology	Ross Crawford
Ario Llewellyn Strydom	PhD		Queensland University of Technology	Ross Crawford
George Tay	PhD	Reducing infection transmission risk in people with cystic fibrosis	The University of Queensland	Scott Bell, David Reid
Alex Terrill	PhD	Application of advanced design and manufacture techniques in the mechanical offloading of tissue stress for management of diabetic foot ulceration.	Queensland University of Technology	Mia Woodruff, S Powell, Peter Lazzarini
Stephen Tomlinson	MPhil		Griffith University	Greg Scalia
Oystein Tronstad	PhD	ICU of the Future	The University of Queensland	John Fraser
Ibin Varughese	MPhil		Queensland University of Technology	Ross Crawford
Mark leon Vickers	MPhil		Queensland University of Technology	Ross Crawford
Luke Visscher	PhD		Queensland University of Technology	Ross Crawford
Shital Ashok Wakale	PhD		Queensland University of Technology	Ross Crawford
Matthew Wells	PhD	Peri-transplant cardiovascular dynamics in an ovine model of donor brain stem death	Griffith University	John Fraser
Karin Wildi	PhD	STARDUST: The Significance of different endotypes in Adult Respiratory Distress Syndrome (ARDS) for effective Treatment	The University of Queensland	John Fraser, Jacky Suen
Xiaoxin Wu	PhD		Queensland University of Technology	Ross Crawford
Yuzi Zhang	PhD	Burden of diabetic foot disease and cost-effectiveness of optimal care	Queensland University of Technology	Peter Lazzarini, S Cramb, Steve McPhail



# Publications

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**Ababneh A, Finlayson K, Lazzarini P, Edwards H.** Cross-Cultural Adaptation and Reliability Testing of Arabic Versions of Several Diabetic Foot Psychosocial Scales. *Int J Low Extrem Wounds*. 2021;15347346211016699.

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**Adsett JA, Morris NR, Mudge AM.** Impact of exercise training program attendance and physical activity participation on six minute walk distance in patients with heart failure. *Physiother Theory Pract*. 2021;37(9):1051–9.

**Agarwal S, Eckhard L, Walter WL, Peng A, Hatton A, Donnelly B, de Steiger R.** The Use of Computer Navigation in Total Hip Arthroplasty Is Associated with a Reduced Rate of Revision for Dislocation: A Study of 6,912 Navigated THA Procedures from the Australian Orthopaedic Association National Joint Replacement Registry. *J Bone Joint Surg Am*. 2021;103(20):1900–5.

**Ahern E, Allen MJ, Schmidt A, Lwin Z, Hughes BGM.** Retrospective analysis of hospital admissions due to immune checkpoint inhibitor-induced immune-related adverse events (irAE). *Asia Pac J Clin Oncol*. 2021;17(2):e109–e16.

**Ahern E, Solomon BJ, Hui R, Pavlakis N, O'Byrne K, Hughes BGM.** Neoadjuvant immunotherapy for non-small cell lung cancer: right drugs, right patient, right time? *J Immunother Cancer*. 2021;9(6).

**Aitken CR, Stewart G, Walsh J, Seale H, Morris NR.** Assessment of oxygenation after balloon pulmonary angioplasty for patients with inoperable chronic thromboembolic pulmonary hypertension. *Int J Cardiol*. 2021;337:104.

**Alahakoon C, Fernando M, Galappaththy C, Lazzarini P, Moxon JV, Jones R, Golledge J.** Repeatability, Completion Time, and Predictive Ability of Four Diabetes-Related Foot Ulcer Classification Systems. *J Diabetes Sci Technol*. 2021;1932296820986548.

**Alshyyab MA, FitzGerald G, Albsoul RA, Ting J, Kinnear FB, Borkoles E.** Strategies and interventions for improving safety culture in Australian Emergency Departments: A modified Delphi study. *Int J Health Plann Manage*. 2021;36(6):2392–410.

