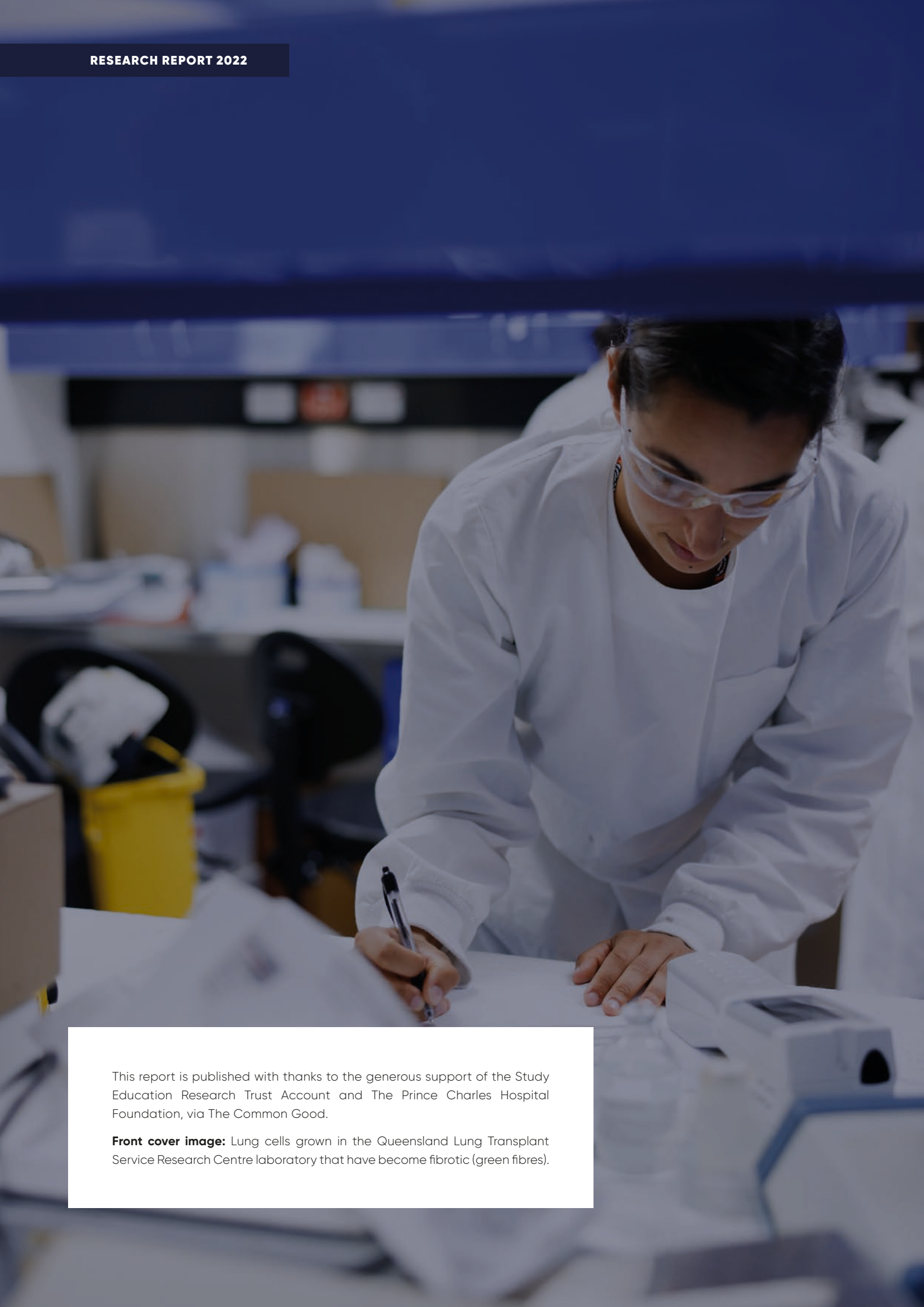


# The Prince Charles Hospital

**Research Report 2022**

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This report is published with thanks to the generous support of the Study Education Research Trust Account and The Prince Charles Hospital Foundation, via The Common Good.







**Front cover image:** Lung cells grown in the Queensland Lung Transplant Service Research Centre laboratory that have become fibrotic (green fibres).




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# Key Statistics

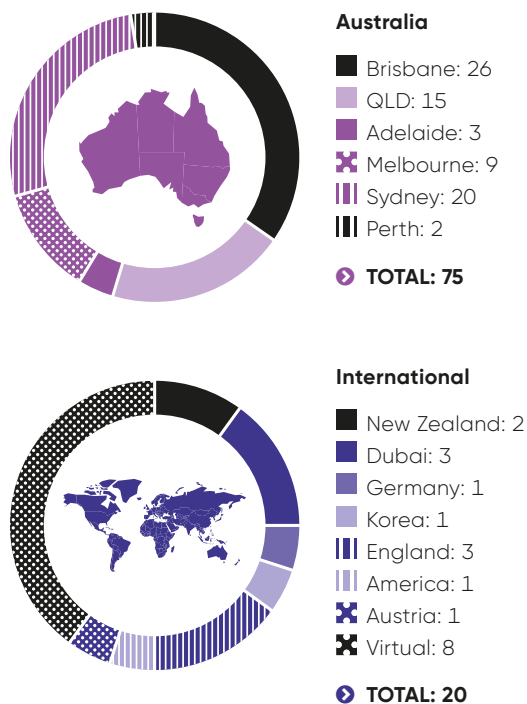
## PHDS AWARDED

-  **Daniell Madden** - Genomic prediction to identify bacteria and antimicrobial resistance.
-  **Josephine Lovegrove** - Development of an international risk-stratified pressure injury prevention bundle for intensive care.
-  **Kristy Garrick** - Development of a novel sutureless inflow cannula for ventricular assist device implantation.
-  **Masoumeh Abedi** - Development and validation of a simple screening tool to be used by case managers to identify those at risk of non-recovery after a road traffic crash.
-  **Salma Ahmed** - Maternal and childhood health and air pollution.
-  **Tania da Silva Duarte** - Deep Sequencing of Microbial Communities in Cystic Fibrosis Airways.

-  **Tharushi De Silva** - Dynamics of regulatory T lymphocytes in lung transplant patients.
-  **Thi Tham Nuygen** - The effectiveness of ultraviolet C light at inactivating airborne *Pseudomonas aeruginosa* and *Mycobacterium abscessus*.
-  **Yuqi Zhang** - Burden of diabetic foot disease and cost-effectiveness of optimal care.

▶ MASTERS/HONOURS AWARDED: 3

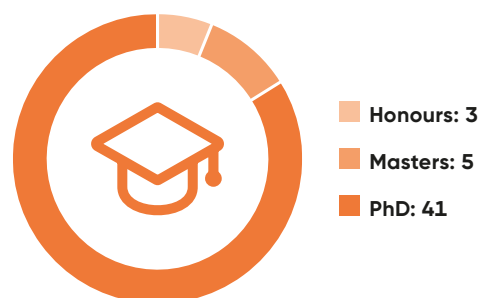
## PRESENTATIONS



## PUBLICATIONS



## STUDENTS



## AWARDS

### Metro North HHS Research Excellence Awards

- **A/Prof Peter Lazzarini**  
Rising Star Award
- **Dr Glenn Stewart**  
Finalist, Rising Star Award
- **Prof Norman Morris**  
Highly Commended Research Support Award

### TPCH Awards

- **Dr Jack Bell**  
Researcher of the Year
- **Dr Glenn Stewart**  
Research Partnership Award
- **TPCH Food Services (Dr Jack Bell)**  
Highly Commended, Services Award

### Queensland Health

- **A/Prof Philip Masel**  
Institutional Integrity Award, Metro North Aboriginal and Torres Strait Islander Health Services
- **Dr Jack Bell**  
Allied Health TRIP Enabler Award
- **Dr Jack Bell**  
Highly Commended, CAHRLI Local Award
- **Dr Jack Bell**  
Allied Health Translating Research Into Practice Enabler Award

### Other

- **Dr Tammy Aplin**  
University of Queensland, School of Health and Rehabilitation Sciences Higher Degree Research Supervision Award
- **Bronwyn Pearse**  
Master of Nurse Practitioner Commonwealth funded placement
- **Prof Tony Rahman and team**  
Royal College of Physicians Excellence in patient care awards
- **Dr Chrys Pulle**  
Internal Medicine Education and Research Award
- **Margaret Morton**  
Internal Medicine Joan Pawsey Award

## ★ OTHER POINTS OF INTEREST

★ **A/Prof Lazzarini (Allied Health Research Collaborative)** led the development of a suite of six Australian evidence-based guidelines for the management of diabetes-related foot disease, published in a special edition of Journal of Foot and Ankle Research.

★ **The Cardiovascular Molecular and Therapeutics Translational Research group** was generously given some highly specialised equipment by a collaborator in NSW. They are now the only laboratory in Australia and one of few in the world that can record from ryanodine receptors.

★ **The Cardiothoracic Surgery Research Unit** is helping to change the landscape of Aortic Surgery within Australia. Their PEARS (Personalised External Aortic Root Support) program reached a milestone in 2022, with over 100 type A Aortic dissection patients now being implanted with a 3D printed customised aortic device.

★ **The COVID Critical study** continued to gain support from sites worldwide with over 25,000 enrolled patients and collaboration from all 7 continents.

★ **A/Prof David Reid** and team plan to study a new method of detecting virus in saliva samples of people with Cystic Fibrosis who are unable to cough up sputum, as a new way to track inflammation and infection in the body. This follows their involvement in a study that assessed the novel method for identifying SARS-CoV-2 virus.

★ **A new GE Online patient education platform** developed by the Gastroenterology team resulted in a reduction of >500,000km of car travel, avoiding >100 tons of CO2 generation, and helped facilitate >700 working days not being taken off to attend hospital appointments for patients and carers.

## \$ ACTIVE GRANTS



- Equipment: \$813,695 (2)
- Project & Partnerships: \$8,895,390 (140)
- Scholarships & Fellowships: \$2,025,000 (20)
- **TOTAL: \$11,734,085 (162)**

## \$ TCG GRANTS FUNDED



- Caboolture: \$98,739 (7)
- Equipment: \$53,231 (3)
- Project / Innovation: \$739,001 (13)
- New Investigator: \$98,554 (10)
- PhD Scholarships: \$86,526 (1)
- Research Fellowships: \$660,000 (2)
- **TOTAL: \$1,736,051 (36)**

# Foreword

## Projects of global significance come to fruition.

Research is a long game, and it takes many hours, days, months and sometimes years to ensure that no stone is left unturned in our quest to find answers. It also takes energy, perseverance and dedication to see research translated into tangible health outcomes for our patients now and into the future.

While the pandemic period of 2020 – 2021 required individuals and teams to realign their priorities to respond to frontline demands, 2022 brought an air of excitement as the focus on research expanded again and the work to pursue better health outcomes and impactful discoveries accelerated.

Supporting this research focus to a new level is the appointment of The Prince Charles Hospital's inaugural Director of Research, a new role which will steer and propel the strategic research priorities of the hospital.

2022 will be remembered as a year where incredible milestones of global significance were achieved at The Prince Charles Hospital, including the realisation of the ICU of The Future and the year that we celebrated a donor heart being transported a record-breaking distance from the east coast to the west coast. Both achievements received national media attention and will go on to inspire global change in the ICU and organ transplant space, ultimately improving and saving lives.

This 2022 Research Report outlines some of our research community's most notable achievements. In some cases, these accomplishments are the result of collaborations between several research groups within the hospital, and in other cases, those collaborations span beyond the

hospital walls and extend to universities, hospitals and institutes around the country and the world.

This year, there were nine PhDs, one Masters and two Honours awarded, many of which were undertaken entirely during the pandemic, which is a testament to the commitment and hard work of these incredible researchers.

The Prince Charles Hospital Foundation, through The Common Good, was proud to support and award 10 New Investigator Grants, 12 Innovation Grants, 1 PhD Scholarship and 2 Research Fellowships, in addition to providing over \$53,000 of equipment grant funding.

We must also recognise and celebrate the accomplishments of our cohort through the publishing of 238 journal articles and three book chapters.

After a disruptive 2020 and 2021, we reflect on 2022 with a sense of pride and a feeling of excitement and energy. Every day, we are inspired by the commitment, determination and hope this extremely talented group of people bring – hope for the years and the generations to come.

We again wish to express our sincere gratitude to those who continue to advance this critical research through philanthropic contributions, public funding, grants and pro-bono contributions. It is only through this generosity that, as a research community, we can continue our important work to improve the lives of those now and into the future. We can achieve incredible things when we come together for the common good.



**Christopher Morton**  
Chair

The Prince Charles  
Hospital Foundation



**Steve Francia**  
Chief Executive Officer

The Prince Charles  
Hospital Foundation



**Tami Photinos**  
Executive Director

The Prince Charles  
Hospital



**A/Prof. Michael Nissán**  
Director of Research

The Prince Charles  
Hospital

# Adult Congenital Heart Disease Research Group

Our research group strives to improve outcomes of patients living with congenital heart disease.

## HEAD OF THE RESEARCH GROUP

- Darren Walters

## RESEARCH GROUP MEMBERS

- Ryan Maxwell
- Abhinay Challa
- Kylie Burns
- Sylvia Chen
- Wandy Chan
- Lauren Giudicatti
- Vish Wijesekera

## 2022 SNAPSHOT

★ **Members:** 8

## A BETTER LIFE FOR PEOPLE WITH CONGENITAL HEART DISEASE

Dramatic advances in cardiovascular healthcare in the last several decades mean more patients with congenital heart disease are able to live into adulthood.

Large international studies that bring greater therapeutic options to treat patients drive many of these advances. However, often patients with congenital heart disease are excluded from these large-scale studies. As a result, there's a significant gap in the literature and evidence to guide the management of these patients.

Our research group aims to bridge this gap and develop a foundation of literature that will help guide clinicians to better manage patients with congenital heart disease.

Our focus is on prolonging survival, minimising co-morbidities and repeat interventions, while also improving psychosocial health and quality of life for people living with this disease.

## HIGHLIGHTS

In 2022, we undertook projects that included a 'CH Fit Trial' (exercise training in patients with congenital heart disease) and an 'F Fit Trial' (exercise training in patients with Fontan circulation), which both showed the importance of exercise training in patients with congenital heart disease.

Our research projects conducted this year have led to outcomes that have changed many elements of care for patients with congenital heart disease, including rationalising the follow-up of patients with Fontan circuits, and a new understanding of the equivalence of Aspirin and Warfarin in preventing Fontan thrombus.

We achieved multiple publications using ANZ Fontan Registry data and contributed to the important, ongoing development of the CHAANZ Registry.



**This unique research group is composed of members from multiple disciplines within cardiology, including congenital heart disease, intervention, cardiac imaging and heart failure and transplant.**

# Adult's, Children's and Emergency Research Group (ACER)

We are driven to ensure research becomes a natural extension of day-to-day service provision within the emergency department at The Prince Charles Hospital. Our priority is research which is clinically relevant and practice changing.

## HEAD OF THE RESEARCH GROUP

- Dr Faye Jordan

## RESEARCH GROUP MEMBERS

- Louise Mills
- Dr Alastair Newton
- Dr Andrew Spiller
- Eleanor Anderson
- Dr Joe Passantino
- Dr Gavin Fincher
- Joshua Wilcox
- Sarah Hazelwood
- Dr Neil Grant
- Prof Paul Fulbrook
- Dr Polash Adhikari
- Rachael McCall
- Dr Rajeev Jaragula
- Dr Rose Fahy
- Dr Jess Rerden
- Dr Jess Cassiello
- Dr Tighe Tozer
- Dr Tony Legassick
- Dr William See
- Dr David Elliott
- Dr Rajeev
- Virginia Blakely
- Louise Spooner-Jackson
- Andrea Hetherington
- Leisa Bauer
- Meenu Wadhwa
- Dr Ben Symon
- Dr Angela Berkhout
- Dr Andrew Holgate

Affiliations with TPCH interdepartmental staff: Lauren Atkins, Dr Wandy Chan, Dr Isuri Ranasingher, Dr Maryam Bayat and Dr Kirin Shekar.

## 2021 SNAPSHOT

- ★ **Members:** 30+
- ★ **Ongoing Active projects:** 7
- ★ **Projects commenced in 2022:** 7
- ★ **Trials and Studies:** 16
- ★ **Publications:** 13

## VITAL RESEARCH IN THE EMERGENCY DEPARTMENT

As the COVID-19 pandemic unfolded, there was a necessary and unavoidable shift of focus away from research to delivery of care in TPCH's Emergency Department.

Now, as the pressures of the pandemic are easing, our group believes it is critically important that research remains central to our core business. This ensures that we continue to deliver patient care in the Emergency Department that is both of a high standard and evidence based.

Our multi-disciplinary research collaborative aims to prioritise staff engagement with research so that it becomes an everyday activity rather than something reserved for those with "special research skills". Our focus is on developing projects with nursing, allied health, prehospital, and medical clinicians and pursuing collaborations between departments and other health facilities to ensure the provision of the best possible care for our patients.



**Without clinically driven research, the practice of emergency medicine will fail to provide the most effective and appropriate treatments when patients need them most.**

## HIGHLIGHTS

In 2022, we had 14 trials underway in the Emergency Department across both the General Emergency Department and Children's Emergency Department. Each one has served to inform evidence-based emergency practice at TPCH. For example, the 'Paediatric Acute Respiratory Intervention Studies (PARIS II) trial - Nasal High Flow Therapy for Children with Acute Hypoxaemic Respiratory Failure' has provided the evidence base for indications – or otherwise – for the use of high flow nasal prong oxygen therapy in children.

Another important study commenced in 2022 'Paeds with a Wheeze - Improving patient flow with Nurse Led Stretching of Inhaled Salbutamol', has successfully attracted major grant funding from the Emergency Medicine Foundation.

Clinically relevant and practice-changing research forms the foundation for the delivery of excellent clinical care to our patients.

# Advanced Heart Failure and Cardiac Transplant Research Group

From basic science to clinical trials, our work aims to improve various aspects of heart failure from diagnosis to management, ultimately improving patient outcomes and reducing heart failure hospitalisation.

## HEAD OF THE RESEARCH GROUP

- Dr George Javorsky

## RESEARCH GROUP MEMBERS

- Dr Scott McKenzie
- Dr Wendy Chan
- Dr Yee Weng Wong
- Dr Maryam Bayat
- Lauren Atkins
- Genevieve Phipps
- Haunnah Rheault
- Maricel Roxas
- Estelle Beevors
- Kathryn Stibijl

## 2022 SNAPSHOT

- ★ **Members:** 15+
- ★ **Trials and Studies:** 4+

## REDUCING THE BURDEN OF HEART FAILURE

While there have been great leaps forward in many areas of modern medicine, there's been little improvement in mortality and re-hospitalisation of patients with heart failure. As a result, heart failure continues to place a huge burden on the healthcare system, while dramatically impacting patients' lives and wider society, both directly and indirectly.

We aim to address this clear, unmet need by looking at better ways to improve diagnosis and treatment that can improve patient outcomes, including prevention of hospitalisation. This will not only benefit individuals, but it will also have positive societal impacts. While the unit continues to participate in multiple international trials under the leadership of Dr McKenzie, we continue to make progress on our local initiatives.



## HIGHLIGHTS

In 2022, we completed a retrospective component of our 'SPAHF' project (Streamlined Pathway for Acute Heart Failure).

This is an exciting new interdisciplinary collaboration with our Emergency Medicine colleagues. It clearly highlights areas of potential improvement for the initial care of patients presenting to the Emergency Department with acute heart failure. A prospective rollout of the pathway commenced in July, with planning underway to scale the project to include other hospitals across Metro North HHS.

Other projects included the 'LASHPEF' project (Left Atrial strain obtained during Exercise Stress Echocardiography in the diagnosis of Heart Failure with Preserved Ejection Fraction), which has now entered the final phase, and the commencement of 'the 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'. This basic science project is being conducted in conjunction with the CVMT and CCRG labs at TPCH to explore cs-cfDNA as a potential prognostic marker in heart failure. The pilot randomised controlled trial of 'Urinary Sodium in Acute Heart Failure' that was coordinated by Dr Bayat was completed. Results were presented at this year's ESC-HF and planning for the main study is underway.



**We congratulate group member Dr Maryam Bayat who has upgraded from a Master's to a PhD candidate, and her abstract accepted for ESC-HF 2023. She has co-advisory support from group member Dr Wendy Chan.**

# Allied Health Research Collaborative (AHRC)

Our vision is to be an internationally recognised Allied Health Research Collaborative Unit generating research that reduces hospitalisation and improves patient quality of life.

## HEAD OF THE RESEARCH GROUP

Professor Norman Morris

## RESEARCH LEADS

- Dr Tammy Aplin
- Dr Jack Bell
- A/Prof Peter Lazzarini
- Prof Norman Morris
- Dr Glenn Stewart
- Dr James Walsh

## 2022 SNAPSHOT

- ★ **Members:** 6+
- ★ **Grants Administered:** \$1.4M+
- ★ **Awards:** 3+
- ★ **Publications:** 40+ peer-reviewed manuscripts



We supervised over 30 PhD and Masters research students, including seven who were awarded their research higher degree in 2022.

## IMPACTING LOCAL AND GLOBAL OUTCOMES FOR PATIENTS

We aim to enable people to live healthy, happy and productive lives away from the hospital setting. To achieve this, we bring together clinicians from Allied Health, Medicine and Nursing to implement evidence-based research practice directed at improving both hospital-based and long-term care outcomes.

We're focused on facilitating the translation of our research findings into clinical practice and strengthening the evidence base for hospital and healthcare practice; while building research capacity for clinical staff at TPCH, Metro North and across Queensland Health.

The work we undertake affects the quality of life of all patients who attend not only TPCH but all patients in Queensland, Australia and globally.

## HIGHLIGHTS

Despite the major disruption to clinical services associated with COVID-19, we continued to lead a range of projects in 2022. These included Dr Tammy Aplin's work exploring assistive technology in the post-acute population and examining the impact of a newly developed community occupational therapy outcome measure; and Dr Jack Bell's continued research on the implementation of interdisciplinary nutritional care across a range of clinical settings, including acute, geriatric and orthogeriatric settings.

Our group continued to provide a range of positive outcomes for both clinicians and patients attending TPCH. This included leading the development of a suite of six Australian evidence-based guidelines for the management of diabetes-related foot disease published in a special edition of the 'Journal of Foot and Ankle Research'.

In 2022, members of our group were widely recognised for their outstanding research contribution, including Dr Jack Bell, who was awarded 'Researcher of the Year' at TPCH Staff Excellence Awards, and Dr Glenn Stewart, who received the 'Research Partnership' Award.



Our group represents the 'tip of the iceberg' of Allied Health Research, with many in our group global leaders in their chosen interdisciplinary research fields.