**Amarase C, Tanavalee A, Larbpaiboonpong V, Lee MC, Crawford RW, Matsubara M, Zhou Y, Asia-Pacific Region Venous Thromboembolism Consensus G.** Asia-Pacific venous thromboembolism consensus in knee and hip arthroplasty and hip fracture surgery: Part 2. Mechanical venous thromboembolism prophylaxis. *Knee Surg Relat Res*. 2021;33(1):20.

**Amaro R, Li Bassi G, Motos A, Fernandez-Barat L, Aguilera Xiol E, Rigol M, Frigola G, Travieso C, Bobi J, Pagliara F, Carbonara M, Comaru T, Chiurazzi C, Yang M, Yang H, Arrieta M, Marti JD, De Rosa F, Saco MA, Rinaudo M, Terraneo S, Schultz MJ, Nicolau DP, Artigas A, Ramirez J, Torres A.** Development and characterization of a new swine model of invasive pneumococcal pneumonia. *Lab Anim (NY)*. 2021;50(11):327–35.

**Aminu AJ, Petkova M, Atkinson AJ, Yanni J, Morris AD, Simms RT, Chen W, Yin Z, Kuniewicz M, Holda MK, Kuzmin VS, Perde F, Molenaar P, Dobrzynski H.** Further insights into the molecular complexity of the human sinus node – The role of 'novel' transcription factors and microRNAs. *Prog Biophys Mol Biol*. 2021;166:86–104.

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**Baker A, Cornwell P, Gustafsson L, Lannin NA.** An exploration of goal-setting practices in Queensland rehabilitation services. *Disabil Rehabil*. 2021;1–11.

**Balmain BN, Sabapathy S, Yamada A, Shiino K, Chan J, Haseler LJ, Kavanagh JJ, Morris NR, Stewart GM.** Cardiac perturbations after high-intensity exercise are attenuated in middle-aged compared with young endurance athletes: diminished stress or depleted stimuli? *Am J Physiol Heart Circ Physiol*. 2021;320(1):H159–H68.

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**Bel D, Manchal N, McNamara J, McDougall C.** Reactive Arthritis from Influenza Vaccination: A Novel Presentation That Mimics Prosthetic Joint Infection: A Case Report. *JBJS Case Connect*. 2021;11(4).



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**Bell JJ, Geirsdottir OG, Hertz K, Santy-Tomlinson J, Skuladottir SS, Eleuteri S, Johansen A.** Nutritional Care of the Older Patient with Fragility Fracture: Opportunities for Systematised, Interdisciplinary Approaches Across Acute Care, Rehabilitation and Secondary Prevention Settings. In: *Falaschi P, Marsh D, editors. Orthogeriatrics: The Management of Older Patients with Fragility Fractures. Cham (CH)2021. p. 311–29.*

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**Bell PT, Carew A, Fiene A, Divithotawela C, Stuart KA, Hodgkinson P, Chambers DC, Hopkins PM.** Combined Heart–Lung–Liver Transplantation for Patients With Cystic Fibrosis: The Australian Experience. *Transplant Proc. 2021;53(7):2382–9.*

**Bhatia KS, Sritharan HP, Chia J, Ciofani J, Nour D, Chui K, Vasanthakumar S, Jayadeva P, Kandadai D, Allahwala U, Bhagwande R, Brieger DB, Choong CYP, Delaney A, Dwivedi G, Harris B, Hillis G, Hudson B, Javorsky G, Jepson N, Kanagaratnam L, Kotsiou G, Lee A, Lo STH, MacIsaac AI, McQuillan BM, Ranasinghe I, Walton A, Weaver J, Wilson W, Yong A, Zhu J, van Gaal W, Kritharides L, Chow C, Bhindi R.** Cardiac Complications in Patients Hospitalised With COVID-19 in Australia. *Heart Lung Circ. 2021;30(12):1834–40.*