# Anaesthesia Research Group

Historically surgical, anaesthetic and perioperative medical research has occurred in silos that led to poorly translatable or scalable outcomes. We focus on coordinated, collaborative, clinician-driven and relevant research that seeks to optimise long-term health outcomes for patients using the surgical encounter as an opportunity for improved health outcomes.

Our collaborative, clinician-driven program seeks to improve the operative experience through research into improving clinical care, optimising systems of care and elevating team processes that drive safety and efficiency.

## HEAD OF THE RESEARCH GROUP

Dr Usha Gurnathan

## RESEARCH GROUP MEMBERS

- A/Prof Ivan Rapchuk
- Dr Christopher Stonell
- Dr Lenore Vandermerwe
- Dr Lisa Stanton
- Dr Shakeel Kunju
- A/Prof Daniel Mullany
- Thar-Nyan Lwin
- Jodie Beuth
- Michael Busser
- Dr Siobhan Dillon
- Dr Thesus Tan
- Dr Ankita Hakeem

## 2022 SNAPSHOT

- ★ **Members:** 12+
- ★ **Publications:** 8 + multiple conference presentations
- ★ **Awards:** Dr Gurnathan received a Queensland Advancing Clinical Research Fellowship

## IMPROVING CARE FOR QUEENSLANDERS

In 2022 our research focused on post-surgical venous thromboembolism (VTE), prehabilitation and perioperative blood management. In addition, we also conducted surveys on anaesthetic care and anaesthetic trainee experiences across the country.

Our research into VTE established that elderly and obese patients are at heightened risk of complications like VTE



following orthopaedic surgery. 2.5 million Queenslanders are overweight or obese, and the rapidly rising prevalence of obesity in our ageing population means early implementation of a robust VTE prevention plan is essential to promote optimal care for Queensland patients.

Dr Gurnathan commenced a range of new studies, including 'Hip Fracture Cohort Study Linking Obesity to Thromboembolism post-Surgery' (HipCLOTS) - a large data linkage study to investigate the thromboembolic complications following hip fracture surgery in elderly Queenslanders and its association with obesity.

## HIGHLIGHTS

During 2022, we completed several projects, including the RETHInK-O study that investigated the use of preoperative rotational thromboelastometry (ROTEM) assays to predict postoperative thrombotic complications following total hip and knee arthroplasty in overweight and obese patients. Our research showed that ROTEM could identify an increased clotting tendency in obese people.

The research group completed a survey of Australasian anaesthetists identifying a shift in pain management practice over the past 20 years. This survey delineated such key points as the shift away from central epidural blockade towards fascial plane and regional nerve blocks in the management of pain post cardiothoracic surgery.



**Our research program aims to promote, support, design, and conduct collaborative research in anaesthesia, perioperative medicine, and pain medicine where the aim is to improve outcomes following surgical treatment. In addition, we will adopt standardised research practices to ensure excellence in study design, conduct, analysis and dissemination of information.**

➤ *We hope this project will benefit future ICU patients, not just at this hospital but at all hospitals – locally, state-wide, nationally, and internationally. The construction of these bedspaces is hopefully the first step in creating global ICU change.*

**Oystein Tronstad**

## FEATURED ARTICLE

# ICU of The Future

With up to 75 per cent of ICU patients globally experiencing physical, cognitive, or psychological problems such as anxiety, depression, and PTSD after their ICU admission, a group of senior clinicians committed to changing those statistics have dedicated several years to determine why these figures were so high and come up with an alternative ICU bedspace design.

This collaborative project, which led to the unveiling of two new ICU bedspaces in 2022, was led by the TPCH Critical Care Research Group (CCRG), supported by The Common Good and completed in collaboration with the TPCH ICU and multiple external collaborators involved with the planning, design and construction.

Patients who had experienced an ICU admission and their families played an essential part in guiding the redesign as they shared their stories and shed light on design and environmental stressors that negatively impacted them during and after their stay in the ICU.

*"Outcomes in intensive care in Australia are fantastic... but we realised more and more as we started to delve into it, that people were surviving but that they weren't thriving. They were going home, they were having terrible nightmares, and terrible hallucinations, they were not getting back to work, and they were left with incapacity. We realised the severe impact of delirium – reversible brain failure," said Professor John Fraser, CCRG Founder and Director.*

From baseline studies completed over five years, design and environmental challenges found to negatively impact patient outcomes and long-term recovery included the lack of natural light, social isolation, and noise pollution from constant alarms and other sources day and night. Noise monitoring conducted as part of the research showed that the noise levels during the daytime were

similar to a busy motorway. At night, peak noise levels were similar to a lawn mower operating close by.

*"We had to build a team of former patients and their family members, clinicians, and researchers with relevant experience from ICU. There were also a lot of external partners because we could not have solved all these problems without talking to the right people – so we worked with leading IT companies, architects, designers, builders, and tech companies, to name a few,"* Project Manager Oystein Tronstad said.

Some of the most significant innovations in the new ICU bedspaces include virtual windows to provide a view in the two windowless bedspaces, bespoke lighting solutions to mimic natural light and support circadian rhythms, architectural design to feel less clinical and more "homely", acoustic panels that are fully cleanable yet able to absorb noise and state-of-the-art beds for improved comfort and connectivity.

These redesigned spaces and their innovations aim to optimise healing and recovery while ensuring clinical efficiencies remain at the highest standard.

*"The ICU of The Future aims to reduce the incidence of ICU Delirium and improve the experience and long-term outcomes of critically ill patients, optimising the quality-of-life patients can expect to enjoy after leaving the hospital,"* said Oystein Tronstad.

As the first patients have now been admitted to the space, the next phase of the research project is underway. It involves collecting data to assess and quantify the impacts and effectiveness of these spaces. That work will include analysing patients' sleep waves to investigate the quantity and quality of sleep. Researchers will also examine patients' stress hormones and circadian rhythms and investigate how well patients recover physically, cognitively, and psychologically after their ICU admission.

# Cardiology Clinical Research Centre (CCRC)

CCRC is the hub of all research activities within the Cardiology Department at TPOCH. We contribute to the global knowledge and rapid evolution of technology that is leading the way to improvements in longevity and quality of life for cardiac patients.

## HEAD OF THE RESEARCH GROUP

- Professor Darren Walters

## RESEARCH GROUP MEMBERS

### Investigators

- Associate Professor Haris Haqqani
- Associate Professor Isuru Ranasinghe
- Dr Scott McKenzie
- Dr Russell Denman
- Dr Yee Weng Wong
- Professor Gregory Scalia
- Dr Nirnanjan Gaikwad
- Dr Karl Poon
- Dr Dale Murdoch
- Dr Rustem Dautov
- Dr Robert Horvath
- Dr. Maryam Bayat
- Dr Su Hnin Hlaing
- Dr Naim Mridha
- Dr Abhinay Challa
- Haunnah Rheault

### Nurse Manager

- Maricel Roxas

### Clinical Research Coordinators

- Estelle Beevors
- Bo Janoschka
- Megan Mearns
- Irena Rymar
- Suzanne Spencer
- Kathryn Stibijl
- Sandra Phillip

## 2022 SNAPSHOT

- ★ **Members:** 30+
- ★ **Projects Coordinated:** 50+

## INTERNATIONALLY RECOGNISED CENTRE OF EXCELLENCE

Our team of cardiac research experts are national and world leaders in clinical trials, and we are proud to contribute to the global knowledge bank. Our research

addresses the modern challenge of how to provide safer interventions and medical therapies for the rising population of high-risk patients suffering from acute and chronic cardiac conditions.

Our collaborative team interfaces across multidisciplinary teams within TPOCH and multisite National and International stakeholders. We have a proven success in recruitment and retention of patients through our commitment to providing a positive and personalised experience.

The Centre also provides a platform for experienced, aspiring and novice researchers, higher degree students and postgraduate nursing students to undertake research projects. Researchers and their projects are supported by the expertise of our Investigators, Nurse Manager and Clinical Research Coordinators.

## HIGHLIGHTS

CCRC is currently the lead site in Australia for 12 clinical trials for regulatory submissions and trial oversight, including ENCIRCLE, PARTNER 3 MVIV CLASP, CENTERA, PREEMPT-HF, TTRACK, POET 2, ADVISOR HD, LEADR, VICTOR, VICTORION PLAQUE and MICOT ACS trials.

In 2022, we coordinated 18 device and 15 drug trials, along with coordination of the Infective Endocarditis Biobank. Other international investigator-led research projects examined diagnostics and clinical remote monitoring devices.

CCRC Cardiac Interventionalists were the first in the Southern Hemisphere to successfully implant a new transcatheter mitral valve in a patient as part of the ENCIRCLE Transcatheter Mitral Valve Clinical Trial.

The research team also maintained a wide range of Cardiovascular, COVID, Echo, Impella, ACOR (TAVI) and Mitral Clip registries.



CCRC is one of the largest Cardiology Research Centres in Australia and is a world leader in interventional/structural clinical trials, including first-in-man, cutting-edge transcatheter device clinical trials; and we are gaining experience in innovative new technologies in less invasive transcatheter approaches for heart procedures.

# Cardiothoracic Surgery Research Unit

Our aim is to provide outstanding leadership in the field of Cardiothoracic Surgery.

## HEAD OF THE RESEARCH GROUP

*Currently vacant*

## REGISTRAR LEAD

- Dr Fiona Doig

## RESEARCH GROUP MEMBERS

### Consultants

- Dr Andrew Clarke
- Dr Homayoun Jalali
- Dr Dong Kang
- Dr Lachlan Marshall
- Dr Rishendran Naidoo
- Dr Anil Prabhu
- Dr Peter Tesar
- Dr Bruce Thompson
- Dr Livia Williams
- Dr Doug Wall
- Dr Morgan Windsor

### Registrars, Clinicians & Support

- Dr Bishwo Shrestha
- Dr Vinod Sharma
- Dr F Doig
- Dr M Daley
- Dr S Tang
- Dr L Nair
- Dr A Suganyaperiasamy
- Dr S Raza
- Dr V Balachandran
- Dr BP Menachery
- Dr J Hwang
- Dr Bronwyn Pearce
- Ms Susan Smith
- Ms Donalee O'Brien

## 2022 SNAPSHOT

- ★ **Members:** 26+
- ★ **Trials and Studies:** 8+
- ★ **Media Mentions:** Multiple

## OUTSTANDING INNOVATION IN HEART SURGERY

As the age and co-morbidities of cardiothoracic patients increase, technological advances are making it possible to perform ever-more complex surgery.

As the largest cardiothoracic service in the country, we are driven to provide the evidence-base necessary to



address the complex, evolving needs of cardiothoracic surgical patients and develop strategies that deliver optimum outcomes.

## HIGHLIGHTS

Our group had an expansive array of research projects continuing in 2022, including research into preoperative risk management, rheumatic heart disease, cardiac surgery in women, bleeding and blood management, novel devices and technologies.

Our game-changing 'Personalised External Aortic Root Support' (PEARS) program reached another milestone this year, with over 100 patients now implanted with a 3D-printed customised aortic device.

As a driver of innovation within the aortic surgery arena, we introduced the Ascyrus Medical Dissection Stent in 2022, which enables stabilisation of the dissection flap within the aortic arch and descending aorta in Acute type A Dissections.

## COLLABORATIONS

We foster collaboration with the University of Queensland and Queensland University of Technology. We are also proud collaborators with the TPCH Department of Physiotherapy and Anaesthetics via the Cardiac Surgery Prehabilitation program.



**Our department has one of the largest PEARS programs in the world and has changed the landscape of Aortic Surgery in Australia.**

# Cardiovascular Molecular and Therapeutics Translational Research Group



We aim to increase understanding of molecular mechanisms of advanced heart failure in order to discover new medicines to treat and improve quality of life for patients with this condition.

## HEADS OF THE RESEARCH GROUP

- Professor Peter Molenaar
- Associate Professor Haris Haqqani
- Dr Yee Weng Wong

## RESEARCH GROUP MEMBERS

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

## 2022 SNAPSHOT

- ★ **Members:** 9+
- ★ **Trials and Studies:** 2
- ★ **Grants Awarded:** 3

## EASING THE BURDEN

The prevalence of heart failure is increasing worldwide, increasing the burden on our hospitals, clinicians, communities and families.

Despite best-available treatment options, patients still have a very poor survival rate. Our research is vital to reduce the burden of patients with heart failure and to provide significantly better outcomes for patients.

## HIGHLIGHTS

In 2022, our group undertook projects that focused on preventing deadly ventricular arrhythmias in heart failure patients. These included the 'Antiarrhythmic effect of phenytoin in human failing hearts' study.

Through this research we established that phenytoin is able to effectively prevent arrhythmias in a human ventricular model of arrhythmia, using tissue samples from patients with heart failure. We found that it works effectively to prevent arrhythmias in human heart samples from patients who were not receiving  $\beta$ -blockers at the time of heart transplantation. This is an important result towards providing an additional medicine in this group of patients.

Using phenytoin as a template medicine, we then designed and synthesised novel compounds. Remarkably, early attempts found some to be more effective than phenytoin at preventing arrhythmias.

At the same time, our 'Redesigning and optimizing  $\beta$ -blocker treatment for patients with heart failure patients' project, used pharmacological criteria to re-design  $\beta$ -blocker use to enable more patients – including those who were previously unable to tolerate  $\beta$ -blocker therapy – to take advantage of treatment.



This year we were delighted to appoint Dr Kafa Walweel to the group to provide strategic expertise to develop novel antiarrhythmic medicines for patients with heart failure.

# Core Thoracic Research Group

Our research aims to assess the evidence behind the diagnosis and management of common thoracic diseases, including asthma and pneumonia.

## HEAD OF THE RESEARCH GROUP

- Philip Masel

## RESEARCH GROUP MEMBERS

- Daniel Smith
- David Reid
- Rekha Hakim
- Ian Yang
- John Cameron
- Elvy Zeng
- Tracy Tse
- Hayley Gunn
- Kathleen Hall

## 2022 SNAPSHOT

- ★ **Members:** 11+
- ★ **Trials and Studies:** 3+
- ★ **Publications:** 3

## DIVERSE TEAM CREATES STRONGER OUTCOMES FOR PATIENTS

Our diverse, multidisciplinary team works across a range of areas to study disease mechanisms and potential new therapies which may benefit patients with bronchiectasis, chronic obstructive pulmonary disease (COPD), asthma, pleural effusions, COVID infections and pneumonia.

Seeking maximum benefit for patients, our team includes occupational therapists, physiotherapists, dietitians, social workers, pharmacists, speech pathologists and respiratory trainees. This broad range of perspectives helps us create innovative projects in this field.

The research we undertake includes many aspects of thoracic medicine. For instance, COPD can present in many ways, and identifying the driving mechanism in each patient allows us to target specific therapy for them.

## HIGHLIGHTS

In 2022 our team piloted a new service for patients with suspected Paradoxical Vocal Cord Movement Disorder. As an outcome, multidisciplinary case presentations were established, linking with ENT services.

During the year, we also undertook trainee projects in areas including sleep medicine and lung cancer.



**With new therapies being developed and rigorously trialled, our patients can gain maximum benefit and better quality of life.**

# Critical Care Research Group

Our research group is a world leader in the field of critical care research and biomedical engineering, with a focus on developing ground-breaking novel technologies and treatments to improve outcomes for the critically ill.

## HEAD OF THE RESEARCH GROUP

Professor John Fraser

## RESEARCH GROUP MEMBERS

- Adrian Barnett
- Andrew Haymet
- Andrew Thomas
- Angelo Milani
- Anil Prabhu
- Anna Beel
- Bailey Schneider
- Brooke London
- Bruce Garlick
- Carmen Ainola
- Charles MacDonald
- Chris Hoi Hong Chan
- Christopher Raffel
- Clayton Semenzin
- Cynthia Taylor
- Dan Dai
- Daniel McGuire
- David McGiffin
- David Platts
- Declan Sela
- Dhayananth Kanagarajan
- Dylan Flaws
- Emily Wilson
- Gabriele Fior
- Gabriella Abbate
- Gianluigi Li Bassi
- Hannah Marrinan
- India Pearse
- Jacky Suen
- Jiville Latu
- Jon Fanning
- Jonathan Chan
- Karin Wildi
- Kei Sato
- Keibun Liu
- Kieran Hyslop
- Kris Skegg
- Lauren Kelly
- Lavienraj Premraj
- Lawrence Yanxi Lu
- Louise See Hoe
- Lucia Gandini
- Lynnette James
- Mahe Bouquet
- Margaret Passmore
- Maryam Memar
- Meredith Redd
- Monique Tucker
- Nchafatso Obonyo
- Nicole White
- Noriko Sato
- Oystein Tronstad
- Pelin Ho
- Robert Holdsworth
- Sainath Raman

- Sam Huth
- Samantha Livingstone
- Samia Farah
- Sarah Macari
- Silver Heinsar
- Simon Forsyth
- Shinichi Ijuin
- Sofia Portatadino
- Sue Patterson
- Sun Kyun Ro
- Susan Lynch
- Taylor Sing
- Toni Hammond
- Vikash Dhanapathy
- Wendy Strugnell

## 2022 SNAPSHOT

- ★ **Members:** 68+
- ★ **Trials and Studies:** 13+
- ★ **Publications:** 46+

## GLOBAL LEADERS IN RESEARCH

We are a dedicated multi-disciplinary group who are not content to just accept good clinical practice, but are driven to develop better technologies, better techniques and better processes that lead to better outcomes for patients.

We know that quantity of life is not the only important question for our patients, but also quality of life. That is why we are continuously facilitating critical thinking and questioning 'how can we do better for the patient?'

Our multi-disciplinary critical care research facility is the largest in Australia, comprising seven purpose-built biology, engineering, and bio-fabrication laboratories. We also have the largest preclinical ICU in the southern hemisphere.

## HIGHLIGHTS

In 2022, CCRG had more than 16 studies and trials underway resulting in key highlights including:

Our COVID-19 Critical Care Consortium (COVID Critical) project continued to gain support from sites worldwide. This is the world's largest known COVID-19 ICU database which now has over 27,000 enrolled patients and collaboration from all seven continents.

Our 'The Living Heart Project: Hypothermic ex Vivo Perfusion' (HEVP) started a clinical trial which resulted in 100 per cent success rate for transplanted hearts,

including the longest ischemic time and distance travelled by a donated heart. The second phase of this study will commence in 2023.

Our 'ICU of the Future: Revolutionising the ICU experience for better patient outcomes' project was unveiled in a world-first space at TPCH with two beds available in our ICU facility.

And, finally, in another world-first, members of our research team documented how extracorporeal membrane oxygenation (ECMO) – the life-saving blood oxygen therapy – alters the effectiveness of antibiotics in critically ill patients. This breakthrough study is set to change the way ECMO is used and administered and improve outcomes for the health system's sickest patients.

## COLLABORATORS

The COVID-19 Critical Care Consortium now includes collaboration from 460+ sites, across 65 countries and all seven continents.



**For almost 20 years, our research group has remained dedicated to translating today's research into tomorrow's treatment.**





➤ *Malnutrition is a wicked problem that adversely influences morbidity, mortality and treatment costs.*

*Dr Jack Bell*

## FEATURED ARTICLE

# Dr Jack Bell, Researcher of the Year 2022, TPCH Staff Excellence Awards

Dr Jack Bell has dedicated many years to studying the nutritional care approach for older adults in hospital, in acute, geriatric and orthogeriatric settings, who are malnourished or are at risk of malnutrition. What he has uncovered over that time is that malnutrition is one of the leading causes of adverse outcomes in orthopedics and orthogeriatrics. So, his mission is to improve care, patient and clinician experiences and healthcare outcomes for malnourished patients.

*"We know that about 1 in 2 hip fracture patients come in malnourished, and if we don't look after them, that increases to almost 2 out of 3 patients who are malnourished by the time they leave the hospital systems. We also know that apart from coming from a residential aged care home or having deep vein thrombosis, malnutrition is the most harmful comorbidity in hip fracture. It's also the most costly comorbidity and the one most likely to influence the length of stay."*

2022 was a busy yet productive year for Dr Bell, who published 10 peer-reviewed manuscripts, seven book chapters and edited one book. His hard work didn't go unnoticed, and he was awarded Researcher of the Year at the TPCH Staff Excellence Awards.

*"I'm passionate about values-based healthcare, which to me is care that matters to people, and the number of resources required to deliver that care."*

Dr Bell believes that dietitians should not be relied on as the sole nutrition care provider; he believes instead that an interdisciplinary approach is needed, so in his work, he brings together patients, care providers and experts to develop and field test models that support team-based care both in and out of the hospital.

*"We know that from studies we've done here at The Prince Charles Hospital and across Queensland, that three of four patients who are malnourished actually don't need specialist care from a dietitian; they need supportive nutrition care, but that's care that can be done by systems and teams. We also know that dietitians don't have enough time to see all of those people. At the moment, they're wasting a lot of time seeing those three people who don't really need or will benefit from their specialist care while the person who needs that specialist care is often missing out."*

*"We must radically rethink when, where, why and how nutrition care is delivered, and by whom. And also make sure it is the right care for the right person."*

Dr Bell led the development of the Systemised, Interdisciplinary, Malnutrition Program for imPlementation and Evaluation (SIMPLE) approach to transform malnutrition care. He has also co-led a similar program across Canadian hospitals. Dr Bell was quick to point out that the real key to successful, sustainable nutrition care improvements has been building the reasons to change, involving all the relevant people in the change process, and engaging patients and teams to implement and embed changes that fit their local setting.

In 2022, Dr Bell co-led two global webinars discussing the implementation of SIMPLE in orthogeriatrics. And in a publication which has clocked up over 100,000 downloads, the acronym has been tweaked to better match research findings and now stands for: Screen for malnutrition, Interdisciplinary assessment, Make the diagnosis and make sure the patient is aware of the diagnosis, Plan with the patient, imPlement interventions and Evaluate ongoing care requirements.

Despite the success of the SIMPLE approach, Dr Bell says there are still plenty of opportunities to shift the reliance away from dietitians, with many healthcare providers and recipients remaining disengaged with nutrition care.

*"There is some complex unpacking that still needs to happen to find out why there's this gap between knowledge and practice."*

# Critical Care Research Group's Innovative Cardiovascular Engineering and Technology Laboratory (ICETLab)

Our aim is to improve the technology of existing mechanical circulatory support devices while expediting the development of novel devices to improve outcomes for the patients who rely on these devices.

## HEAD OF THE RESEARCH GROUP

Professor Geoff Tansley – Engineering Lead

Professor John Fraser – Medical Lead

## RESEARCH GROUP MEMBERS

- Michael Simmonds
- Clayton Semenzin
- Chris Chan
- Taylor Sing
- Dhayananth Kanagarajan
- Kristy Garrick
- Zoe McSweeney
- Antony McNamee
- Zack Fertjowski
- Maria Stadheim
- Junyan Zhang

## 2022 SNAPSHOT

- ★ **Members:** 10+
- ★ **Trials and Studies:** 5+
- ★ **Awards:** Several team members were recognised with the 'ESAO-SAGE-Research Award' for work supported by the TPCF Foundation.
- ★ **PhDs awarded:** 1

## INNOVATION TO SAVE LIVES

Cardiovascular disease is one of the biggest causes of mortality and morbidity in Australia and throughout the world. Our research is focused on improving mechanical circulatory support devices which can support blood flow in critically ill patients who rely on these devices to survive.

The use of these devices can be life-saving, bridging patients to more definitive therapies in acute illness (eg. temporary balloon pumps), and providing definitive therapy in chronic cases (eg. total artificial hearts).

CCRG's ICETLab draws on computational, in vitro and in vivo facilities to develop mechanical circulatory support devices and remains interdisciplinary at its core, facilitating evaluation of clinical, engineering, and scientific challenges within a holistic framework.

## HIGHLIGHTS

In 2022, we continued the development of an Intraventricular Balloon Pump. Progress included development of an in vitro test loop that will allow human blood to be pumped by an artificial pulsatile ventricle, and into which the intraventricular balloon is placed.

Other projects that continued in 2022 include: a 'Fluid Dynamical Study of Pulsatile Extracorporeal Membrane Oxygenation (ECMO)' study which encompassed various elements such as a Systematic Review of Pulsatile ECMO and the development of a Computational Fluid Dynamic Model.

We also continued our 'Evaluation of Interspecies Blood Sensitivity to Mechanical Stresses' study, undertaking several projects that have evaluated the biophysical and rheological properties of blood (and blood cells) from bovine blood donors, when compared with humans.



**Our Systematic Review of Pulsatile ECMO has been written up as a manuscript entitled 'Pre-clinical studies on Pulsatile V-A ECMO: a Systematic Review of the Literature' and accepted for publication by ASAIO journal.**

**We congratulate group member Kristy Garrick on receiving her PhD for a project entitled 'Development of a novel sutureless inflow cannula for ventricular assist device implantation'.**

# Cystic Fibrosis Research Group

We aim to improve the health and well-being of people living with cystic fibrosis and other associated lung diseases through research.

## HEAD OF THE RESEARCH GROUP

- Professor Ian Yang

## RESEARCH GROUP MEMBERS

- |                          |                      |
|--------------------------|----------------------|
| • Professor Scott Bell   | • Karen Herd         |
| • A/Professor Phil Masel | • Kathleen Hall      |
| • Dr Paul Lane           | • Robyn Cobb         |
| • A/Professor David Reid | • Jennifer Bingham   |
| • Dr Daniel Henderson    | • Suzette Fox        |
| • Dr Daniel Smith        | • Paul Maplethorpe   |
| • Michelle Wood          | • Julieta Castellini |
| • Felicity Loel          | • Dr Graeme Mattison |
| • Vanessa Moore          | • Dr George Tay      |
| • Tracy McMahon          | • Dr Andrew Burke    |
| • Andrea Lacey           | • Emma Ledger        |
| • Angela Matson          |                      |

## 2022 SNAPSHOT

- ★ **Members:** 23+
- ★ **Collaborators:** 12+
- ★ **Trials and Studies:** 10+
- ★ **PhD completions:** 3

## CHANGING THE FUTURE OF CYSTIC FIBROSIS

Over recent years there have been great advances in treatment for people living with cystic fibrosis. While this has improved health and longevity, there continues to be significant morbidity and shortened life expectancy associated with the disease.

As the challenges faced by those living with cystic fibrosis evolve, our ongoing emphasis on continuing to extend life expectancy and improve quality of life is vital.

While our research focus is cystic fibrosis, we anticipate that advances in the understanding of the acquisition, spread and prevention of infection brought about by our research will serve to inform public health policy and the treatment of many other chronic respiratory diseases.

## HIGHLIGHTS

In 2022, the diverse, multi-disciplinary studies we undertook are continuing to advance the understanding of airway infections in cystic fibrosis and associated lung diseases.

We have continued to work with international collaborators to identify future research directions and strategies to deliver more effective care to people living with cystic fibrosis.

Throughout the year, we continued to deliver significant research output focused on describing the cystic fibrosis airway microbiome, its interaction with host immune responses and strategies for the effective treatment of infection.

Assessing the role of technology, we also published a systematic review of the role of wearables in the remote monitoring of people with chronic disease. We will pursue further research into monitoring the health of people with cystic fibrosis, with the aim of developing an AI algorithm that predicts pulmonary exacerbations.

Our team collaborates extensively with the Lung Bacteria Group (CHRC, Gallipoli Medical Research Centre, UQ and TPCH) and Lung Inflammation and Infection Laboratory (QIMR-B).



Ongoing research is critical to continue to minimise morbidity and meet the obstacles associated with growing old with cystic fibrosis.

# Echocardiography & Catharsis Program

CATHARSIS is the world's largest echocardiography comparative study, with over 300 echocardiograms performed on a broad range of heart patients to date. This data has been used to validate existing procedures and develop innovative new techniques.

## HEAD OF THE RESEARCH GROUP

- Professor Gregory M Scalia

## RESEARCH GROUP MEMBERS

- Dr David Platts
- Dr Darryl Burstow
- Dr Vinesh Appadurai
- Dr Stephen Tomlinson
- Dr Pyi Naing
- Dr Paul Wiemers
- Dr Robert Chamberlain
- Dr Natalie Edwards
- Dr Wendy Chan
- Maricel Roxas
- Bo Janoschka

## 2022 SNAPSHOT

- ★ **Members:** 12+
- ★ **Trials and Studies:** 1+
- ★ **Publications:** 5
- ★ **PhD's Awarded to group members:** 4

## PURSUIT OF INNOVATION

Over the last 50 years, many impressive innovations in the use of simple ultrasound have allowed echocardiographers to answer clinical questions that would once have required patients to endure expensive and invasive tests.

Through the CATHARSIS study, our research is pushing the envelope to develop new scanning and calculation techniques and derive important answers to even more clinical questions.

In the four years since recruitment for the study began, data generated by CATHARSIS has led to many publications and facilitated the introduction of three exciting new innovations, which are used daily in echocardiography labs around the world.

## HIGHLIGHTS

In 2022, we undertook a novel investigation into two new parameters:

**Left Atrial Strain:** This is a new technology for assessing atrial function in patients with various forms of heart failure. Group member Dr Stephen Tomlinson has pioneered the use of this pixel-tracking technology, which can be used to estimate left atrial pressure and predict heart failure hospitalisations.

**Left Ventricular Mechanical Dispersion:** Group member Dr Vinesh Appadurai has investigated the dispersion of timing of muscle contraction in the ventricle and its effect on cardiac function.

Intuitively it would be reasonable to think that the whole of the left ventricle contracts in unison. However, timing synchronisation issues between different parts of the myocardium significantly impact ventricular function.

The use of quantification of this mechanical dispersion in predicting cardiac events is being investigated as part of our CATHARSIS study.

In 2022, we also commenced an investigation into the Prognostic value of non-invasive myocardial work and global longitudinal strain in patients with significant coronary artery disease confirmed by coronary angiography.

Group member Dr Natalie Edwards is investigating the outcomes of patients within the CATHARSIS study in terms of morbidity and heart failure hospitalisation. She is expanding on her research performed during her PhD on novel parameters of non-invasive myocardial work and global longitudinal strain to determine if this technology can determine which patients have better outcomes. It is hoped that the earlier detection of subclinical heart disease assessed by myocardial work and global longitudinal strain may allow patients to obtain earlier treatment before permanent damage occurs to the heart muscle.



**Several innovations facilitated by our CATHARSIS study are now used on a daily basis in echocardiography labs in countries around the world.**

# Health Services and Outcomes Research Program

Our multidisciplinary applied research program aims to generate research that informs practical clinical and policy strategies to improve cardiovascular health services and patient outcomes.

## HEAD OF THE RESEARCH GROUP

Associate Professor Isuru Ranasinghe

## RESEARCH GROUP MEMBERS

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

## 2022 SNAPSHOT

- ★ **Members:** 7+
- ★ **Trials and Studies:** 7+
- ★ **Publications:** 18
- ★ **Media Mentions:** Multiple (local and global)

## TRANSLATING RESEARCH INTO BETTER HEALTH OUTCOMES FOR PATIENTS

Our research focuses on informing what matters the most – the health care that patients experience. This includes the safety, effectiveness and costs of hospital care.

Directly addressing the fourth phase of translational research, we seek to evaluate the 'real world' health outcomes of health practices. By studying these outcomes, we draw insights into how well hospital care is delivered; whether evidence-based interventions effectively reach individuals whose health can benefit; and, we identify opportunities to improve care through clinical and policy intervention.

## HIGHLIGHTS

Our team undertook a broad range of research projects in 2022. Associate Professor Isuru Ranasinghe headed up the 'Leveraging Big Data to Inform Nationwide Cardiovascular

Health Outcomes' study, a data linkage study that brings together a decade's worth of cardiovascular hospitalisation data from across Australia and New Zealand. Funded by the National Heart Foundation, this research will allow a population-wide assessment of outcomes of hospital-based cardiovascular care, giving us the ability to better understand how outcomes vary across healthcare facilities and regions.



Shining a spotlight on the safety and effectiveness of hospital care, we commenced our national 'Safety, Effectiveness of care and Resource use among Australian Hospitals' (SAFER Hospitals) study in 2022.



This year our work on national stroke survival rates received global media attention, including coverage in the Brisbane Times, Sydney Morning Herald and Telegraph (UK).

Other studies underway this year included the 'Evaluating the Role of Urinary Sodium Guided Diuretic Therapy' study led by Dr Maryam Khorramshahi Bayat, as well as the 'Burden and Outcomes of Stroke Hospitalisations' study led, by Dr Yang Peng. This study uses national stroke hospitalisation data in Australia and New Zealand to evaluate outcomes of ischemic and haemorrhagic stroke.



We're excited to welcome Ms Trang Dang, a health economist, to our group. Ms Dang is undertaking her PhD with our team, supported by investigators from the University of Queensland Faculty of Economics and the Australian Centre for Health Services Innovation (AusHSI) at Queensland University of Technology.

# Improving Gastroenterology Outcomes through Clinical Research



We aim to improve the lives of patients who have diseases emanating from the liver or the bowel.

## HEAD OF THE RESEARCH GROUP

Dr Tony Rahman

## RESEARCH GROUP MEMBERS

- Dr Ruth Hodgson
- Dr Antony Pan
- Dr Azhar Ghumman
- Dr Madhavi Kasi
- Dr Aditya Agarwal
- Dr Rajeev Shrivastava
- Dr Mohamed Khan
- Dr Myatt Khaing
- Ann Vandeleur
- Endoscopy Nurses Collaborative
- ...and our research registrars.

## 2022 SNAPSHOT

- ★ **Members:** 11+
- ★ **Trials and Studies:** 4+
- ★ **Awards:** 'International Excellence in Patient Care' Award, Royal College of Physicians, London



We are a group of local, hard-working clinicians who are dedicated to serving our patients to the best of our ability, improving access, diagnostics, technology and the experience of patients and their families.

## LIFE-SAVING RESEARCH

We're a clinically-focused research group working to address needs that are important to our patients. Our work aims to make it easier and more equitable for patients to access care by introducing new technologies that will improve accessing vital healthcare.

Our current projects include studies on coeliac disease, cirrhosis of the liver, hepatic encephalopathy and the improvement of diagnostics in oesophageal cancers and access to diagnostic services such as colonoscopy for bowel cancer.

The group's research to date has significantly contributed to the reduction of bowel cancer in Australia by facilitating over 14,000 colonoscopies. Additionally, our work has helped reduce waiting times, improving patient education, increasing the diagnosis of polyps compared to standard pathways, and thus increasing bowel cancer detection and prevention.

We have also treated and cured more than 1,000 patients with Hepatitis C without the patients needing to attend hospital. Instead, local doctors administered life-saving treatments via our novel clinical pathway within days of their referral letter arriving to us.

## HIGHLIGHTS

In 2020 our 'GEO – GE Online' project won the Royal College of Physicians 'International Excellence in Patient Care' award. This important project has – and will continue to – increase the detection of polyps in the colon and will lead to a reduction in colon cancer.

It is also the first patient educational product that has led to better colon cancer and polyp detection without the need for upgrading equipment. This makes it very valuable to regional and remote hospitals and health services.

Other projects undertaken this year included a 'Gastroenterology and Hepatological Impacts of Adult Congenital Heart Disease (ACHD)' study, in which we created a database of TPCH ACHD patients, their diagnoses, pathology, radiology and fibroscans.

We have also sought to advance our study of oesophageal cancer, making an initial ethics application for Nanostring biomarkers for oesophageal cancer with Professor Subramanian at the Queensland University of Technology.

# Infective Endocarditis Queensland (ieQ) Research Group

ieQ is a TPCCH initiative to establish Australia's first clinical and research collaborative supporting improved outcomes for patients with infective endocarditis.

## CO-CHAIRS OF THE RESEARCH GROUP

Dr. Robert Horvath & Dr Yong Shen Wee

## RESEARCH GROUP MEMBERS/EXECUTIVE COMMITTEE

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

## 2022 SNAPSHOT

### ★ Members:

**ieQ** (QLD ACE members) 51

**ACE** (excluding QLD) SA 16, Vic 12, NSW 11, WA 3, Tas 1, NZ 5. (total non-QLD 48 members)

**QFIG** (national) 58. Note some ACE members are also QFIG members

### ★ Trials and Studies: 4+

## IMPROVING THE UNDERSTANDING OF AN UNCOMMON CONDITION

Little is known about the relatively uncommon condition Infective Endocarditis, yet TPCCH admits and treats around 60-80 patients with Infective Endocarditis every year – many requiring open-heart surgery.

ieQ's mission is to improve outcomes for patients by making advances in diagnosis, management and prevention of the condition. We do this in four key ways: education, management, research and collaboration.

As Endocarditis is a specific variant of sepsis, lessons learnt from our research can be applied to many other forms of sepsis – which is one of Australia's leading causes of death.

## HIGHLIGHTS

Our group undertook an array of research and clinical trials in 2022, including the 'POET 2 trial: Shortened antibiotic treatment duration in left-sided Endocarditis (POET II): Rationale and Design of a Randomised Controlled Trial'. TPCCH is currently the lead Australasian site for this trial, with two other Australian sites now initiated – Fiona Stanley Hospital and Barwon Health, and two other Australian sites (Royal Adelaide, Queen Elizabeth South Australia) in initiation process.

During the year, we conducted and published an audit of Endocarditis at QCH, which is a pilot for a paediatric Infective Endocarditis registry. Our group also commenced work on the 'Q Fever Registry', which is now under planning with a committee from three states around the country. This will also serve as a pilot for a planned endocarditis state/national registry.

Among our other achievements, we are delighted to report that our ieQ Biobank now has over 80 recruitments and is being used as a pivot for molecular sepsis studies in Australia.

Our group has developed two off-shoots, ACE (Australasian Collaboration in Endocarditis) which is currently working on a national (voluntary) endocarditis registry.

The second off-shoot is QFIG – Q fever interest group. This group is designing registries and studies on all aspects of Q fever (acute Q fever, chronic Q fever, Q fever in pregnancy, Q fever endocarditis). As a component of this, ieQ/TPCH is currently expected to be the repository of a national Q fever endocarditis biobank.



Our research is part of a global effort to expand knowledge of the relatively uncommon condition, Infective Endocarditis, and via the QFIG off-shoot of ieQ, knowledge of all aspects of Q fever (not just endocarditis).

GLOBAL SIGNIFICANCE.  
NATIONAL COLLABORATIONS.  
ONE PURPOSE...

MAKE THE WORLD BETTER, ONE DISCOVERY AT A TIME.



 THE COMMON GOOD  
PEOPLE POWERING MEDICAL DISCOVERIES  
AN INITIATIVE OF THE PRINCE CHARLES HOSPITAL FOUNDATION



➤ *We produce high-quality, world-class research here at The Prince Charles Hospital and through our amazing network of national and international collaborators. It's a goldmine – we just have to mine it.*

**A/Prof Michael Nissen**

## FEATURED ARTICLE

# A/Prof Michael Nissen, Inaugural Director of Research at TPCH

Associate Professor Michael Nissen was appointed as the inaugural Director of Research at The Prince Charles Hospital in 2022. Along with feeling honoured to step into this position, he's incredibly excited about what the future could hold.

*"It's such a great hospital with so many things going on from a research perspective, as well as being a hospital with a long history of quality research that translates into better patient care and outcomes."*

Michael has large aspirations and is not one to shy away from a challenge. Throughout a distinguished career as a consultant and academic in infectious diseases, microbiology, and vaccine studies with a stint in the pharmaceutical industry, he has led more than 40 clinical trials and authored more than 200 peer-reviewed publications.

Looking at the big picture, he hopes, in this role, he can lead the growth of research capacity at The Prince Charles Hospital through research promotion, translation and collaborative partnerships. The key, he thinks, is to therefore maximise opportunities and outcomes for all parties – not only the researchers but for hospital patients and their families, as well as the broader community.

*"The Prince Charles Hospital is known for its cardiothoracic excellence, in recently being voted the leading Cardiology service in Australia and number 35 globally, but we're also unique in the sense that we provide a whole range of other services for our local community, including but not limited to internal medicine, aged care, mental health, general surgery, paediatrics with critical supporting services to heart-lung surgery through other specialities such as intensive care, anaesthetics, allied health, nursing, medical imaging and pharmacy."*

*"Also, smaller groups within the bigger departments are conducting important research to benefit patients locally, state-wide, and nationally. I want to raise the profile of our emerging researchers and strengthen what we already have. For example, The Prince Charles Hospital does the most cardiac MRIs in the country. People travel from interstate, including Tasmania and Darwin, to access cardiac MRIs here. We are leaders in that space, and that needs some profile lifting and applause."*

Michael says while this role presents incredible opportunities, there are also numerous challenges.

*"This role involves getting a handle or understanding of the full depth and breadth of research done at the hospital. It goes beyond knowing how many grants are available or being given, to knowing the number of individuals carrying out research, how often they are here, and what other work they do; so, we can get a full plan in terms of what assets we have and what's the best way to use those assets in combination with our partners including The Common Good and academic contributors."*

*"All the researchers here at The Prince Charles Hospital have the same goal of providing safe, efficient and high-quality evidence-based health services and are fortunate they can work together in terms of recognition or sharing of resources or ideas, giving them unique strength and offering a foundation for sustainable research."*

# Internal Medicine & Dementia Research Unit



IMDRU was established in 1998 and is primarily involved in undertaking Clinical Trials in potential new treatments for Dementia. It is currently the only dementia clinical trial unit operating in Queensland Health.

## HEAD OF THE RESEARCH GROUP

- Dr Chrys Pule

## RESEARCH GROUP MEMBERS

- Dr Gurudev Kewalram
- Dr Lucy Dakin
- Dr Carolina Ling
- Dr Debbie Lee
- Dr Benignus Logan
- Dr Alisa Crouch
- Dr Eamonn Eeles
- Dr Donna Pinsker
- Margaret Morton
- Maureen Morgan
- Anne Bucetti
- Wayne Brady
- Amy Gilbert
- Laura White
- Celia O'Meara
- Robyn Riley
- Andrew Trotter
- Wayne Brady
- Lisa Goldsmith
- Rebecca Greenwood
- Caroline Logan
- Natasha Bhan
- Roger Penfound
- Tracey Palu

## 2022 SNAPSHOT

- ★ **Members:** 26+
- ★ **Trials and Studies:** 3+
- ★ **Awards:** 2
- ★ **Presentations:** Multiple (local, national and international)



Our group features a diverse mix of professionals united in our unwavering commitment to this often-challenging area of research.

## TOWARDS A CURE FOR DEMENTIA

Our research unit was established in 1998 and has undertaken more than 40 international pharmaceutical randomised clinical trials in the hope of finding a cure and a potential new treatment for dementia.

This work is vital as there is currently no cure and no affordable treatment available for this insidious disease.

It's only with clinical research like ours and the assistance of participants that we can advance dementia treatment, develop preventive strategies and come closer to a cure.

## HIGHLIGHTS

IMDRU is recognised as a site that participates in innovative and transformational research. The unit also celebrates and validates patient focused initiatives which improves the patient and study partner clinical experience.

Our Research Unit undertook a number of pharmaceutical clinical trials in 2022 that explored potential new treatments for dementia. These included the use of Monoclonal Antibodies and the use of a GLP-1 (Glucagon – like peptide-1).

These studies provided patients diagnosed with dementia the opportunity to trial a potential new treatment, while giving clinicians the opportunity to develop knowledge and improve their understanding of the disease. At the same time they were able to benchmark clinical research in the translation of new knowledge of medications and provide excellence in the management of dementia.

Additionally, trial participants and study partners were involved in the Queensland Gallery of Modern Art (GOMA) 'Dementia & Art' Project which has proven to be very successful.

This year our Head of Research Dr Chrys Pule received the 'Internal Medicine Education and Research Award', while group member Margaret Morton received the 'Internal Medicine – Joan Pawsey Award for 2022'.

# Internal Medicine Services Research Group

We aim to promote and foster an interdisciplinary culture of research that helps to improve patient care and empower clinicians to be involved at all stages of the research process.

## HEADS OF THE RESEARCH GROUP

Dr. Eamonn Eeles

Dr. Chrys Pulle

## RESEARCH GROUP MEMBERS

- Dr. Sarah Lord
- Dr. Lucy Dakin
- Dr. Ling Lan
- Ms. Susan Mannion
- Ms. Rachael Williams
- Dr. Jack Bell
- Margaret Morton
- Margaret Turner

## 2022 SNAPSHOT

- ★ **Members:** 10+
- ★ **Trials and Studies:** 2
- ★ **Publications:** 6

## ADVANCING INTERNAL MEDICINE RESEARCH

Within Internal Medicine Services, our research focuses on improving patient experiences and outcomes, so each patient receives the most efficient and effective healthcare possible.



As part of our program, we provide peer review to clinician researchers and their projects, along with leadership, support and governance to research initiatives, balancing the demands of research with patient and ward clinical activity.

## HIGHLIGHTS

Due to the current healthcare environment and uncertain clinical landscape associated with Novel Coronavirus, our group undertook just two research projects in 2022.

For our Sterling's Dream project, in collaboration with CSIRO, HIRF and QBI, the group showed proof of principle that cholinergic function measured using [18F]-FEOBV PET correlates with cognitive function.

In addition, pilot testing of a new electronic diagnostic support tool for use in delirium showed it to be useful and usable among junior doctors. We hope to introduce this world-first tool into clinical care here at TPCH in the near future.