**Bhatia KS, Sritharan HP, Ciofani J, Chia J, Allahwala UK, Chui K, Nour D, Vasanthakumar S, Khandadai D, Jayadeva P, Bhagwande R, Brieger D, Choong C, Delaney A, Dwivedi G, Harris B, Hillis G, Hudson B, Javorski G, Jepson N, Kanagaratnam L, Kotsiou G, Lee A, Lo ST, MacIsaac AI, McQuillan B, Ranasinghe I, Walton A, Weaver J, Wilson W, Yong ASC, Zhu J, Van Gaal W, Kritharides L, Chow CK, Bhindi R.** Association of hypertension with mortality in patients hospitalised with COVID-19. *Open Heart. 2021;8(2).*

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**Carvalho Singulane C, Singh A, Miyoshi T, Addetia K, Soulat-Dufour L, Schreckenberger M, Blankenhagen M, Hitschrich N, Amuthan V, Citro R, Daimon M, Gutierrez-Fajardo P, Kasliwal R, Kirkpatrick JN, Monaghan MJ, Muraru D, Ogunyankin KO, Park SW, Tude Rodrigues AC, Ronderos R, Sadeghpour A, Scalia GM, Takeuchi M, Tsang W, Tucay ES, Zhang Y, Mor-Avi V, Asch FM, Lang RM.** Sex-, Age-, and Race-Related Normal Values of Right Ventricular Diastolic Function Parameters: Data from the World Alliance Societies of Echocardiography Study. *J Am Soc Echocardiogr. 2021.*

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**Chambers DC, Perch M, Zuckermann A, Cherikh WS, Harhay MO, Hayes D, Jr., Hsieh E, Khush KK, Potena L, Sadavarte A, Lindblad K, Singh TP, Stehlik J, International Society for Heart and Lung Transplantation.** Thirty-eighth adult lung transplantation report – 2021; Focus on recipient characteristics. *J Heart Lung Transplant. 2021;40(10):1060–72.*



**Chan CHH, Ki KK, Chu IY, Rolls J, Morris S, Lee TJ, Bindorfer S, Pauls JP, Idachi I, Fraser JF.** In vitro Hemocompatibility Evaluation of the HeartWare Ventricular Assist Device Under Systemic, Pediatric and Pulmonary Support Conditions. *Asaio j.* 2021;67(3):270–5.

**Chan CHH, Ki KK, Zhang M, Asnicar C, Cho HJ, Ainola C, Bouquet M, Heinsar S, Pauls JP, Li Bassi G, Suen J, Fraser JF.** Extracorporeal Membrane Oxygenation-Induced Hemolysis: An In Vitro Study to Appraise Causative Factors. *Membranes (Basel).* 2021;11(5).

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**Cheng V, Abdul-Aziz MH, Burrows F, Buscher H, Cho YJ, Corley A, Diehl A, Gilder E, Jakob SM, Kim HS, Levkovich BJ, Lim SY, McGuinness S, Parke R, Pellegrino V, Que YA, Reynolds C, Rudham S, Wallis SC, Welch SA, Zacharias D, Fraser JF, Shekar K, Roberts JA.** Population pharmacokinetics of vancomycin in critically ill adult patients receiving extracorporeal membrane oxygenation (an ASAP ECMO study). *Antimicrob Agents Chemother.* 2021;Aac0137721.

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**Dashwood A, Cheesman E, Wong YW, Haqqani H, Beard N, Hay K, Spratt M, Chan W, Molenaar P.** Effects of omecantiv mecarbil on failing human ventricular trabeculae and interaction with (–)-noradrenaline. *Pharmacol Res Perspect.* 2021;9(3):e00760.

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**Dowman LM, May AK, Cox NS, Morris NR, Nakazawa A, Parker L, Bondarenko J, Holland AE.** Attenuation of exertional desaturation and preference for interval exercise compared to continuous exercise in people with interstitial lung disease. *Respirology.* 2021;26(11):1076–9.

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**Eberlein M, Chambers DC.** Donor to recipient matching for lung transplant candidates with interstitial lung disease – A sizeable problem. *J Heart Lung Transplant*. 2021;40(11):1431–2.

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**Flaws D, Patterson S, Fraser J, Tronstad O, Scott JG.** Reconceptualizing post-intensive care syndrome: Do we need to unpick our PICS? *Nurs Crit Care*. 2021;26(2):67–9.

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