## COLLABORATORS

In 2022, we continued strong working relationships with the Internal Medicine & Dementia Research Unit (IMDRU) and Network for Orthopaedic and Fracture Education Research (NOFEAR) groups at TPCH.

# Medical Imaging & Richard Slaughter Centre of Excellence Imaging Research Groups

We aim to develop and implement new imaging techniques that continue to improve the efficient use of medical imaging and deliver the best possible patient care outcomes.

## HEAD OF THE RESEARCH GROUP

- Dr Rachael O'Rourke

## RESEARCH GROUP MEMBERS

- Dr Anthony Litzow
- Dr Allan Wesley
- Dr Harsh Kandpal
- Ms Celia O'Meara
- Mr Andrew Trotter
- Ms Elizabeth Warburton
- Ms Katrina O'Keefe
- Mr Chris Gilmore
- Ms Anna Crawford

## 2022 SNAPSHOT

- ★ **Members:** 9+
- ★ **Trials and Studies:** 7+
- ★ **Publications:** Ongoing publications in the CONVERGE Registry, the international research database of Cardiac CT cases

## CREATING A SUSTAINABLE FUTURE FOR MEDICAL IMAGING

Imaging has become an integral and essential part of the patient care pathway. This exponential growth in demand and the complexity of studies requested pose an ongoing challenge for a relatively small workforce.

We believe translational research is essential to developing superior and more efficient imaging techniques that will ensure medical imaging remains sustainable. For example, our 'International Lung Screening' trial directly resulted in decreased radiation doses across all CT screening patient cohorts.

## HIGHLIGHTS

The installation of two new CT scanners and a new MRI machine in 2022 presented new opportunities for our groups to conduct further research for imaging in the Heart and Lung and General Imaging fields.

Our groups also continued to support several projects including:

- Thoracic Imaging: The 'International and Australian Lung Screening' trial
- Cardiovascular Imaging: CT imaging and MRI 4D flow for PEARS patients; Myocarditis MRI guidelines; and the 'Optimising Exercise Prescription and Delivery in CHD (CH-FIT)' trial.
- Neurocognitive Imaging: Including testing novel MRI techniques for identification of Parkinson's Disease, and the use of medical imaging to investigate the results of novel dementia treatment drugs.

The outcomes of this research will help develop and validate new surgical techniques, drug treatments, improved pathology detection and improved utility of cardiac MRI for myocarditis and pulmonary hypertension.

**We're also delighted to report that along with the installation of a new magnet, we're extending our overarching research agreement with Seimens to continue to develop new scanning techniques.**



**In addition to projects undertaken by our Group's members, many projects across TPCH involve and rely on Medical Imaging for their research projects.**

# Medical Oncology Research Group

Our group is focused on improving the clinical outcomes of patients with cancer.

We have a long history of both investigator initiated, collaborative and pharmaceutical sponsored clinical trials predominately in lung cancer and mesothelioma.

## HEAD OF THE RESEARCH GROUP

- Associate Professor Brett Hughes

## RESEARCH GROUP MEMBERS

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

## 2022 SNAPSHOT

★ **Members:** 5+

★ **Trials and Studies:** 7+

## CHANGING THE FUTURE OF CANCER

Building on our work in previous years, our group's focus continues to be improving outcomes for patients with lung cancer and mesothelioma.

The advancements in therapeutics for these cancers have been remarkable in recent years. New targeted therapies for EGFR mutated or ALK rearranged lung cancers and the emergence of checkpoint immunotherapies are revolutionising patient care – and outcomes.



Through our work we continue to be involved in key studies that are changing the way we treat cancers.

## HIGHLIGHTS

During 2022, we continued a range of trials and studies. These included the 'DREAM3R' study: Durvalumab with chemotherapy vs chemotherapy alone as first line treatment in advanced, pleural Mesothelioma – a phase 3 randomised trial.

As well as the 'ASPiRATION' study: An observational cohort study to assess the clinical impact of comprehensive genomic profiling in metastatic lung cancer patients (TOGA).

And, the 'Beigene 302' study: A phase 3, randomised, double-blind study of BGB-A1217, an Anti-TIGIT Antibody, in combination with Tislelizumab Compared to Pembrolizumab in Patients with previously Untreated, PD-L1 Selected, and Locally Advanced, Unresectable, or Metastatic NSCLC.

All work is ongoing, and we look forward to progressing in 2023.



➤ Sepsis is quite a big problem in the sense that, even in high-income countries where the rates of infection are very low, when patients get to the ICU and they develop sepsis and/or progress to septic shock, it increases their risk of death substantially.

## FEATURED ARTICLE

# Dr Nchafatso Obonyo

For Research Fellow Dr Nchafatso Obonyo, the severity of sepsis and septic shock was made abundantly clear during his internship at Kijabe Mission Hospital on the outskirts of Nairobi in 2010.

*"Whenever we had patients with sepsis, especially in the children's ward, it didn't matter how stringently the World Health Organization's (WHO) resuscitation guidelines were applied, the patient almost always never left the hospital alive. This piqued my interest, and I started looking at treatments for sepsis and septic shock. I wanted to know what we are getting wrong. We're using the guidelines, and it didn't matter if it was in the next hour or a day later, chances were very high that the patient would end up dying in hospital. That's when I started googling and searching, and that's when I stumbled upon the FEAST trial."*

The Fluid Expansion as Supportive Therapy (FEAST) study, led by Professor Kathryn Maitland OBE and published in 2011, examined the early and rapid fluid resuscitation in young patients with fever and septic shock to correct abnormalities in blood flow – an approach that has been widely endorsed worldwide over time. The study was conducted at multiple sites in Uganda, Kenya and Tanzania.

The work being done by Professor Maitland and her team aligned with Dr Obonyo's own curiosities and concerns regarding treatment guidelines for septic shock, and at the end of his internship, Dr Obonyo leapt at a job opening within Professor Maitland's research group at the KEMRI-Wellcome Trust Research Programme (KWTRP).

There are four key pillars of treating sepsis recognised in guidelines around the world, which include: early recognition that the condition is sepsis, controlling the source of the infection, taking blood for culturing and administering appropriate antibiotics early, and aggressive fluid resuscitation via fluid bolus. It was that one final pillar that Dr Obonyo and his peers deemed controversial.

*"A lot of people might think low-income settings research can't contribute to guideline changes anywhere, but this was one classical case of where a study conducted in a low-resource setting across multiple sites in Kenya, Uganda and Tanzania received significant attention across the whole world and led people to say let's take a step back and look at what we've been doing for the last 150 years."*

*"And as a result of this, we've had a couple of other clinical studies in high-income settings just trying to look back at the same question."*

Dr Obonyo was the lead author in a post-FEAST trial follow-up observational study published in 2022, analysing data collected between 2013 and 2015 from the paediatric wards of Mbale Regional Referral Hospital, Uganda, and Kilifi Country Hospital, Kenya.

It involved assessing children between 60-days-old and 12-years-old who had a severe fever and septic shock signs of impaired blood flow. Some of those children received intravenous maintenance fluid, whereas those who had shock as defined by the WHO received two fluid boluses, and if shock persisted, they also received a transfusion.

The conclusion was that fluid-bolus management of WHO-defined shock resulted in high fatality.

*"That paper was quite important because it showed that the standard of care treatment for WHO-shock definition led to 100% mortality, unfortunately. Whereas the group that got slow rationalised volume replacement, the mortality there was about 21%."*

In 2022, Dr. Obonyo's PhD supervisors, Professors John Fraser and Professor Maitland, hosted a lab tour and showcased the impact of international research collaboration between higher and lower income-country settings. This was attended by His Excellency Ambassador Mr John Tipis, the High Commissioner for Kenya in Australia and New Zealand who was represented by Mr Kapchianga Simatwa, the Deputy Head of Mission.

Dr Obonyo's work and its significance were also recognised at the 2022 Kenyans in Queensland (KIQ) Gala Dinner to celebrate the Kenyan independence holiday, Jamhuri Day. At that event, Dr Obonyo received several awards, including an award for excellence in science. He also received the KIQ President's award 2022, which is an overall achievement award. The President of the African Professionals of Australia was in attendance that evening; and after she was made aware of his work, she acknowledged the importance and relevance of this research for African nations, nominating Dr Obonyo for Africa's prestigious Forty under 40 award in the Science, Technology and Innovations category.

# Network for Orthopaedic and Fracture Education and Research (NOFEAR)

With members from a diverse range of disciplines, our research group aims to promote pragmatic clinical research to achieve best outcomes for Hip Fracture and Orthopaedic patients.

## JOINT LEADERS OF THE RESEARCH GROUP

Chrys Pulle, Jack Bell, Alisa Crouch, Catherine McDougall

## RESEARCH GROUP MEMBERS

- Simon Perkins
- Ross Crawford
- Ivan Rapchuk
- Sophie Jayamaha
- Alex Maltby
- Usha Gurunathan
- Madonna Dalton
- Rebecca Ferrier
- Kerryn Bootle

## 2022 SNAPSHOT

- ★ **Members:** 13
- ★ **Trials and Studies:** 7+
- ★ **Awards:** 3+



## IMPROVING CARE FOR FRAIL PATIENTS

Established in 2010 when The Prince Charles Hip Fracture unit opened, NOFEAR brings together the diverse expertise of clinicians involved in the complex care of Hip Fracture and Orthopaedic patients.

Our work contributes to clinically based evidence for best practice guidelines, care standards and policy – both in Australia and internationally – to improve outcomes for the frail cohort of people who are Orthopaedic and Hip Fracture patients.

In recent years NOFEAR members have published studies demonstrating traditional randomised trials in this population group are less likely to improve health outcomes or quality of life for patients. This has resulted in a shift towards alternative study designs that are influencing how research and translation to practice are conducted at The Prince Charles Hip Fracture unit, throughout Australasia and internationally.

## HIGHLIGHTS

In 2022, our research spanned all areas of Orthogeriatric Care – Perioperative Care, Surgical, Medical, Anaesthetic, Nursing and Allied Health Care.

Many of our projects centred around implementing systematised, interdisciplinary nutrition care approaches in acute care, geriatric and orthogeriatric settings.

Our team also instigated a wide range of studies, including several multi-site Orthopaedic and Orthogeriatric trials such as the 'AOA National Joint Replacement Nested CRISTAL Trial' – a cluster randomised, crossover, non-inferiority trial of aspirin compared to low molecular weight heparin for venous thromboembolism prophylaxis and safety in hip or knee arthroplasty.

Members of NOFEAR were widely recognised and awarded in 2022, including Dr Jack Bell's appointment as co-chair of the Fragility Fracture Network (Global) Hip Fracture Recovery Special Interest Group and Dr Catherine McDougall's appointment as co-chair of the Australia New Zealand Hip Fracture Registry (ANZHFR).



The unit is contributing to clinically based evidence for best practice guidelines, care standards, and policy.

# Nursing Research & Practice Development Centre (NRPDC)

Founded in 2010, our group aims to foster change through research, and encourage the implementation of evidence-based practice for patient care.

## HEAD OF THE RESEARCH GROUP

Professor Paul Fulbrook

## RESEARCH GROUP MEMBERS

- Josephine Lovegrove
- Dr Adam Burston
- Saroeun Ven
- Jacob Butterworth
- Dr Sandra Miles

## 2022 SNAPSHOT

- ★ **Members:** 6+
- ★ **Trials and Studies:**
- ★ **Publications:** 10 journal publications & eight conference papers
- ★ **PhDs Awarded:** 1

## NURSE-LED RESEARCH TO IMPROVE CLINICAL OUTCOMES

The aim of our nurse-led research team is to inspire, support and undertake quality research within the hospital, contributing to improved clinical outcomes.

Since our inception, our work has contributed to reducing the impact of pressure injuries and improving patient and hospital outcomes related to significant harm, pain, decreased quality of life, increased hospital stay and treatment times, along with associated personal and financial costs.

Our current research priority area is pressure injury prevention. This important research will ultimately improve outcomes and optimise patient safety within the acute hospital setting.

Other projects include research into falls prevention and wound management.



## HIGHLIGHTS

In 2022, our group undertook and supported a number of new projects, while continuing work on ongoing projects.

We currently have over 16 Pressure Injury Prevention and Wound Management projects underway, including an investigational, observational study of the use of thermal imaging to determine patient body position within an acute hospital setting; and implementation of an intensive care-specific pressure injury risk assessment scale and preventative intervention bundle.

During 2022 our Falls Prevention projects included Phase 1 and Phase 2 of 'Fast screening of patients that present to the emergency department following a fall: A feasibility and prevalence study'. While other projects included a wide range of systematic reviews such as 'Reliability of nurses' assessment of pressure injury staging: A systematic review'.

## COLLABORATORS

Throughout the year we collaborated closely with a number of partners on TPCH-based, state and national multisite projects.

Local collaborators include the Australian Catholic University and Royal Hobart Hospital. While internationally we are working with colleagues from Peking University Hospital (China) and San Cecilio University Hospital (Spain).



**We undertake nursing-focused research to improve patient outcomes while collaborating with hospital and university professionals across disciplines.**

# Queensland Lung Transplant Service Research Centre

As an internationally renowned research group, we innovate to progress the current scientific understanding of the biology of lung diseases and conduct first-in-human trials to pioneer new therapies and bridge the 'bench-to-bedside' gap.

## HEAD OF THE RESEARCH GROUP

Prof Daniel Chambers

## RESEARCH GROUP MEMBERS

- Prof Peter Hopkins
- A/Prof Brendan O'Sullivan
- Dr Simon Apte
- Dr John Mackintosh
- Dr Chandima Divithotawela
- Dr John Feenstra
- Dr Chandima Divithotawela
- Dr Vidya Navaratnam
- Dr Viviana Lutzky
- Maxine Tan
- Penelope Groves
- Amy Pham
- Tharushi De Silva
- Debra Enever
- Maria Pietsch
- Sarah Watson
- Bronwen Field
- Brittany Cooper
- SJane Timmins
- Omega Daka
- Cathy Saxon
- Michelle Grant
- Ruby Geddes

## 2022 SNAPSHOT

★ **Members:** 24+

★ **Trials and Studies:** 8+



The group's research to reduce the impact of post-lung transplant diseases and lung failure is critical.

## GROUND-BREAKING RESEARCH

Our work advances the number of treatment options available for patients, increases the success of lung transplant procedures and ensures positive long-term

outcomes for transplant recipients so they can maintain quality of life into the future.

We've been responsible for numerous world-first studies, along with research into post-lung transplant rejection. Our lung fibrosis and lung transplantation clinical trial centre is one of the largest in the world.

Current projects include a focus on treatments and personalised medicine for lung disease. For example, our ongoing research to develop new treatments for idiopathic pulmonary fibrosis (IPF) targets telomere maintenance and repair.

We also have active programs identifying biomarkers associated with transplant rejection, and drug discovery looking at new treatments for pulmonary fibrosis.

Our Clinical Trials Centre continues to be one of the largest recruiters in the world to multiple studies in advanced lung disease, generating over \$2 million in income to fund the research effort.

## HIGHLIGHTS

In 2022, we had multiple clinical trials underway, including a multi-site trial to treat chronic lung allograft dysfunction (CLAD) with stem cells (ASSIST CLAD) – the world's largest ever study of stem cell therapy for lung disease.

During the year, our multi-site trial to develop new treatments for patients with Silicosis (SHIELD), received widespread media attention. Supported by seed funding from the TPCH Foundation, we have conducted a world-first program of whole lung lavage for silicosis as part of this study.

## COLLABORATORS

We have established a new collaboration with Pathology QLD to develop new treatments for antibody-mediated rejection.

Other new collaborations include The Centre of Research Excellence for Interstitial Lung Disease – towards Individualised Care; which has been funded by the NHMRC for five years from 2022.

# Sleep Health Research Group

Our group focuses on improving clinical outcomes and developing effective models of care for patients with sleep disorders.

## HEAD OF THE RESEARCH GROUP

Dr Deanne Curtin

## RESEARCH GROUP MEMBERS

- Dr Dan Henderson
- Dr Peter Robinson
- Dr Irene Szollosi
- Dr George Tay
- Dr Sebastian Le Feuvre
- Dr Sara Winter
- Jan Robinson
- Dr Ravindnath Balasubramaniam
- Trent Segal
- Thomas Georgeson
- Danielle Wilson

## 2022 SNAPSHOT

- ★ **Members:** 9+
- ★ **Trials and Studies:** 14+
- ★ **Publications:** Multiple
- ★ **Media Mentions:** 'Insomnia' clinical trial received media attention

## IMPROVING ACCESS TO CARE

Our work continues to evaluate diagnostic devices and screening tools for sleep apnoea. As awareness of sleep disorders increases, the demand for sleep diagnosis and treatment services is rising. To meet these needs, we are developing and evaluating clinical pathways that make the diagnosis and treatment of Obstructive Sleep Apnoea (OSA) more rapid and accessible for all patients, including those living in regional and remote areas.

With the generous support of TPCH Foundation, this year we also continued our research into sleep and dementia, and with our most recent collaborations we extended our research into the 'ICU of the Future'.

Technological advances in sleep diagnostics now make it possible to remotely monitor the effectiveness of treatments.



## HIGHLIGHTS

In 2022, our research group had 14 studies and trials in progress. These included our 'Mechanisms of Cognitive Decline in OSA' study, a pilot study to evaluate six months of continuous positive airway pressure (CPAP) on markers of cerebral small vessel disease in patients with OSA and mild cognitive impairment, and a study examining the prevalence of high-risk OSA in patients with mild cognitive impairment attending a tertiary hospital memory clinic.

Our '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' project is nearing completion with all data collection now complete.

## COLLABORATORS

In 2022, we began collaborating with TPCH's 'ICU of the Future' project.

Our research attracted additional funding including:

- Danielle Wilson MN UQ Collaborative Research Grant
- TPCH Foundation Innovation Grant for Sleep in ICU
- Sara Winter Health Practitioner Research Scheme.

# The University of Queensland Thoracic Research Centre (UQTRC)

We are focused on undertaking clinical, translational, and scientific research to improve lung health.

## HEAD OF THE RESEARCH GROUP

- Professor Kwun Fong

## RESEARCH GROUP MEMBERS

### Senior Researchers

- Professor Ian Yang
- Associate Professor Henry Marshall
- Associate Professor Rayleen Bowman

### Research Team

- Maria Martins
- Dr Barbara Page
- Dr Kelly Chee
- Linda Passmore
- Jacqui Brady
- Jenny Peek
- Anita Goldsworthy
- Honorary members and collaborators

### HDR Students

- Janet Shaw
- Eloise Shaw
- Marissa Daniels
- Dr Gerry Olive
- Hollie Bendotti
- Nikita Patel
- Edward Stephens
- Jazmin Mireya Guayco Sigcha
- Caeli Zahra
- Edwina Duhig

## 2022 SNAPSHOT

- ★ **Members:** 19+
- ★ **Trials and Studies:** 11+
- ★ **PhDs awarded:** 1

## A CENTRE OF EXCELLENCE

Our Research Centre is closely aligned with the Thoracic Medicine Department of TPCH and is a Centre of the Northside Clinical Unit, Medical School at The University of Queensland.

We have a multidisciplinary research team consisting of medical staff, research nurses, research scientists, and administration and management roles.

Seeking to improve lung health, we focus on clinical, translational and scientific research relating to lung cancer, mesothelioma, smoking cessation, and chronic airway diseases like chronic obstructive pulmonary disease and asthma.

## HIGHLIGHTS

In 2022, we undertook more than 11 research projects, including 'CO-RiQUIRE' (Comorbidity, Risk, Quit, Reach), which addresses lung cancer screening knowledge gaps; the 'Improving Sensitivity of Lung Cancer Mutation Detection in Bronchoscopy Diagnostics by Nanopore Sequencing Technology' study; and an International Lung Screen Trial.

These and other studies are ongoing, including a trial to enhance smoking cessation through the use of an innovative mobile health avatar.

Congratulations to group member Dr Kelly Chee on receiving her PhD in 2022.

## COLLABORATORS

Funding to support our research projects is generously provided by external funding organisations, including NHMRC, ARC, DDB, ACRF, TPCH Foundation, Cancer Australia, and the Cancer Council of Queensland.



Our laboratory is a fully functional molecular lab capable of molecular genetic techniques, and administers the extensive TPCH Lung Biobank, which supports lung research with specimens collected over a 20-year period.



## FEATURED ARTICLE

# Dr Usha Gurunathan

While Dr Usha Gurunathan is an anaesthetist who leads the Anaesthesia Research Group at The Prince Charles Hospital, the research she undertakes does not always focus solely on anaesthesia.

*"Usually, the topics I explore are the research questions that come to my mind when I am managing patients. They are not always anaesthetic-related. I think, as anaesthetists are evolving into perioperative physicians, we need to look at the whole journey rather than limit ourselves to the main part of anaesthesia."*

*"My current research interest is perioperative outcomes of obese surgical patients – how to improve their outcomes and what are the blood-related changes that happen during the surgery."*

*"Safe anaesthesia care is mainly about the three 'A's of patient management", she says, "which include Assessing the patient, Anticipating their problems, and Avoiding complications. These have been the focus for most of my research and other clinical initiatives".*

Dr Gurunathan is completing a PhD on clotting complications, primarily investigating the risks of orthopaedic surgery on obese patients.

In 2022, she completed two studies as part of her Doctor of Philosophy, which fell into the assessment and anticipation of problems research areas. The first, titled RETHInK-0, involved using rotational thromboelastometry (ROTEM) – an established method to test haemostasis – before surgery. This was done to see if this testing could predict the clotting risk in overweight and obese patients receiving a hip or knee replacement.

*"Obesity increases the risk of clotting complications, yet not all obese patients have equal risk. So, if I can identify patients who are at risk of clotting complications, we can selectively give them anti-clotting medications, as opposed to giving that medication to everybody because some people may have an increased bleeding risk."*

The second study completed in 2022 as part of Dr Gurunathan's PhD is titled ORACLE. This investigation examined tranexamic acid dosing during hip replacements. This medication, normally given to prevent blood loss, is currently administered based on the manufacturer's recommendation.

*"We're not really sure at this stage what the correct dosage is. We go by the manufacturer's recommendation, and that doesn't seem to be based on very strong evidence. So, I am assessing the blood levels of tranexamic acid, and I am also looking at the effect of that drug in the blood, namely the biochemical changes in the blood, to see if we can come up with a dose specific for hip replacement."*

The third study included in Dr Gurunathan's PhD, titled Hip Fracture Cohort Study Linking Obesity to Thromboembolism post-Surgery (HipCLOTS), is still underway. In this investigation, she is analysing clotting complications in 2500 elderly Queenslanders after hip fracture surgery and its association with obesity. She was awarded Queensland Advancing Clinical Research Fellowship for this project.

Among other achievements in 2022, the Surgical Prehabilitation program (SurgiFIT) – established by Dr Gurunathan with a significant contribution from The Prince Charles Hospital's Allied Health department and recently endorsed by the hospital – was discussed and well-received at the Royal Australasian College of Surgeons 90th Annual Scientific Conference. This SurgiFIT initiative is a patient-codesigned program that strives to optimise outcomes for patients undergoing major procedures, such as cardiac or cancer surgery, by providing pre-operative multidisciplinary care, including physiotherapy, social psychological support and dietetics, to improve their mental and physical health.

*"If we condition frail and complex patients to a reasonable level before the operation, their chance of recovery is much better, and their quality of life returns to normal much quicker. The key to success here is patient empowerment."*



# 2022 Grants Awarded by The Common Good

Grant Type	Recipient	Project Title	Amount Awarded
Caboolture and Kilcoy Hospitals and Woodford Corrections Health Research Grant	Annabelle Marozza	SHORT Sensory Profile2 information and relevance to diagnosis of Attention Deficit Hyperactivity (ADHD) and Autism Spectrum Disorder (ASD) in 7-13 year old Australian children.	\$10,000.00
Caboolture and Kilcoy Hospitals and Woodford Corrections Health Research Grant	Dr Mahesh Ramanan	Vasopressor Infusion via Peripheral vs Central Access in patients with shock – The VIPCA randomised controlled feasibility trial	\$20,000.00
Caboolture and Kilcoy Hospitals and Woodford Corrections Health Research Grant	Dr Thuy Frakking	Swallowing sounds in premature babies (SUPERB) study	\$19,010.32
Caboolture and Kilcoy Hospitals and Woodford Corrections Health Research Grant	Dr Sean Clark	Improving rapid access to care for patients with type 1 diabetes – a needs analysis	\$19,981.00
Caboolture and Kilcoy Hospitals and Woodford Corrections Health Research Grant	Dr Shahida Rehman	Outcomes of breech birth by mode of delivery across hospitals within MNHHS: a retrospective observational study	\$9,796.00
Caboolture and Kilcoy Hospitals and Woodford Corrections Health Research Grant	Deborah Sutherland	Evaluating an innovative model of antenatal care for young, vulnerable mothers	\$10,000.00
Caboolture and Kilcoy Hospitals and Woodford Corrections Health Research Grant	Aletta Cowen	CT scan requests by Nurse Practitioners in the emergency department of a community hospital for presentations of minor trauma and infections including older adults	\$9,952.00
Equipment Grant	Oystein Tronstad	Compumedics Somfit Device + sensors	\$5,446.00
Equipment Grant	Maxine Tan	Spectrophotometer nanodrop One & Rotary centrifuge with ancillary items	\$27,785.22
Equipment Grant	Prof Peter Molenaar	Electrophysiology station improvements	\$20,000.00
New Investigator Grant	Caeli Zahra	Detection of EGFR gene mutation in minimally invasive blood plasma extracellular vesicles for the diagnosis of lung cancer	\$9,996.00
New Investigator Grant	Dr Lucia Gandini	Investigating A Novel Approach to Reduce Oxidative Stress and Activation of Coagulation during Extracorporeal Membrane Oxygenation Use	\$9,994.00
New Investigator Grant	Reema Rachakonda	Pulmonary endothelial and immunological profiles in an ovine model of live bacterial sepsis	\$9,908.84
New Investigator Grant	Yanxi Lu	Fluid balance, renin-angiotensin-aldosterone system (RAAS), and glycocalyx shedding in an ovine model of cardiogenic shock on pulsatile or continuous-flow veno-arterial extracorporeal membrane oxygenation support (VA-ECMO)	\$9,992.20
New Investigator Grant	Dr Gabriele Fior	Biofluids-induced lung injury in acute respiratory distress syndrome	\$9,991.00
New Investigator Grant	Craig Aitken	Measuring exertional dyspnoea in pulmonary hypertension	\$9,963.00
New Investigator Grant	Dr Declan Sela	Cardiorenal syndrome and endothelial dysfunction in sepsis	\$9,831.77

## 2022 Grants Awarded by The Common Good continued...

Grant Type	Recipient	Project Title	Amount Awarded
New Investigator Grant	Kirsten Dous	How Can I Help? Hospital Physiotherapy Care for People With Idiopathic Parkinson's Disease Post Hip Fractures – A Retrospective Chart Review	\$9,026.00
New Investigator Grant	Jacob Butterworth	Incidence and characteristics of medical device-related pressure injury in adult intensive care patients.	\$9,995.00
New Investigator Grant	Jessica King	Does digital pre-operative education replace face-to-face education and improve patient outcomes?	\$9,856.36
PhD scholarship	Jazmin Guayco Sigcha	Blood biomarkers for lung cancer screening	\$86,562.00
Research Fellowship	Amy Pham	New pathways to treat intractable lung infection	\$330,000.00
Research Fellowship	Dr Keibun Liu	A Novel Hydrogen Gas Treatment comprising an innovative delivery method for Refractory Severe Acute Respiratory Distress Syndrome	\$330,000.00
Innovation Grant	Natalie Edwards	Prognostic value of non-invasive myocardial work and global longitudinal strain in patients with significant coronary artery disease confirmed by angiography	\$55,559.74
Innovation Grant	Dr Gabriele Fior, Prof John Fraser, Dr Jacky Suen, A/Prof Gianluigi Li Bassi	BIOFluid-induced Lung injury: a nOvel pathOgenic mechanism in acute respiratory Distress syndrome (the BIO-FLOOD study)	\$53,998.00
Innovation Grant	Oystein Tronstad, Prof John Fraser, Jiville Latu, A/Prof Dylan Flaws, A/Prof Frederic Gachon, A/Prof Veronica Garcia Hansen, Dr Francisca Rodrigues	Can sleep and circadian physiological disruptions caused by the intensive care unit environment be prevented by environmental and lighting modifications?	\$62,018.70
Innovation Grant	Dr Hideaki Nonaka, Prof John Fraser, Dr Kei Sato, Dr David Platts, Dr Jacky Suen, Dr Gianluigi Li Basso, Dr Nchafatso Obonyo, Dr Silver Heinsar, Prof Johnathan Chan	A Novel Right Ventricular Assessment using Speckle-Tracking Echocardiography in Swine Right Ventricular Failure	\$48,359.00
Innovation Grant	Luke Churchill	Can lung ultrasound predict post-operative pulmonary complications in high-risk post-operative cardiac surgery patients? A multi-centre prospective observational cohort study	\$29,552.64
Innovation Grant	Prof Ian Yang, Dr Marlien Varnfield, Dr Jane Li, Mark Khair, Prof Jillian Francis, Prof Christine McDonald, A/Prof Eli Dabscheck	Transforming the care of people living with chronic obstructive pulmonary disease (COPD) using digital health: an implementation feasibility study	\$99,940.00
Innovation Grant	Dr Robert Horvath, Cassandra Vale, Prof Jason Roberts, Dr Menino Cotta	PK/PD in prolonged beta-lactam antibiotics	\$50,000.00
Innovation Grant	Dr Eric Wu	Decompressing the Stressed Heart – An Innovative Unloading Device for Extracorporeal Membrane Oxygenation Support	\$74,620.00
Innovation Grant	Dr Shinichi Ijuin, Dr Keibun Liu, Dr Denzil Gill, Dr Jacky Suen, Prof John Fraser	A Novel and Innovative Therapeutic strategy for patients with refractory Cardiopulmonary Arrest requiring Veno-Arterial Extracorporeal Membrane Oxygenation Support to improve neurological impairments and outcomes	\$49,680.00
Innovation Grant	Dr Tian Mun Chee, Prof Kwun Fong, Prof IanYang	Molecular testing for lung cancer genetic aberrations in bronchoscopy specimens by nanopore whole genome sequencing	\$21,000.00
Innovation Grant	Dr Maithri Siriwardena, Dr Wandy Chan, Prof Mark Richards, Prof Christopher Pemberton, Elizabeth Cheesman, Prof Peter Molenaar	The effects of human B- Type natriuretic peptide signal peptide (BNPsp) in human atrial tissue in an in vitro model of ischaemia reperfusion injury (IRI)	\$44,273.00

Grant Type	Recipient	Project Title	Amount Awarded
Innovation Grant	Dr Senthil Muthuswamy	Extension of Restorative Practice in mental health services The Prince Charles Hospital	\$100,000.00
Board/IACB	Prof Dan Chambers	Antibody mediated rejection – let me refresh your memory	\$50,000.00





# Active Grants 2022

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Aitken, Morris	TPCH Foundation	Measuring exertional dyspnoea in pulmonary arterial hypertension	2022-2023	\$9,871.00	\$9,871.00	New Investigator
Aitken, Morris, Sabapathy, Walsh	TPCH Foundation	Towards Individualising Rehabilitation: Identifying factors which limit exercise tolerance in chronic heart and lung disease. The Prince Charles Hospital Foundation PhD Stipend.	2019-2022	\$81,246.00	\$13,541.00	PhD stipend
An, Simmonds, McNmaee	ARC	Resolving surface nanobubbles as cavitation nuclei	2023-2025	\$416,000.00		Discovery Project
Aplin, Russi, Fleming	Philanthropic funding	Fostering resilience and personal growth for people with traumatic spinal cord injury	2023-2026	\$242,000.00	\$0.00	Philanthropic funding
Apte	TPCH Foundation	IPF and viruses 2019-01	2019-2021	\$96,000.00		Innovation grant
Bayat	TPCH Foundation	Evaluating the role of urinary sodium in the management of acute heart failure	2022-present		\$6,000.00	Project grant
Bayat	TPCH Foundation	Urinary sodium guided pathway for expedited treatment of acute heart failure: A multicenter randomised controlled trial	2021-present		\$0.00	Project
Bell	OCAHO	Investigating best practice dietetic services in Mental Health Alcohol and Other Drugs Services across Queensland	2022-2023	\$42,360.00	\$42,360.00	Project grant
Bell	CAHRLI	Patient perceptions and understanding of the term 'malnutrition'	2022-2023	\$5,000.00	\$5,000.00	RHD Grant
Bell	CAHRLI	Nutrition Care for Older Adults with Delirium	2022-2023	\$5,000.00	\$5,000.00	RHD Grant
Bell, Rogers, Thomson, Wainwright, Clements, Floto	NHMRC	The emerging problem of non-tuberculous mycobacteria infection: understanding aetiology, geospatial epidemiology and developing interventions	2016-2023	\$988,791.00	\$210,000.00	Project grant
Bell, Wainwright, Reid, Sly et al	CF Foundation (USA)	NTM: understanding acquisition and transmission pathways	2020-2023	\$1,230,000.00	\$300,000.00	Project grant
Burke, Windsor, Naidoo, Le Feuvre	Institute for Respiratory Health	AMPLE 3 Trial: A Randomised Study Comparing Combined Indwelling Pleural Catheter (IPC) and Talc Pleurodesis with Video-Assisted Thoracoscopic Surgery (VATS) for the Management of Patients with Malignant Pleural Effusion				Project grant
Butterworth, Fulbrook	TPCH Foundation	Incidence and characteristics of medical device-related pressure injury in adult intensive care patients	2022	\$9,994.00	\$9,994.00	New Investigator grant
Chambers	TPCH Foundation	Silicosis – new Ideas to conquer the re-Emergence of an ancient Lung Disease –The SHIELD Study	2019-2021	\$90,000.00		Innovation grant
Chambers	TPCH Foundation	Taking stem cell therapy to the clinic – is reprogramming alveolar macrophages the key?	2016-2021	\$44,000.00		Project grant
Chambers	Perpetual	Macrophages and drug discovery– IPAP2012-0768	2021	\$30,000.00		Project grant

## Active Grants 2022 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Chambers	Radiata Foundation	Drug discovery IPF	2021	\$129,052.00	\$64,526.00	Project grant
Chambers, Corte, Jaffe, Glaspole, Hopkins, Goh, Grainge, Mackintosh, Selvadurai	MRFF	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	\$1,828,445.50	\$310,000.00	Project grant
Chambers, Hopkins, Westall, Holmes, Glanville	NHMRC	Conquering the final frontier in lung transplantation - Mesenchymal stromal cell therapy for chronic lung allograft dysfunction	2016-2022	\$1,200,140	\$462,830.00	Project grant
Chambers, Westall, Goh, Corte, Apte, Powell, Bozinovski, Newbigin, Wimalawaran, Pattaroni	MRFF	Silicosis - Harnessing new ideas to conquer the re-emergence of an ancient lung disease - The SHIELD Study	2021-2023	\$2,216,631.00	\$551,591.00	Project grant
Chan, Richards, Pemberton, Cheesman, Molenaar	TPCH Foundation	The effects of human B- Type natriuretic peptide signal peptide (BNPsp) in human atrial tissue in an in vitro model of ischaemia reperfusion injury (IRI).	2022-2023	\$44,273.00	\$0.00	Project grant
Chee	TPCH Foundation	Improving Sensitivity of Lung Cancer Mutation Detection in Bronchoscopy Diagnostics by Nanopore Sequencing Technology	2022	\$21,000.00		Innovation Grant
Chee, Fong, Yang	Perpetual Grant	Molecular Testing for lung cancer genetic aberrations in bronchoscopy specimens by Nanopore whole genome sequencing	2022	\$60,000.00		Project grant
Corte, Holland, Chambers, Hansbro, Dickinson, Palmer, Moodley, Powell, Knibbs, Smallwood	NHMRC	CRE for Interstitial Lung Disease - towards Individualised Care	2022-2026	\$2,500,000.00	\$500,000.00	Centre of Research Excellence
Curtin, Szollosi, Le Feuvre	MRFF	A multi-centre randomised controlled trial of polysomnographic titration of non-invasive ventilation in motor neurone disease	2022-2026	\$113,500.00	\$16,000.00	Project grant
Curtin, Szollosi, Winter	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	2021-2023	\$215,946.00	\$76,730.73	Industry Sponsored
Dashwood	University of Queensland	Understanding how phosphorylation and redox modifications regulate cardiac ryanodine receptor-type 2 activity to produce an arrhythmogenic phenotype in advanced heart failure.	2020-2022		\$28,000.00	Scholarship
Dautov	SAHMRI	The COLchicine for COronary Plaque MODification in Acute Coronary Syndrome study	2019-present		\$5,657.52	Industry Sponsored
Dautov	University of Western Australia	Plaque features and function improve risk stratification for future coronary events	2022-present		\$550.00	Industry Sponsored
Denman	St Jude Medical		2015-2022		\$620.00	Industry Sponsored
Denman	St Jude Medical	A Safety and effectiveness trial for a leadless pacemaker system	2015-present		\$3,850.00	Industry Sponsored

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Denman	Medtronic	Lead EvaluAtion for Defibrillation and Reliability (ICD or CRT-D)	2021-present		\$19,165.53	Industry Sponsored
Denman	Medtronic	Micra Acute Performance (MAP) Asia Pacific Cohort	2022-present		\$8,476.60	Industry Sponsored
Denman	George Institute	Programmed Ventricular Stimulation to Risk Stratify for Early Cardioverter-defibrillator Implantation to Prevent Tachyarrhythmia following Acute Myocardial Infarction	2012-present		\$0.00	Industry Sponsored
Denman	Investigator Driven	Assessment of MEchaNical Dyssynchrony versus standard selection on clinical response in candidates for Cardiac Resynchronization Therapy	2022-present		\$3,300.00	Project grant
Dous, Morris	TPCH Foundation	How Can I Help? Hospital Physiotherapy Care for People with Idiopathic Parkinson's Disease Post Hip Fractures: Retrospective Chart Review	2022-2023	\$9,086.00	\$9,871.00	New Investigator grant
Duhig	RCPA Foundation	Interstinal microenvironment in pulmonary disease including non-small cell carcinoma	2022	\$10,000.00	\$10,000.00	Project grant
Fong	NHMRC	Early diagnosis and treatment of lung cancer Fellowship	2019-2024	\$487,893.00	\$97,578.60	Fellowship
Fong, Bowman, Tammemagi, Lam, Berg, Steinke, McWilliams, Manser,	NHMRC	Low Dose Computed Tomography (LDCT) to diagnose lung cancer	2016-2022	\$3,032,884.00		Project Grant
Fong, Lwin	NHMRC	Early lung cancer biomarkers	2020-2023	\$754,893.20		Ideas grant
Fong, Yang, Bowman, Marshall, Valery, Garvey, Toombs, Otty, O'Rourke	Cancer Council Queensland & UQ	Lung Cancer Screening in Queensland	2022-2026	\$2,000,000.00		Project grant
Fong, Yang, Marshall, Bowman, O'Rourke, Valery, Stone, Canfell, Weber, Garvey, Lam, Tammemagi, Otty, Sabesan, Brims, McWilliams	Australian Cancer Research Foundation	Lung Cancer Screening Centre of Excellence	2022-2025	\$2,000,000.00	\$2,000,000.00	Equipment grant
Fong, Yang, Marshall, Tammemagi, Lam, Toombs, Manser, McWilliams	MRFF	Lung cancer screening for early detection	2021-2024	\$2,836,143.00		Project grant
Fraser	NHMRC	ACTIONS Centre for Research Excellence	2014-2021	\$2,487,452.00	\$1,160.52	Program Grant
Gaikwad	Boehringer Ingelheim	EMPACT-MI: A streamlined, multicentre, randomised, parallel group, double-blind placebo-controlled superiority trial to evaluate the effect of EMPagliflozin on hospitalisation for heart failure and mortality in patients with aCuTe Myocardial Infarction	2022-present		\$32,448.03	Industry Sponsored
Gaikwad	Leuven Research and Development	STREAM-2 (STrategic Reperfusion in elderly patients Early After Myocardial Infarction)	2021-present		\$0.00	Industry Sponsored

## Active Grants 2022 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Golledge, Sangla, Oliver, Kantro, Lazzarini, Burton	CRC for Developing Northern Australia	Tele-DFD: Remotely providing effective healthcare for diabetic foot disease	2022-2026	\$840,000.00	\$168,000.00	Project Grant
Gregory, Tansley	TPCH Foundation	ICETLab Team Grant	2018-2020	\$600,000.00	\$24,914.04	Team Grant
Gurunathan	ANZCA Clinical Trial Network	CARDIAC Surgery Preoperative Inspiratory muscle Training (CARDIAC SPRINT)	2022	\$10,000.00	\$10,000.00	Project Grant
Hansbro, El-Omar, Wood, Jardine, Faiz, Scott, Liu, Vaughan, Jiang, Budden	NHMRC	Defining the role and therapeutic manipulation of the gut-lung axis in respiratory disease	2022-2025	\$5,000,000.00	\$1,000,000.00	Synergy Grant
Haqqani	Abbott	Prospective, non-randomized, multicentre observational study to quantify and characterise the outcomes of RF ablation after, and the utility of electroanatomical mapping with HD Grid and the EnSite Precision with HD Wave in subjects with Pers AF or VT in real world clinical settings.	2019-present		\$1,100.00	Industry Sponsored
Haqqani	Western Sydney Local Health District	Catheter Ablation versus Anti-arrhythmic Drugs for Ventricular Tachycardia (CAAD-VT): A Randomised Trial	2022-present		\$1,529.00	Industry Sponsored
Haqqani	Cardialen	MultiPulse Therapy (MPT) for AF A Clinical Feasibility Study to Evaluate the Safety and Performance of Low-Energy Therapy in Patients with Atrial Fibrillation	2020-present		\$3,850.00	Industry Sponsored
Haqqani	Investigator Driven	Utility of electrophysiology study (EPS) for risk assessment after transcatheter aortic valve implantation	2022-present		\$21,175.91	Industry Sponsored
Haqqani	Medtronic	ExtraVascular Implantable Cardioverter Defibrillator (EV ICD) Pilot Study. - Single-chamber	2018-present		\$9,093.50	Industry Sponsored
Haqqani	Boston Scientific	PREcision Event Monitoring of PatienTs with Heart Failure using HeartLogic	2019-present		\$8,196.00	Industry Sponsored
Haqqani	Abbott	The objective of the TactiFlex PAF clinical trial is to demonstrate that ablation with the TactiFlex Sensor-Enabled™ Ablation Catheter (TactiFlex SE), in conjunction with a compatible RF generator and three-dimensional mapping system, is safe and effective for the treatment of drug refractory, symptomatic paroxysmal atrial fibrillation (PAF) when following standard electrophysiology mapping and radiofrequency (RF) ablation procedures.	2020-present		\$3,959.00	Industry Sponsored
Haqqani	Investigator Driven	A New ECG configuration to Improve the Diagnostic Accuracy of Idiopathic Outflow Tract Ventricular Arrhythmias	2020-present		\$0.00	Industry Sponsored
Hetherington, Bauer, Jordan	Emergency Medicine Foundation	Paeds with a Wheeze - Improving patient flow with Nurse Led Stretching of Inhaled Salbutamol (NLSIS)	2023	\$70 000	\$70 000	Project grant

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Holland, McDonald, Corte, Chambers, Palmer, Ekstrom, Gaspole, Goh, Hepworth	NHMRC	Ambulatory oxygen for interstitial lung disease	2018-2023	\$1,503,000.00		Project grant
Horvath	Investigator Driven	Host-Pathogen Relationships and Improved Diagnosis in Infective Endocarditis	2019-present		\$13,818.82	Industry Sponsored
Horvath	TPCH Foundation	Accelerated Treatment in Endocarditis - investigate the safety and efficacy of shortening treatment of endocarditis based on the individual patient's initial treatment response.	2021-present		\$0.00	Project
Jones, Aplin, Burke, Wadhwa, McLaughlin, Gullo	TPCH Foundation	Exploring the role of child life therapy in emergency: Children's emotional coping, healthcare experience and economic impact	2022-2023	\$10,000.00		Project grant
Khosrotehrani, Campbell, Chambers, Gordon, Webster, Mar, Damian, Chong, Schaidler, Isabel	MRFF	The SiroSkin study: A multi-centre randomised double-blind placebo-controlled trial of 1% topical sirolimus in the chemoprevention of facial squamous cell carcinomas in solid organ transplant recipients	2021-2025	\$2,480,000.00		Project grant
King, Oystein, Morris	TPCH Foundation	Is digital pre-operative education an acceptable replacement for face-to-face physiotherapy pre-operative education in Thoracic surgical patients?	2022-2023	\$9,856.00	\$9,871.00	New Investigator
Lazzarini	NHMRC	NHMRC Early Career Fellowship	2018-2022	\$322,952.00	\$80,738.00	Fellowship
Lazzarini, Evans	Queensland University of Technology	Prevention of diabetes foot disease using technology-led solutions in regional and remote regions	2023-2026	\$105,000.00	\$35,000.00	PhD Scholarship
Lazzarini, Nazeer, Cramb	Queensland University of Technology	Predicting foot-related hospitalisation and cost-of-care outcomes: A retrospective data- linkage cohort study	2023-2026	\$105,000.00	\$35,000.00	PhD Scholarship
Ledger	University of Queensland	The impact of helpful and harmful immune responses in the cystic fibrosis lung	2020-2023	\$90,000.00	\$30,000.00	PhD Scholarship
Lovegrove, Fulbrook	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	\$82,788.00	\$27,596.00	PhD Scholarship
Lutzky	TPCH Foundation	Telemoeres and IPF 2019-41	2019-2021	\$23,000.00		Emerging Researcher
Mackintosh	IPF CRE	MDM2.0	2021	\$149,000.00		Project grant
Marshall	NHMRC	Enhancing smoking cessation with an innovative mobile health avatar	2020-2022	\$444,875.00		Investigator Grant
Marshall	Queensland Advancing Clinical Research Fellowships	CO-RiQUIRE (COmorbidity, Risk, QUIT, REach) - addressing lung cancer screening knowledge gaps:	2020-2023	\$300,000.00	\$100,000.00	Fellowship
Mattison	Digital Health Cooperative Research Centre	Integrating Wearable Devices into the Patient-Centred Digital Healthcare Environment	2021-2024	\$135,000.00	\$45,000.00	PhD Scholarship

## Active Grants 2022 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
McKenna, Corray, O'Gorman, Perrin, MacDonald, Skinner, Lazzarini, Golledge, Varnfield	TRI – CSIRO Australian e-Health Research Centre Grant Scheme	Feasibility of a Smart Footprint System for Diabetes-Related Foot Care.	2023–2026	\$100,000.00		Project Grant
McKenzie	Astra Zeneca	Treatment of HFpEF with a Uric acid transporter 1 Inhibitor (URAT1). The main objective is to assess exercise capacity, specifically Peak VO2 measurements, using a CardioPulmonary Exercise Test (CPET)	2020–present		\$13,555.77	Industry Sponsored
McKenzie	Procyron	An Evaluation of the Safety and Performance of the Aortix System for Intra-Aortic Mechanical Circulatory Support in Patients with Cardiorenal Syndrome	2020–present		\$6,315.56	Industry Sponsored
McKenzie	Medpace Australia Pty Ltd	Aldose Reductase Inhibition for Stabilization of Exercise capacity in Heart Failure (ARISE-HF): A Multicenter, Randomized, Placebo-Controlled Study to Evaluate the Safety and Efficacy of AT-001 in Patients with Diabetic Cardiomyopathy / Stage B Heart Failure at High Risk of Progression to Overt Heart Failure (Stage C Heart Failure)	2020–present		\$9,038.51	Industry Sponsored
McKenzie	Pfizer	Burden of Disease (BOD) in ATTR CM patients and caregivers. What is the BOD of ATTR-CM for the patients and their caregivers?	2021–present		\$6,215.00	Industry Sponsored
McKenzie	St Jude Medical	CardioMEMSTM HF System Post-Approval Study	2016–present		\$3,491.40	Industry Sponsored
McKenzie	Bayer	A multicenter, randomized, double-blind, parallel-group, placebo-controlled study to evaluate the efficacy and safety of finerenone on morbidity and mortality in participants with heart failure (NYHA II–IV) and left ventricular ejection fraction $\geq 40\%$ (LVEF $\geq 40\%$ )	2021–present		\$43,762.80	Industry Sponsored
McKenzie	CSIRO/TPCH Foundation	A mobile based multidisciplinary virtual clinic for patients with HF: A Controlled Randomised Trial, MoTER-HF	2020–present		\$10,727.44	Industry Sponsored
McKenzie	Novartis	A multicenter, randomized, double-blind, active-controlled study to evaluate the effects of LCZ696 compared to valsartan on cognitive function in patients with chronic heart failure and preserved ejection fraction	2018–present		\$11,648.00	Industry Sponsored
McKenzie	Corvia	Reduce Lap-HF Randomised Trial II: A study to evaluate the Corvia Medical, Inc. IASD® System II to REDUCE Elevated Left Atrial Pressure in Patients with Heart Failure	2017–present		\$15,140.81	Industry Sponsored
McKenzie	VWAVE	Reducing Lung Congestion Symptoms using the V-Wave shunt in Advanced Heart Failure (the Shunt is intended to reduce excessive left-sided cardiac filling pressures)	2021–present		\$101,912.81	Industry Sponsored
McKenzie	MSD	A Pivotal Phase 3 Randomized, Placebo-controlled Clinical Study to Evaluate the Efficacy and Safety of the sGC Stimulator Vericiguat/MK-1242 in Adults With Chronic Heart Failure With Reduced Ejection Fraction	2021–present		\$54,701.47	Industry Sponsored

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
McKenzie	Astra Zeneca	A Randomised, Double-blind, Placebo-controlled, Multi-center Sequential Phase 2b and Phase 3 Study to Evaluate the Efficacy and Safety of AZD4831 Administered for up to 48 Weeks in Participants with Heart Failure With Left Ventricular Ejection Fraction > 40%	2022-present		\$11,220.00	Industry Sponsored
McKenzie, Halim	SANOI	Utilisation of diastolic strain by 2D speckled-tracking echocardiography for the assessment of left ventricular wall thickening	2020-present		\$0.00	Industry Sponsored
McQualter, Anthony, Chambers, Carraro	NHMRC	Modulation of lung regeneration and remodeling by the innate immune system.	2018-2022	\$1,021,178.00		Project grant
Molenaar, Cheesman	Atrogi	Determination of effects of Atrogi compounds in human heart	2022-2023	\$39,893.00	\$39,893.00	Industry sponsored
Molenaar, Cheesman	Perpetual	Keeping Failing Hearts Beating - Research towards the Prevention of Sudden Cardiac Death	2022-2025	\$130,680.00	\$43,560.00	Project Grant
Monzon	Queensland University of Technology	Simultaneous use of two beta-blockers, carvedilol and bisoprolol, for effective and safe treatment of heart failure	2021-2022			Scholarship
Morris	Health and Research Office of Queensland	Exercise Training in Pulmonary Hypertension (ExTra_PH): A Randomised Controlled Trial of Exercise Training in Pulmonary Hypertension.	2015-2023	\$247,000.00	\$16,000.00	Project Grant
Morris	Consultancy	Measuring the performance characteristics of the PEP Device	2022	\$10,500.00	\$21,500.00	Industry Sponsored
Morris	Consultancy	Measuring the performance characteristics of the PEP Device	2022	\$8,250.00	\$21,500.00	Industry Sponsored
Morris	Metro North HHS	The Prince Charles Hospital Joint Research Fellowship	2016-2022	\$613,948.00	\$130,000.00	Fellowship
Morris, Pyne, Sabapathy, Stewart, Hwang, Clark	Griffith University	Hot Legs for Heart Failure: Using lower limb heating to improve health outcomes.	2023-2024	\$121,350.00	\$0.00	Seed Grant
Morris, Sabapathy, Scalia, Walsh, Balmain, Chan, Benjamin, Roberts	TPCH Foundation	Hot Legs For Heart Failure: Using lower limb heating to improve exercise tolerance in heart failure.	2021-2023	\$63,905.00	\$30,000.00	Innovation Grant
Morris, Sabapathy, Stewart, Roberts	Griffith University	High and Hot: Using Environmental Extremes to Improve Oxygen Transport in Heart Failure.	2022-2023	\$29,495.00	\$24,000.00	Near Miss Grant
Morris, Walsh, Bellet, Louis, Sabapathy	TPCH Foundation	Small muscle training for big gains: Using high intensity single muscle group training in heart failure.	2018-2023	\$48,318.00	\$10,100.00	Innovation Grant
Morawska, Bell et al.	ARC Linkage Grant	Making Australia resilient to airborne infection transmission	2021-2023	\$868,513.00	\$350,000.00	Linkage
Murdoch	Boston Scientific	A Study to Evaluate the Feasibility and Safety of the ACURATE Prime™ XL Aortic Valve System in Patients Indicated for TAVI:	2020-present		\$90,135.10	Industry Sponsored
Murdoch	Edwards Lifesciences	SAPIEN M3 System TransCatheter Mitral Valve ReplacemEnt via TransseptalL AccEss	2021-present		\$13,997.78	Industry Sponsored
Murdoch	Medtronic	Optimize PRO TAVR Post Market Study	2022-present		\$4,400.00	Industry Sponsored

## Active Grants 2022 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Naidoo, Ki, McDonald, Suen	Metro North Hospital and Health Service	OCCUR Study: Advancing knowledge in cardiac surgery-associated Organ Complications: Confronting/Understanding the daRk side of cell-free mitochondrial DNA		\$47,880.00		Collaborative Research grant
Pauls, Tansley	TPCH Foundation	Development and in-vivo evaluation of physiological control systems for a novel, low-cost ventricular assist device 'OpenHeart'	2019-2022	\$11,326.00		Emerging Researcher
Pearse	CSL Behring (Australia) Pty Ltd	Use of three-factor prothrombin complex concentrate in cardiac surgery	2020-unlimited	\$10,000.00	\$10,000	Research and Education grant
Pearse, Naidoo, Ziegenfuss, Smith, Vincent, D O'Brien	NHMRC	The Cryopreserved vs. Liquid Platelets trial: CLIP-II A phase III multicentre blinded randomised controlled clinical non-inferiority trial of cryopreserved platelets vs. conventional liquid-stored platelets for the management of surgical bleeding		\$1,825,647.60		Project grant
Pearse, Rushbrook, Gardner, Perel, Fung	National Blood Authority	Implementation of a Standard 7 - Blood Management Dashboard for Metro North, Hospital and Health Service	2023-2025	\$155,000.00		Project grant
Poon	Edwards Lifesciences	A Prospective, Single-Arm, Multicentre Study to Investigate the Safety and Effectiveness of SAPIEN 3 Transcatheter Heart Valve Implantation in Patients with a Failing Mitral Bioprosthesis Valve	2019-present		\$11,484.25	Industry Sponsored
Poon	Edwards Lifesciences	A Prospective, Randomized, Controlled Trial to Assess the Management of Moderate Aortic Stenosis by Clinical Surveillance or Transcatheter Aortic Valve Replacement	2022-present		\$4,400.00	Industry Sponsored
Poon	Boston Scientific	Stroke Protection with Sentinel During Transcatheter Aortic Valve Replacement	2020-present		\$16,519.80	Industry Sponsored
Raffel	Abbott Vascular	A Clinical Evaluation of Absorb™ BVS, the Everolimus Eluting Bioresorbable Vascular Scaffold in the Treatment of Subjects with de novo Native Coronary Artery Lesions	2014-present		\$6,985.00	Industry Sponsored
Raffel	CSL Behring	A Phase III, multicentre, double-blind, randomized, placebo-controlled, parallel-group study to investigate the efficacy and safety of CSL112 in subjects with Acute Coronary Syndrome	2018-present		\$16,187.10	Industry Sponsored
Raffel	Edwards Lifesciences	Edwards PASCAL TrAnScatheter Mitral Valve RePair System Study	2017-present		\$5,379.00	Industry Sponsored
Raffel	Esperion	A randomised, Double-Blind, Placebo-Controlled Study to Assess the Effects of Bempeidic Acid (ETC-1002) on the Occurrence of Major Cardiovascular Events in Patients With, or at High Risk for, Cardiovascular Disease who are Statin Intolerant	2019-present		\$13,257.42	Industry Sponsored
Raffel	Pacific Clinical Research Group	A Clinical Evaluation of Absorb™ BVS, the Everolimus Eluting Bioresorbable Vascular Scaffold in the Treatment of Subjects with de novo Native Coronary Artery Lesions	2015-2022		\$6,704.50	Industry Sponsored
Raffel	Boston Scientific	Fully Absorbable Scaffold Feasibility Study	2016-present		\$5,451.60	Industry Sponsored

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Raffel	Medtronic	Global SYMPPLICITY Registry (GSR) Denervation Findings in Real World (DEFINE) is referred to as the GSR DEFINE study	2021-present		\$0.00	Industry Sponsored
Raffel	Boston Scientific	A study to evaluate the feasibility and safety of the Millipede Transcatheter Annuloplasty Ring System in Patients with Functional Mitral Regurgitation	2020-present		\$5,797.00	Industry Sponsored
Raffel	MOBIUS	Multi-Organ Denervation to RedUce Sympathetic Drive, A Single Blinded, Multi-Center, Prospective Feasibility Study	2021-present		\$550.00	Industry Sponsored
Raffel	St Jude Medical	International long-term follow-up study of patients implanted with a PORTICO™ valve	2013-present		\$1,554.00	Industry Sponsored
Raffel	St Jude Medical	Portico™ Re-sheathable transcatheter Aortic Valve System US IDE Trial	2016-present		\$14,344.81	Industry Sponsored
Raffel	Medpace Australia Pty Ltd	Obicetrapib and Cardiovascular Outcomes: A Placebo-Controlled, Double-Blind, Randomized Phase 3 Study to Evaluate the Effect of 10 mg Obicetrapib in Participants With Atherosclerotic Cardiovascular Disease (ASCVD) Who are Not Adequately Controlled Despite Maximally Tolerated Lipid-Modifying Therapies	2022-present		\$12,815.00	Industry Sponsored
Raffel	Edwards Lifesciences	Early Feasibility Study of the Edwards SAPIEN 3 Transcatheter Heart Valve System with the Edwards Caval Presept for the Treatment of Reverse Caval Flow	2022-present		\$2,181.46	Industry Sponsored
Raffel	Abbott	To evaluate the safety and effectiveness of the ABT NG DES 48 everolimus-eluting coronary stent system (EECSS) in improving coronary artery luminal diameter in subjects with CAD due to de novo native coronary artery long lesions	2020-present		\$4,700.85	Industry Sponsored
Raffel	Johnson & Johnson	Wavecrest Vs Watchman Transseptal LAA Closure to Reduce AF-Mediated Stroke 2	2018-present		\$3,575.00	Industry Sponsored
Raffel	Labcorp	Open-Label, Sequential-Dose Escalation/De-escalation Trial Testing MT1002 in Patients Undergoing PCI Due to Acute Coronary Syndrome with NSTEMI	2022-present		\$18,865.00	Industry Sponsored
Raffel	ACOR	Australasian Cardiac Outcomes Registry LTD TAVI	2019-present		\$0.00	Industry Sponsored
Ranasinghe	RNSH Cardiology	Australian Cardiovascular COVID-19 Database	2020-present		\$2,318.18	Industry Sponsored
Ranasinghe	Novartis	A multi-center, randomized, double-blind, placebo-controlled, parallel-group Phase IIIb study evaluating the effect of inclisiran on atherosclerotic plaque progression assessed by coronary computed tomography angiography (CCTA) in participants with a diagnosis of non-obstructive coronary artery disease without previous cardiovascular events	2022-present		\$13,783.00	Industry Sponsored
Ranasinghe	Novartis	A randomized double-blind, placebo-controlled, multicenter trial assessing the impact of lipoprotein (a) lowering with TQJ230 on major cardiovascular events in patients with established cardiovascular disease	2020-present		\$39,230.94	Industry Sponsored

## Active Grants 2022 continued...

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Reid, et al.	TPCH Foundation	Prognostics, Diagnostics and Therapeutic targets in response to infectious threats to the Australian population; (Phase 1) COVID-19.	2020-2023	\$100,000.00	\$72,000.00	Philanthropic
Reid, Smith, Bell	TPCH Foundation	A Multi-modality, multi-disciplinary program of research to improve disease outcomes in Cystic Fibrosis	2018-2023	\$600,000.00	\$200,000.00	Project Grant
Rogers, Crotty, Morawska, Bell, 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	\$1,330,000.00	\$550,000.00	Project Grant
Rutherford, Binnewies, Bach, Tjondronegoro, Morris, Moyle, Torrisi, Nghiem, Phung, Zhang, MacQuarrie, Gabric	Wellcome Trust	Individualised Heat-Health Early Warning Systems: a novel digital solution.	2022-2025	\$2,351,841.00	\$600,000.00	Project Grant
Scalia	TPCH Foundation	CATHARSIS	2022	\$25,000.00	\$25,000.00	Equipment grant
Scalia	Investigator Driven	Comparative Catheter Echocardiographic Hemodynamics Program	2017-present		\$0.00	Project Grant
Scalia	Investigator Initiated Registry	This is an Asia-Pacific multi-centre international observational registry of patients with mitral regurgitation treated with the MitraClip	2014-present		\$0.00	Project Grant
Simmonds, Pauls, Chan, Tansley	TPCH Foundation	Optimising mechanical circulatory support: improved human compatibility of medical devices through minimisation of animal testing	2020-2022	\$49,040.00	\$49,040.00	Innovation Grant
Sly, Wainwright, Bell, Reid, et al.	CF Foundation (USA)	Early life origins of CF lung disease	2019-2023	\$1,650,000.00	\$550,000.00	Project Grant
Smith	TPCH Foundation	EMBRACE: Exploring the relationship between EMotional well-Being with health outcomes and patient pReferences for resources and support in cArdiaC surgEry	2020-2023	\$10,000.00	\$10,000.00	New Investigator Grant
Spratt	Queensland University of Technology	ECR support	2021-2023	\$8,404.00	\$8,404.00	University
Spratt	Krum Educational Grant	Developing a class of cardiac ryanodine receptor stabilising antiarrhythmics	2022			Conference stipend
Spratt	TPCH Foundation	Arrhythmias in human heart failure: relating clinical and laboratory-generated arrhythmias and regionality of arrhythmic responses.	2021-2023	\$56,184.00	\$28,092.00	Scholarship
Stewart	Griffith University	New Researcher grant	2021-2022	\$19,762.00	\$19,762.00	New Investigator
Stewart	Pulmonary Hypertension Society of Australia and New Zealand	Developing a novel imaging biomarker for tracking right ventricular failure in Pulmonary Hypertension	2022-2023	\$30,000.00	\$30,000.00	Projec Grant

Chief Investigators	Granting Agency	Project Title	Years of Funding	Total Funding Awarded	Funding received for 2021	Grant Type
Stewart	TPCH Foundation	TPCH Fellowship	2021-2023	\$300,000.00	\$100,000.00	Fellowship
Stewart, Chan, Morris, Scalia	TPCH Foundation	The ventricular strain gradient: A novel imaging biomarker of the adapting and maladapting heart.	2021-2022	\$59,428.00	\$10,000.00	Project Grant
Stewart, Edwards, Chan, Morris, 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.	2021-2022	\$49,688.00	\$15,000.00	Project Grant
Szollosi, Eeles, Curtin, Fripp, Coulson	TPCH Foundation	Obstructive Sleep Apnoea in Mild Cognitive Impairment: an opportunity to preserve brain health	2018-2023	\$79,300.00	\$0.00	Innovation Grant
Tansley	TPCH Foundation	Pump Design and Development for Intra-Ventricular Balloon Pump (Taylor Sing)	2020-2013	\$84,276.00	\$31,009.52	Postgraduate Scholarship
Taylor, Bell, Rogers	Cystic Fibrosis Australia	Australian-wide surveillance for fungal infection: a national metagenomic analysis across 19 CF centres	2022-2024	\$80,000.00	\$40,000.00	Project Grant
Terrill, Woodruff, Lazzarini	NHMRC	NHMRC Postgraduate scholarship	2021-2025	\$110,702.00	\$22,140.00	Fellowship
Terrill, Woodruff, Lazzarini	Urgo Foundation	Patient specific 3D printing of metamaterials to improve personalised offloading and healing of diabetes-related foot ulceration	2021-2023	\$15,000.00	\$5,000.00	Project grant
Thomson, Ahmed, Guo, Bell, Burke, Jackson	HeIDI/CSIRO	Eliminating opportunistic pathogens from premise plumbing biofilms in healthcare facilities	2022-2024	\$150,000.00	\$110,000.00	Project Grant
Wainwright, Bell, Reid, Sly, et al.	Cystic Fibrosis Foundation (USA)	FORMAT adaptive study of Mycobacterium abscessus in lung disease	2020-2024	\$4,000,000.00	\$1,000,000.00	Project Grant
Wells, Goldberg, Smith, Apte	Cystic Fibrosis Foundation (USA)	Impact and treatment of cloaking antibodies in CF	2021-2023	\$USD 430,000	\$USD 130000	Project Grant
Wong	SAMHRI/Luitpold	A Randomised, Double-Blind, Placebo Controlled Study to Investigate the Efficacy and Safety of Injecrafer® (Ferric Carboxymaltose) as a Treatment for Heart Failure with Iron Deficiency	2018-present		\$64,589.77	Industry Sponsored
Wong	Pfizer	Prevalence and characteristics of transthyretin amyloidosis in patients with left ventricular hypertrophy of unknown etiology (TTRACK)	2020-present		\$32,190.00	Industry Sponsored
Zahra	TPCH Foundation	Detection of EGFR Gene mutation in minimally invasive blood plasma extracellular vesicles for the diagnosis of lung cancer	2022	\$9,996.00	\$9,996.00	New Investigator grant



# Higher Degree Students Supervised During 2022

Full Name	Postgraduate Course	Research Project Title	University affiliation	Supervisors
Alexander Dashwood	PhD	Understanding how phosphorylation and redox modifications regulate cardiac ryanodine receptor-type 2 activity to produce an arrhythmogenic phenotype in advanced heart failure	University of Queensland	Molenaar, Haqqani, Wong, Beard
Alita Rushton	Mphil	Investigating and exploring delegation to dietitian assistants in malnutrition care within the hospital setting	University of Queensland	Bell, Bauer
Amy Pham	PhD	Host pathogen interactions in chronic Burkholderia cepacia lung infections	University of Queensland	Wells, Chambers, Von Torres
Andrew Burke	PhD	Pharmacokinetics of Antimycobacterial Drugs in Patients with Cystic Fibrosis and Latent Tuberculosis	University of Queensland	Roberts, Thomson, Smith, Bell
Anne-Maree Caine	PhD	Exploration older adults as occupation beings in residential aged care	Griffith University	Gustafsson, Molineux, Aplin
Bianca Monzon	MPhil	Simultaneous use of two beta-blockers carvedilol and bisoprolol, for effective and safe treatment of heart failure	Queensland University of Technology	Molenaar
Daniel Bogale	PhD	Household and ambient air pollution and childhood morbidity and mortality in LMICs	University of Queensland	Knibbs, Yang
Daniell Madden	PhD	Genomic prediction to identify bacteria and antimicrobial resistance	University of the Sunshine Coast	Price, Saravich, Bell
Dhayananth Kanagarajan	PhD	Computational Fluid Dynamics Evaluation of Mixing Zones in Extra Corporeal Membrane Oxygenation (ECMO) Circuits to Prevent Brain Injury	Griffith University	Tansley, Dau
Edward Stephens	PhD	Lung Cancer in Never Smokers	University of Queensland	Yang, Fong, Chee
Elenor Anderson	Grad Cert	Musculoskeletal Injury	University of Tasmania	Jordan
Elijah Lawson	Honours	Validating a single-sensor EEG as an alternative to Polysomnography in the ICU environment	Queensland University of Technology	Szollosi
Eloise Shaw	PhD	Screening For Biomarkers in Non-small Cell Lung Cancer	University of Queensland	Fong, Bowman, Yang
Emma Ledger	PhD	Helpful and harmful immune responses in the cystic fibrosis lung	University of Queensland	Well, Smith, Reid
George Tay	PhD	Reducing infection transmission risk in people with cystic fibrosis	University of Queensland	Bell, Thomson, Reid
Gerard Olive	PhD	Interventional bronchoscopy	University of Queensland	Fong, Marshall, Bowman, Yang
Graeme Mattison	PhD	Integrating Wearable Devices into the Patient-Centred Digital Healthcare Environment	University of Queensland	Dobbins, Smith, Reid, Forrester
Hollie Bendotti	PhD	Artificial Intelligence for Smoking Cessation: Development and Effectiveness of Quin, a Smoking Cessation Smartphone Chatbot	University of Queensland	Marshall, Gartner, Ireland, Lawler
Jacob Butterworth	Honours	A descriptive, exploratory study of mucosal pressure injury 5-year incidence and characteristics	Australian Catholic University	Fulbrook, Miles, Lovegrove

## Higher Degree Students Supervised During 2022 continued...

Full Name	Postgraduate Course	Research Project Title	University affiliation	Supervisors
Janet Shaw	PhD	The lung microbiome in COPD	University of Queensland	Yang, Fong, Bowman, Zimmerman
Jazmin Mireya Guayco Sigcha	PhD	Blood Biomarkers in Lung Cancer Screening	University of Queensland	Marshall, Fong, Yang, Chee
Josephine Lovegrove	PhD	Development of an international risk-stratified pressure injury prevention bundle for intensive care	Australian Catholic University	Fulbrook, Miles, Steele, Vargas
Kathleen Hall	PhD	Evaluation of the inclusion of an allied health assistant within an Adult Cystic Fibrosis Centre: their role, scope of practice, and impact on physiotherapy services	Australian Catholic University	
Kristy Garrick	PhD	Development of a novel sutureless inflow cannula for ventricular assist device implantation	Griffith University	Tansley, Hall, Gregory
Leon Cavalli	PhD	Artificial Intelligence in Pre-Operative Anaemia	University of the Sunshine Coast	Fung, Craswell, Pearse, Wang
Lisa Jurak	PhD	Using proteomics to understand the mechanisms of asthma exacerbations and how macrolides can reduce exacerbations	University of Queensland	Upham, Yang, Simpson, Hill
Liz Springfield	PhD	Crossing thresholds: occupational therapy students experience of assessments as a stimulus for negotiating liminal space	University of Queensland	Aplin, Bennett
Martin Hajek	PhD	Exploring the relationship between trunk extensor morphology and activation with lower back pain and lower limb injury in sport	Griffith University	Duhig, Roberts, Bourne, Morris
Masoumeh Abedi	PhD	Development and validation of a simple screening tool to be used by case managers to identify those at risk of non-recovery after a road traffic crash	University of Queensland	Johnsont, Sterling, Aplin
Maureen Peasey	MPhil	Pulmonary Rehabilitation and Physical Activity in COPD	Griffith University	Morris, Walsh
Melanie Spratt	PhD	Arrhythmias in human heart failure: relating clinical and laboratory-generated arrhythmias and regionality of arrhythmic responses	Queensland University of Technology	Molenaar, Haqqani, Battle
Menaka Louis	PhD	High intensity single muscle group training in heart failure	Griffith University	Morris, Hwang, Roberts, Sabapathy
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	Kenealy, Lazzarini
Nikita Patel	MPhil	Osteoporosis Diagnosis and Fracture Prediction using CT Vertebral Attenuation in Lung Cancer Screening	University of Queensland	Marshall, Fong, Yang, O'Rourke, Hopcraft
Nimantha Durage	PhD	Investigating cognitive functioning in people with diabetes-related foot ulcers in Queensland, Australia; A prospective longitudinal study	Queensland University of Technology	Finlayson, Parker, Lazzarini
Rachael McCall	PhD	Child Protection Project	University of Queensland	Jordan
Rebecca Chambers	PhD	Exercise training modes in Pre-Lung Transplant Patients	Griffith University	Walsh, Morris
Rebecca Tarrant	PhD	Development of the OTSCAR: A occupational therapy outcome measure for occupational performance in the home environment	University of Queensland	Aplin, Rohde
Salma Ahmed	PhD	Maternal and childhood health and air pollution	University of Queensland	Knibbs, Yang
Samantha Ness	PhD	Contemporary Management of Malnutrition in patients with Chronic Obstructive Pulmonary Disease (COPD)	University of Queensland	Bell, Collins, Masel

Full Name	Postgraduate Course	Research Project Title	University affiliation	Supervisors
Sarah Mackay	MPhil	Malnutrition Terminology	University of Queensland	Young, Bell
Sophie Deeth	PhD	Nutrition Care in Older Hospital Inpatients	University of Queensland	Bell, Mudge
Tania da Silva Duarte	PhD	Deep Sequencing of Microbial Communities in Cystic Fibrosis Airways	University of Queensland	Coin, Bell, Price
Tanya Palmer	PhD	The validity of a test to measure exertional breathlessness in chronic disease	Griffith University	Morris, Walsh, Obst, Sabapathy
Taylor Sing	PhD	Physiological Suitability of an Intra-Ventricular Balloon Pump	Griffith University	Tansley, Feih
Tharushi De Silva	PhD	Dynamics of regulatory T lymphocytes in lung transplant patients	Queensland University of Technology	O'Sullivan, Chambers, Apte, Voisey, Spann
Thi Tham Nuygen	PhD	The effectiveness of ultraviolet C light at inactivating airborne Pseudomonas aeruginosa and Mycobacterium abscessus	University of Queensland	Knibbs, Bell, Johnson
Thomas Georgeson	PhD	Detecting risk of dementia in people with sleep apnoea	University of Queensland	Szollasi
Yuqi Zhang	PhD	Burden of diabetic foot disease and cost-effectiveness of optimal care	Queensland University of Technology	Lazzarini, Cramb, McPhail
Zoe McSweeney	Honours	ECG detection and triggering module	University of Queensland	Semenzin

Large shards of crystalline material recovered from a stoneworker's lungs during a broncho-alveolar-lavage at TPCH.

# Publications

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- Ababneh, A., Finlayson, K., Edwards, H., & Lazzarini, P. A.** (2022). Factors associated with adherence to using removable cast walker treatment among patients with diabetes-related foot ulcers. *BMJ Open Diabetes Research & Care*, 10(1), e002640.
- Abbas, A., Abdukahil, S. A., Abdulkadir, N. N., Abe, R., Abel, L., Absil, L., . . . Chow, T. S.** (2022). ISARIC-COVID-19 dataset: A Prospective, Standardized, Global Dataset of Patients Hospitalized with COVID-19. *Scientific Data*, 9(1), 454.
- Abedi, M., Aplin, T., Gane, E., & Johnston, V.** (2022). Exploring the perspectives of key stakeholders in returning to work after minor to serious road traffic injuries: a qualitative study. *J Occup Rehabil*.
- Abedi, M., Aplin, T., Gane, E., & Johnston, V.** (2022). "No Man's Land": the experiences of persons injured in a road traffic crash wanting to return to work in Queensland, Australia. *Disability and Rehabilitation*, 1-10.
- Abedi, M., Gane, E., Aplin, T., Zerguine, H., & Johnston, V.** (2022). Barriers and Facilitators Associated with Return to Work Following Minor to Serious Road Traffic Musculoskeletal Injuries: A Systematic Review. *J Occup Rehabil*, 32(1), 13-26.
- Adsett, J. A., Bowe, R., Kelly, R., Louis, M., Morris, N., & Hwang, R.** (2022). A Study of the Reliability, Validity, and Physiological Changes of Sit-to-Stand Tests in People With Heart Failure. *J Cardiopulm Rehabil Prev*.
- Ahmed, S. M., Knibbs, L. D., Moss, K. M., Mouly, T. A., Yang, I. A., & Mishra, G. D.** (2022). Residential greenspace and early childhood development and academic performance: A longitudinal analysis of Australian children aged 4-12 years. *Sci Total Environ*, 833, 155214.
- Ahmed, S. M., Mishra, G. D., Moss, K. M., Mouly, T. A., Yang, I. A., & Knibbs, L. D.** (2022). Association between residential greenspace and health-related quality of life in children aged 0-12 years. *Environ Res*, 214(Pt 1), 113759.
- Ahmed, S. M., Mishra, G. D., Moss, K. M., Yang, I. A., Lycett, K., & Knibbs, L. D.** (2022). Maternal and Childhood Ambient Air Pollution Exposure and Mental Health Symptoms and Psychomotor Development in Children: An Australian Population-Based Longitudinal Study. *Environ Int*, 158, 107003.
- Ainsworth, E., Aplin, T., de Jonge, D., & Bennett, S.** (2022). Understanding home modification outcomes from the perspective of older people and people with a disability: informing home modification evaluation. *Disabil Rehabil*, 1-10.
- Aitken, C. R., Walsh, J., Stewart G.M., Sabapathy, S., Adams, L., and Morris, N.R.** (2022). Exertional Dyspnoea responses reported in the Dyspnoea Challenge and measures of disease severity in COPD. *Resp Physiol Neurobiol*, 304, 103941.
- Aitken, C. R., Stewart G.M., Walsh, J., Palmer, T., Adams, L., Sabapathy, S., and Morris, N.R.** (2022). Exertional Dyspnoea responses to the Dyspnoea Challenge in heart failure: comparison to chronic obstructive pulmonary disease. *Heart and Lung*, 28(58), 108-115.
- Aitken, C. R., Walsh, J., Stewart G., Sabapathy, S., Adams, L., Morris, N.R. and Stewart, G.M.** (2022). Optimising the Dyspnoea Challenge: exertional dyspnoea responses to changing treadmill gradients. *Resp Physiol Neurobiol*, 302, 103915.
- Alshyyab, M. A., Borkoles, E., Albsoul, R. A., Kinnear, F. B., & Fitzgerald, G.** (2022). Safety culture in emergency medicine: An exploratory qualitative study. *International Journal of Risk & Safety in Medicine*, 33, 365-383.
- Aminu, A. J., Chen, W., Yin, Z., Kuniewicz, M., Walocha, J., Perde, F., . . . Atkinson, A. J.** (2022). Novel micro-computed tomography contrast agents to visualise the human cardiac conduction system and surrounding structures in hearts from normal, aged, and obese individuals. *Translational Research in Anatomy*, 27, 100175.
- Aplin, T., & Liddle, J.** (2022). Partnering with consumers: Do occupational therapists genuinely partner? Can we do more? *Australian Occupational Therapy Journal*, 69(6), 649-652.
- Appadurai, V., Scalia, G. M., Lau, K., Chamberlain, R., Edwards, N., Bushell, H., . . . Chan, J.** (2022). Impact of inter-vendor variability on evaluation of left ventricular mechanical dispersion. *Echocardiography*, 39(1), 54-64.
- Apple, F. S., Smith, S. W., Greenslade, J. H., Sandoval, Y., Parsonage, W., Ranasinghe, I., . . . Cullen, L.** (2022). Single High-Sensitivity Point-of-Care Whole-Blood Cardiac Troponin I Measurement to Rule Out Acute Myocardial Infarction at Low Risk. *Circulation*, 146(25), 1918-1929.
- Apte, S. H., Tan, M. E., Lutzky, V. P., De Silva, T. A., Fiene, A., Hundloe, J., . . . Chambers, D. C.** (2022). Alveolar crystal burden in stone workers with artificial stone silicosis. *Respirology*, 27(6), 437-446.
- Barnes, H., Chambers, D., Grainge, C., Corte, T. J., Bastiampillai, S., Frenkel, S., . . . Glaspole, I.** (2022). Clinical utility of a standardized chronic hypersensitivity pneumonitis exposure questionnaire. *Respirology*.
- Barnett, A., Ball, L., Coppieters, M. W., Morris, N. R., Kendall, E., & Campbell, K. L.** (2022). Patients' experiences with rehabilitation care: a qualitative study to inform patient-centred outcomes. *Disability and Rehabilitation*, 1-8.
- Battaglini, D., Premraj, L., Griffiee, M., Huth, S., Fanning, J., Whitman, G., . . . Cho, S-M.** (2022). Neurological Manifestations of SARS-CoV-2 Infection: Protocol for a Sub-analysis of the COVID-19 Critical Care Consortium Observational Study. *Frontiers in Medicine*, 9.
- Battaglini, D., Premraj, L., Huth, S., Fanning, J., Whitman, G., Arora, R. C., . . . Chiara, R.** (2022). Non-Invasive Multimodal Neuromonitoring in Non-Critically Ill Hospitalized Adult Patients With COVID-19: A Systematic Review and Meta-Analysis. *Frontiers in Neurology*, 13.

## Publications continued...

- Battaglini, D., Premraj, L., Huth, S., Fanning, J., Whitman, G., Arora, R. C., . . . Robba, C.** (2022). The Use of Noninvasive Multimodal Neuromonitoring in Adult Critically Ill Patients With COVID-19 Infection. *Journal of Neurosurgical Anesthesiology*.
- Battaglini, D., Premraj, L., White, N., Sutt, A. L., Robba, C., Cho, S. M., . . . Pelosi, P.** (2022). Tracheostomy outcomes in critically ill patients with COVID-19: a systematic review, meta-analysis, and meta-regression. *Br J Anaesth*, 129(5), 679-692.
- Beck, S., Kinnear, F. B., Maree Kelly, A., Chu, K. H., Sen Kuan, W., Keijzers, G., . . . Group, H. S.** (2022). Clinical presentation and assessment of older patients presenting with headache to emergency departments: A multicentre observational study. *Australasian Journal on Ageing*, 41(1), 126-137.
- Bell S.C., S. B. S., Passamano J.A.** (2022). Chapter 45 Working with cystic fibrosis. In A. M. D. Bush A., Davies J.C., Simmonds N.J., Taylor-Cousar J.L., Ranganathan S. (Ed.), Hodson and Geddes, *Cystic fibrosis* (Vol. 5th ed.): Taylor and Francis Group.
- Bendotti, H., Lawler, S., Ireland, D., Gartner, C., Hides, L., & Marshall, H. M.** (2022). What Do People Want in a Smoking Cessation App? An Analysis of User Reviews and App Quality. *Nicotine Tob Res*, 24(2), 169-177.
- Bonney, A., Malouf, R., Marchal, C., Manners, D., Fong, K. M., Marshall, H. M., . . . Manser, R.** (2022). Impact of low-dose computed tomography (LDCT) screening on lung cancer-related mortality. *Cochrane Database Syst Rev*, 8(8), Cd013829.
- Boone, A. C., Sing, T. R., Semenzin, C., Liao, S., Pauls, J. P., Gregory, S. D., & Tansley, G. D.** (2022). Ventricular Flow Dynamics with an Intra-Ventricular Balloon Pump: An In Vitro Analysis. *Asaio j*.
- Brass, A., Shoubbridge, A. P., Larby, N., Elms, L., Sims, S. K., Flynn, E., . . . Rogers, G. B.** (2022). Targeted reduction of airborne viral transmission risk in long-term residential aged care. *Age Ageing*, 51(12).
- Brims, F. J. H., Kumarasamy, C., Nash, J., Leong, T. L., Stone, E., & Marshall, H. M.** (2022). Hospital-based multidisciplinary lung cancer care in Australia: a survey of the landscape in 2021. *BMJ Open Respir Res*, 9(1).
- Broom, A., Kenny, K., Williams Veazey, L., Page, A., Prainsack, B., Wakefield, C. E., . . . Lwin, Z.** (2022). Living (well) with cancer in the precision era. *SSM - Qualitative Research in Health*, 2, 100096.
- Bryant, C., Aplin, T., & Setchell, J.** (2022). Sexuality Support After Spinal Cord Injury: What is Provided in Australian Practice Settings? *Sexuality and Disability*, 40(3), 409-423.
- Bryant, C., Gustafsson, L., Aplin, T., & Setchell, J.** (2022). Supporting sexuality after spinal cord injury: a scoping review of non-medical approaches. *Disabil Rehabil*, 44(19), 5669-5682.
- Buchanan, T., White, S. L., Marshall, H., Carson-Chahhoud, K. V., Magee, C. A., & Kelly, P. J.** (2022). Authors' response to 'Vaping nicotine should be part of Australia's tobacco control policy'. *Aust N Z J Public Health*, 46(6), 918.
- Burns, C. L., Cottrell, M., Jones, A., Foley, J., Rahmann, A., Young, A., . . . Pateman, K.** (2022). Prioritising enhancements across allied health telehealth services in a metropolitan hospital: Using a concept mapping approach. *J Telemed Telecare*, 28(10), 740-749.
- Burston, A., Miles, S. J., & Fulbrook, P.** (2022). Patient and carer experience of living with a pressure injury: A meta-synthesis of qualitative studies. *J Clin Nurs*.
- Burtneß, B., Rischin, D., Greil, R., Soulières, D., Tahara, M., de Castro, G., Jr., . . . Harrington, K.** (2022). Pembrolizumab Alone or With Chemotherapy for Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma in KEYNOTE-048: Subgroup Analysis by Programmed Death Ligand-1 Combined Positive Score. *J Clin Oncol*, 40(21), 2321-2332.
- Canning, M. L., Munns, A., & Tai, B.** (2022). Integration with electronic medication management systems is non-negotiable for a national allergy/ADR register. *Med J Aust*, 217(9), 494.
- Capdevila, J., Klochikhin, A., Leboulleux, S., Isaev, P., Badiu, C., Robinson, B., . . . Jarzab, B.** (2022). A Randomized, Double-Blind Noninferiority Study to Evaluate the Efficacy of the Cabozantinib Tablet at 60 mg Per Day Compared with the Cabozantinib Capsule at 140 mg Per Day in Patients with Progressive, Metastatic Medullary Thyroid Cancer. *Thyroid*, 32(5), 515-524.
- Carr, S. B., McClenaghan, E., Elbert, A., Faro, A., Cosgriff, R., Abdрахmanov, O., . . . Stephenson, A. L.** (2022). Factors associated with clinical progression to severe COVID-19 in people with cystic fibrosis: A global observational study. *J Cyst Fibros*, 21(4), e221-e231.
- Cate, D. t., Schuurmans, M. J., Eijk, J. v., Bell, J. J., Schoonhoven, L., & Ettema, R. G. A.** (2022). Factors Influencing Nurses' Behavior in Nutritional Care for Community-Dwelling Older Adults Before, During, and After Hospitalization: A Delphi Study. *The Journal of Continuing Education in Nursing*, 53(12), 545-556.
- Cavaye, J., Dai, B., Gurunathan, K., Weir, R. M., Yerkovich, S., & Gurunathan, U.** (2022). NK1 receptor antagonists versus other antiemetics in the prevention of postoperative nausea and vomiting following laparoscopic surgical procedures: a systematic review and meta-analysis. *J Anaesthesiol Clin Pharmacol*, 38(1), 35-47.
- Chamberlain, R., Edwards, N. F. A., Doyle, S. N., Wong, Y. W., Scalia, G. M., Sabapathy, S., & Chan, J.** (2022). Prognostic Value of Left and right ventricular deformation strain analysis on Acute Cellular rejection in Heart Transplant recipients: A 6-year outcome study. *Int J Cardiovasc Imaging*, 38(11), 2271-2281.
- Chan, C. H. H., Simmonds, M. J., Fraser, K. H., Igarashi, K., Ki, K. K., Murashige, T., . . . Watanabe, N.** (2022). Discrete responses of erythrocytes, platelets, and von Willebrand factor to shear. *J Biomech*, 130, 110898.

- Chee, M., Corte, T., Jackson, D., Lee, C., Wrobel, J., Glaspole, I., . . . Thien, F.** (2022). Idiopathic pulmonary fibrosis-eastern health Victoria benchmarked against national population. *Respirology*, 27, 166–166.
- Chen, P., Carville, K., Swanson, T., Lazzarini, P. A., Charles, J., Cheney, J., & Prentice, J.** (2022). Australian guideline on wound healing interventions to enhance healing of foot ulcers: part of the 2021 Australian evidence-based guidelines for diabetes-related foot disease. *J Foot Ankle Res*, 15(1), 40.
- Cheng, V., Abdul-Aziz, M. H., Burrows, F., Buscher, H., Cho, Y.-J., Corley, A., . . . Roberts, J. A.** (2022). Population Pharmacokinetics and Dosing Simulations of Ceftriaxone in Critically Ill Patients Receiving Extracorporeal Membrane Oxygenation (An ASAP ECMO Study). *Clinical Pharmacokinetics*, 61(6), 847–856.
- Cheyne, S., Lindley, R. I., Smallwood, N., Tendal, B., Chapman, M., Fraile Navarro, D., . . . Agar, M. R.** (2022). Care of older people and people requiring palliative care with COVID-19: guidance from the Australian National COVID-19 Clinical Evidence Taskforce. *Med J Aust*, 216(4), 203–208.
- Chia, M. R. H., & Windsor, M.** (2022). Metastatic lipoblastoma-like tumour. *ANZ J Surg*. doi:10.1111/ans.17884
- Chin, M., Brennan, A. L., & Bell, S. C.** (2022). Emerging Nonpulmonary Complications for Adults With Cystic Fibrosis: Adult Cystic Fibrosis Series. *Chest*, 161(5), 1211–1224.
- Cho, S.-M., White, N., Premraj, L., Battaglini, D., Fanning, J., Suen, J., . . . Thomson, D.** (2022). Neurological manifestations of COVID-19 in adults and children. *Brain*. doi:10.1093/brain/awac332
- Chong, C. Y., Jalali, A., Wong, H. L., Loft, M., Wong, R., Lee, M., . . . Gibbs, P.** (2022). Impact of the evolution in RAS mutation analysis in Australian patients with metastatic colorectal cancer. *Asia Pac J Clin Oncol*, 18(5), e363–e368.
- Collaro, A. J., Chang, A. B., Marchant, J. M., Chatfield, M. D., Dent, A., Fong, K. M., & McElrea, M. S.** (2022). Association of Gas Diffusing Capacity of the Lung for Carbon Monoxide with Cardiovascular Morbidity and Survival in a Disadvantaged Clinical Population. *Lung*, 200(6), 783–792.
- Coyer, F., Cook, J. L., Doubrovsky, A., Campbell, J., Vann, A., McNamara, G., . . . Fulbrook, P.** (2022). Implementation and evaluation of multilayered pressure injury prevention strategies in an Australian intensive care unit setting. *Aust Crit Care*, 35(2), 143–152.
- Dabscheck, E., Wagner, C., Shaw, J.G., Kung, S.C., Yang I.A.** (2022). COPD exacerbations: a pragmatic approach to prevention, diagnosis and management. *Medicine Today*, 23(12), 33–38.
- Dabscheck, E., George, J., Hermann, K., McDonald, C. F., McDonald, V. M., McNamara, R., . . . Yang, I. A.** (2022). COPD-X Australian guidelines for the diagnosis and management of chronic obstructive pulmonary disease: 2022 update. *Med J Aust*, 217(8), 415–423.
- Dai, B., Cavaye, J., Judd, M., Beuth, J., Iswariah, H., & Gurunathan, U.** (2022). Perioperative Presentations of Kounis Syndrome: A Systematic Literature Review. *J Cardiothorac Vasc Anesth*, 36(7), 2070–2076.
- Daley, M., Lonne, M., & Yuide, P.** (2022). Pedunculated jejunal vascular malformation: a rare cause of abdominal pain. *ANZ J Surg*, 92(10), 2742–2743.
- Davidson, S. J., France, M., Callaway, L. K., Lust, K., Chambers, D., Hopkins, P., . . . Barrett, H. L.** (2022). Pregnancy in women with cystic fibrosis and diabetes: An audit of outcomes at two tertiary obstetric hospitals in Australia in the pre-cystic fibrosis transmembrane conductance regulator modulator era. *Obstetric Medicine*. doi:10.1177/1753495X221146342
- de Silva, T., Voisey, J., Hopkins, P., Apte, S., Chambers, D., & O'Sullivan, B.** (2022). Markers of rejection of a lung allograft: state of the art. *Biomarkers in Medicine*, 16(6), 483–498.
- Doyle, B. J., Kelsey, L. J., Shelverton, C., Abbate, G., Ainola, C., Sato, N., . . . Keogh, S.** (2022). Design, development and preliminary assessment in a porcine model of a novel peripheral intravenous catheter aimed at reducing early failure rates. *The Journal of Vascular Access*. doi:10.1177/11297298221127760
- Duhig, E. E.** (2022). Usual interstitial pneumonia: a review of the pathogenesis and discussion of elastin fibres, type II pneumocytes and proposed roles in the pathogenesis. *Pathology*, 54(5), 517–525.
- Dunlop, K. L. A., Marshall, H. M., Stone, E., Sharman, A. R., Dodd, R. H., Rhee, J. J., . . . Rankin, N. M.** (2022). Motivation is not enough: A qualitative study of lung cancer screening uptake in Australia to inform future implementation. *PLoS One*, 17(9), e0275361.
- Dyer, W. B., Simonova, G., Chiaretti, S., Bouquet, M., Wellburn, R., Heinsar, S., . . . Fraser, J. F.** (2022). Recovery of organ-specific tissue oxygen delivery at restrictive transfusion thresholds after fluid treatment in ovine haemorrhagic shock. *Intensive Care Medicine Experimental*, 10(1), 12.
- Eccleston, D., Scalia, G., Kearney, L., Cross, D., Cehic, D., Disney, P., . . . Srivastava, P. M.** (2022). Genesis of improved quality in imaging through a national Australian echocardiography registry. *Open Heart*, 9(1). doi:10.1136/openhrt-2021-001797
- Edwards, A., Brown, T., Hughes, B. G. M., & Bauer, J.** (2022). The changing face of head and neck cancer: are patients with human papillomavirus-positive disease at greater nutritional risk? A systematic review. *Support Care Cancer*, 30(9), 7191–7204.
- Ellender, C. M., Samaranayake, C., Reid, N., Duce, B., Boyde, M., Winter, S., & Hukins, C. A.** (2022). Randomized controlled trial on the efficacy of audio-visual health educational materials on CPAP adherence: the AHEAD trial. *J Clin Sleep Med*, 18(11), 2617–2625.
- Endlich, Y., Hore, P. J., Baker, P. A., Beckmann, L. A., Bradley, W. P., Chan, K. L. E., . . . Roessler, P.** (2022). Updated guideline on equipment to manage difficult airways: Australian and New Zealand College of Anaesthetists. *Anaesthesia and Intensive Care*, 50(6), 430–446.
- Even, C., Delord, J. P., Price, K. A., Nakagawa, K., Oh, D. Y., Burge, M., . . . Hansen, A. R.** (2022). Evaluation of pembrolizumab monotherapy in patients with previously treated advanced salivary gland carcinoma in the phase 2 KEYNOTE-158 study. *Eur J Cancer*, 171, 259–268.

## Publications continued...

- Ezekowitz, J. A., Colin-Ramirez, E., Ross, H., Escobedo, J., Macdonald, P., Troughton, R., . . . Zieroth, S. (2022). Reduction of dietary sodium to less than 100 mmol in heart failure (SODIUM-HF): an international, open-label, randomised, controlled trial. *Lancet*, 399(10333), 1391-1400.
- Fanning, J., Panigada, M., & Li Bassi, G. (2022). Nosocomial Pneumonia in the Mechanically Ventilated Patient. *Semin Respir Crit Care Med*, 43(3), 426-439.
- Fernando, M. E., Horsley, M., Jones, S., Martin, B., Nube, V. L., Charles, J., . . . Pathways, P. (2022). Australian guideline on offloading treatment for foot ulcers: part of the 2021 Australian evidence-based guidelines for diabetes-related foot disease. *Journal of Foot and Ankle Research*, 15(1), 31.
- Fiedler, L., Roca, I., Lorgat, F., Lacotte, J., Haqqani, H., Jesser, E., . . . Steven, D. (2022). Characterization of high-density mapping in catheter ablation for persistent atrial fibrillation: results from the Advisor™ HD Grid Mapping Catheter Observational study. *J Interv Card Electrophysiol*, 1-11.
- Finnimore, A., Theodoros, D., & Rumbach, A. (2022). The Impact of PD Check-In, a Model for Supported Self-Managed Maintenance of Speech on the Quality of Life of People with Parkinson's Disease: A Phase 1 Study. *Brain Sci*, 12(4).
- Fior, G., Colon, Z. F. V., Peek, G. J., & Fraser, J. F. (2022). Mechanical Ventilation during ECMO: Lessons from Clinical Trials and Future Prospects. *Semin Respir Crit Care Med*, 43(3), 417-425.
- Fitzgerald, D. B., Sidhu, C., Budgeon, C., Tan, A. L., Read, C. A., Kwan, B. C. H., . . . Lee, Y. C. G. (2022). Australasian Malignant Pleural Effusion (AMPLE)-3 trial: study protocol for a multi-centre randomised study comparing indwelling pleural catheter (±talc pleurodesis) versus video-assisted thoracoscopic surgery for management of malignant pleural effusion. *Trials*, 23(1), 530.
- Fong, K. M., Marshall, H. M., & Lam, D. C. L. (2022). Lung cancer screening-Marching along .... *Respirology*, 27(8), 578-580.
- Franks, L. J., Walsh, J. R., Hall, K., Adsett, J. A., & Morris, N. R. (2022). Patient perspectives of airway clearance techniques in bronchiectasis. *Physiother Theory Pract*, 1-11.
- Franks, L. J., Walsh, J. R., Hall, K., Adsett, J. A., & Morris, N. R. (2022). Physiotherapist perspectives of airway clearance techniques in bronchiectasis. *Physiother Theory Pract*, 1-9.
- Friedman, D. J., Qin, L., Parzynski, C., Heist, E. K., Russo, A. M., Ranasinghe, I., . . . Al-Khatib, S. M. (2022). Longitudinal Outcomes of Subcutaneous or Transvenous Implantable Cardioverter-Defibrillators in Older Patients. *J Am Coll Cardiol*, 79(11), 1050-1059.
- Fulbrook, P., Lovegrove, J., & Butterworth, J. (2022). Incidence and characteristics of hospital-acquired mucous membrane pressure injury: A five-year analysis. *J Clin Nurs*. doi:10.1111/jocn.16473
- Fulbrook, P., Lovegrove, J., Miles, S., & Isaqi, B. (2022). Systematic review: Incidence and prevalence of mucous membrane pressure injury in adults admitted to acute hospital settings. *Int Wound J*, 19(2), 278-293.
- Gately, L., Drummond, K., Rosenthal, M., Harrup, R., Dowling, A., Gogos, A., . . . Gibbs, P. (2022). Beyond standard data collection - the promise and potential of BRAIN (Brain tumour Registry Australia INnovation and translation registry). *BMC Cancer*, 22(1), 604.
- Gisondi, M. A., Chambers, D., La, T. M., Ryan, A., Shankar, A., Xue, A., & Barber, R. A. (2022). A Stanford Conference on Social Media, Ethics, and COVID-19 Misinformation (INFODEMIC): Qualitative Thematic Analysis. *Journal of Medical Internet Research*, 24(2), 16.
- Golledge, J., Fernando, M. E., Alahakoon, C., Lazzarini, P. A., Aan de Stegge, W. B., van Netten, J. J., & Bus, S. A. (2022). Efficacy of at home monitoring of foot temperature for risk reduction of diabetes-related foot ulcer: A meta-analysis. *Diabetes Metab Res Rev*, 38(6), e3549.
- Green, A. C., Way, M., Oster, M., Plasmeijer, E. I., Jiyad, Z., O'Rourke, P., . . . Marquart, L. (2022). Destructive and topical treatments of skin lesions in organ transplant recipients and relation to skin cancer. *Archives of Dermatological Research*, 314(2), 203-206.
- Gross, N. D., Miller, D. M., Khushalani, N. I., Divi, V., Ruiz, E. S., Lipson, E. J., . . . Rischin, D. (2022). Neoadjuvant Cemiplimab for Stage II to IV Cutaneous Squamous-Cell Carcinoma. *N Engl J Med*, 387(17), 1557-1568.
- Grota, T., Betihavas, V., Burston, A., & Jacob, E. (2022). Impact of nurse-surgeons on patient-centred outcomes: A systematic review. *International Journal of Nursing Studies Advances*, 4, 100086.
- Gurunathan, U., Dai, B. M., Dm Cavaye, J., Judd, M. R., Beuth, J. A., & Iswariah, H. (2022). Coronary vasospasm in the setting of perioperative anaphylaxis: A case report. *Anaesth Intensive Care*, 50(6), 491-494.
- Gurunathan, U., Barras, M., McDougall, C., Nandurkar, H., & Eley, V. (2022). Obesity and the Risk of Venous Thromboembolism after Major Lower Limb Orthopaedic Surgery: A Literature Review. *Thromb Haemost*, 122(12), 1969-1979.
- Gurunathan, U., J. L. K., French, C., Iswariah, H., P. R. H., Holmes, P., . . . Tronstad, O. (2022). A multimodal surgical prehabilitation programme for major abdominal cancer surgery at a tertiary metropolitan institution in Australia: Our initial experience. *Anaesth Intensive Care*, 50(3), 258-261.
- Gustafsson, L., McKinstry, C., Buchanan, A., Laver, K., Pepin, G., Aplin, T., . . . Murray, C. (2022). Doing, being, becoming, and belonging-A diversity, equity, and inclusion commitment. *Aust Occup Ther J*, 69(4), 375-378.
- Hajek, M., Williams, M. D., Bourne, M. N., Roberts, L. A., Morris, N. R., Shield, A. J., . . . Duhig, S. J. (2022). Predicting Noncontact Lower Limb Injury Using Lumbar Morphology in Professional Australian Football and Rugby League Players. *Med Sci Sports Exerc*, 54(5), 814-820.
- Haqqani, H. M. (2022). Ventricular Tachycardia Substrate Imaging by Cardiac Magnetic Resonance in ICD Patients: Believing Before Seeing. *JACC Clin Electrophysiol*, 8(2), 236-238.

- Harhay, M. O., Cherikh, W. S., Toll, A. E., Christie, J. D., Stehlik, J., Chambers, D., . . . Cantu, E.** (2022). Epidemiology, risk factors, and outcomes of lung retransplantation: An analysis of the International Society for Heart and Lung Transplantation Thoracic Transplant Registry. *Journal of Heart and Lung Transplantation*, 41(10), 1478–1486.
- Hariharaputhiran, S., Peng, Y., Ngo, L., Ali, A., Hossain, S., Visvanathan, R., . . . Ranasinghe, I.** (2022). Long-term survival and life expectancy following an acute heart failure hospitalization in Australia and New Zealand. *Eur J Heart Fail*, 24(9), 1519–1528.
- Haymet, A. B., Pinto, N., Peden, S., Cohen, T., Vallely, M. P., McGiffin, D., . . . Fraser, J. F.** (2022). Current intraoperative storage and handling practices of autologous bypass conduit: A survey of the royal australasian college of surgeons. *Front Surg*, 9, 956177.
- Henderson, D., Moore, V., MacMorran, K., Castellini, J., Hay, K., Keegan, V., . . . Tay, G.** (2022). Cohort study of sleep quality in adult patients with acute pulmonary exacerbations of cystic fibrosis. *Intern Med J*, 52(1), 63–68.
- Hua, J. T., Zell-Baran, L., Go, L. H. T., Kramer, M. R., Van Bree, J. B., Chambers, D., . . . Rose, C. S.** (2022). Demographic, exposure and clinical characteristics in a multinational registry of engineered stone workers with silicosis. *Occupational and Environmental Medicine*. doi:10.1136/oemed-2021-108190
- Hua, J. T., Zell-Baran, L., Go, L. H. T., Kramer, M. R., Van Bree, J. B., Chambers, D., . . . Rose, C. S.** (2022). Response to: Correspondence on 'Demographic, exposure and clinical characteristics in a multinational registry of engineered stone workers with silicosis' by Hoy et al. *Occupational and Environmental Medicine*, 79(12), 849–850.
- Hwang, R., Fan, T., Bowe, R., Louis, M., Bertram, M., Morris, N. R., & Adsett, J.** (2022). Home-based and remote functional exercise testing in cardiac conditions, during the covid-19 pandemic and beyond: a systematic review. *Physiotherapy*, 115, 27–35.
- Hwang, R., Peters, R., Harmer, E., Boyde, M., & Morris, N. R.** (2022). Insight into a real-world experience with completion of cardiac rehabilitation. *Int J Cardiol*, 360, 5–6.
- Isbister, J. P., Pearse, B. L., Delaforce, A. S., & Farmer, S. L.** (2022). Patients' Choice, Consent, and Ethics in Patient Blood Management. *Anesth Analg*, 135(3), 489–500.
- Issac, H., Keijzers, G., Yang, I. A., Lea, J., Taylor, M., & Moloney, C.** (2022). Development of an Electronic Interdisciplinary Chronic Obstructive Pulmonary Disease (COPD) Proforma (E-ICP) to Improve Interdisciplinary Guideline Adherence in the Emergency Department: Modified Delphi Study. *Int J Chron Obstruct Pulmon Dis*, 17, 1089–1106.
- Javidfar, J., Labib, A., Ragazzo, G., Kurtzman, E., Callahan, M., Heinsar, S., . . . Peek, G.** (2022). Mobile Extracorporeal Membrane Oxygenation for Covid-19 Does Not Pose Extra Risk to Transport Team. *ASAIO Journal*, 68(2), 163–167.
- Javidfar, J., Zaaqoq, A. M., Barnett, A., Labib, A., Arora, R., Hayanga, J. W. A., . . . Peek, G.** (2022). COV3: The Impact of Morbid Obesity on Patients with COVID-19 who Develop Respiratory Failure requiring Extracorporeal Membrane Oxygenation. *ASAIO Journal*, 68(Supplement 2), 63.
- Jiang, Y., Shi, Y., Liu, Y., Wang, Z., Ma, Y., Shi, X., . . . Feng, J.** (2022). Efficacy and safety of alectinib in ALK-positive non-small cell lung cancer and blood markers for prognosis and efficacy: a retrospective cohort study. *Transl Lung Cancer Res*, 11(12), 2521–2538.
- Kaczmarek, T., Kavanagh, D. J., Lazzarini, P. A., Warnock, J., & Van Netten, J. J.** (2022). Training diabetes healthcare practitioners in motivational interviewing: a systematic review. *Health Psychol Rev*, 16(3), 430–449.
- Kapeleris, J., Müller Bark, J., Ranjit, S., Irwin, D., Hartel, G., Warkiani, M. E., . . . Punyadeera, C.** (2022). Prognostic value of integrating circulating tumour cells and cell-free DNA in non-small cell lung cancer. *Heliyon*, 8(7), e09971.
- Karunathilaka, A., Halstrom, S., Price, P., Holt, M., Lutzky, V. P., Doolan, D. L., . . . Ratnatunga, C. N.** (2022). CD161 expression defines new human  $\gamma\delta$  T cell subsets. *Immun Ageing*, 19(1), 11.
- Kazmer, S. T., Hartel, G., Robinson, H., Richards, R. S., Yan, K., van Hal, S. J., . . . Hill, M. M.** (2022). Pathophysiological Response to SARS-CoV-2 Infection Detected by Infrared Spectroscopy Enables Rapid and Robust Saliva Screening for COVID-19. *Biomedicines*, 10(2).
- Kelk, D., Logan, J., Andersen, I., Gutierrez Cardenas, D., Bell, S. C., Wainwright, C. E., . . . Fantino, E.** (2022). Neutrophil respiratory burst activity is not exaggerated in cystic fibrosis. *J Cyst Fibros*, 21(4), 707–712.
- Kelly, A-M., Chu, K. H., Kuan, W. S., Keijzers, G., Kinnear, F. B., Cardozo-Ocampo, A.** (2022). Is headache during pregnancy a higher risk for serious secondary headache cause? A HEAD study report. *Emergency Medicine Australasia*, 34(4), 629–631.
- Khorramshahi Bayat, M., Ngo, L., Mulligan, A., Chan, W., McKenzie, S., Hay, K., & Ranasinghe, I.** (2022). The association between urinary sodium concentration (UNa) and outcomes of acute heart failure: a systematic review and meta-analysis. *Eur Heart J Qual Care Clin Outcomes*, 8(7), 709–721.
- Kok, P. S., Forde, P. M., Hughes, B., Sun, Z., Brown, C., Ramalingam, S., . . . Nowak, A. K.** (2022). Protocol of DREAM3R: DuRvalumab with chEmotherapy as first-line treatment in advanced pleural Mesothelioma—a phase 3 randomised trial. *BMJ Open*, 12(1), e057663.
- Kong, B. Y., Carter, C., Nowak, A. K., Hovey, E., Lwin, Z., Haghighi, N., . . . Foote, M.** (2022). Barriers and potential solutions to international collaboration in neuro-oncology clinical trials: Challenges from the Australian perspective. *Asia Pac J Clin Oncol*, 18(3), 259–266.
- Kularatna, S., Sharma, P., Senanayake, S., McCreanor, V., Hewage, S., Ngo, L., . . . Parsonage, W.** (2022). Long-term Patient and Health Service Outcomes of Ablation and Antiarrhythmic Drugs in Atrial Fibrillation: A Comparative Systematic Review. *Cardiol Rev*.
- Kurup, C., Burston, A., & Miles, S.** (2022). Transition of internationally qualified nurses in Australia: Meta-synthesis of qualitative studies. *Collegian*. doi:https://doi.org/10.1016/j.collegn.2022.10.002

## Publications continued...

- Kusuma, G. D., Li, A., Zhu, D., McDonald, H., Inocencio, I. M., Chambers, D. C., . . . Lim, R.** (2022). Effect of 2D and 3D Culture Microenvironments on Mesenchymal Stem Cell-Derived Extracellular Vesicles Potencies. *Frontiers in Cell and Developmental Biology*, 10. doi:10.3389/fcell.2022.819726
- Lazzarini, P. A., Raspovic, A., Prentice, J., Commons, R. J., Fitridge, R. A., Charles, J., . . . Twigg, S. M.** (2022). Guidelines development protocol and findings: part of the 2021 Australian evidence-based guidelines for diabetes-related foot disease. *J Foot Ankle Res*, 15(1), 28.
- Leighl, N. B., Laurie, S. A., Goss, G. D., Hughes, B. G. M., Stockler, M., Tsao, M. S., . . . Vera-Badillo, F.** (2022). CCTG BR34: A Randomized Phase 2 Trial of Durvalumab and Tremelimumab With or Without Platinum-Based Chemotherapy in Patients With Metastatic NSCLC. *J Thorac Oncol*, 17(3), 434–445
- Li Bassi, G., Gibbons, K., Suen, J. Y., Dalton, H. J., White, N., Corley, A., . . . Zakhary, B.** (2022). Early short course of neuromuscular blocking agents in patients with COVID-19 ARDS: a propensity score analysis. *Critical Care*, 26(1), 141.
- Lloyd, E. C., Cogen, J. D., Maples, H., Bell, S. C., & Saiman, L.** (2022). Antimicrobial Stewardship in Cystic Fibrosis. *J Pediatric Infect Dis Soc*, 71(Supplement\_2), S53–s61.
- Louis, M., Hwang, R., Sabapathy, S., Roberts, L. A., & Morris, N. R.** (2022). Small Muscle Mass Training in Heart Failure: A Scoping Review of The Literature. *J Cardiopulm Rehabil Prev*, 42(5), 373–375.
- Lovegrove, J., Fulbrook, P., Miles, S., & Steele, M.** (2022). Effectiveness of interventions to prevent pressure injury in adults admitted to intensive care settings: A systematic review and meta-analysis of randomised controlled trials. *Aust Crit Care*, 35(2), 186–203.
- Lovegrove, J., Fulbrook, P., & Miles, S. J.** (2022). Use of a Sacral Foam Dressing to Prevent Pressure Injury in At-Risk Subacute Hospitalized Older Adults: A Pilot Randomized Controlled Trial. *J Wound Ostomy Continence Nurs*, 49(4), 322–330.
- Lovegrove, J., Fulbrook, P., Miles, S. J., Steele, M., Liu, X. L., Zhang, L., & Cobos Vargas, A.** (2022). Translation and piloting of the Chinese Mandarin version of an intensive care-specific pressure injury risk assessment tool (the COMHON Index). *Int J Nurs Sci*, 9(2), 169–178.
- Lucas, S., Raspin, K., Chambers, D., Glaspole, I., Reynolds, P., Schwartz, D., . . . Dickinson, J.** (2022). Polygenic risk scores in familial IPF implicates rare variants. *Respirology*, 27, 115–115.
- Luong, M., Silveira, F. P., Morrissey, O., Danziger-Isakov, L., Verschuuren, E., Wolfe, C. R., . . . Husain, S.** (2022). Delphipanel on Antimicrobial Stewardship and Management of Clinical Syndromes in Thoracic Organ Transplants and Mechanical Circulatory Device Recipients. *Journal of Heart and Lung Transplantation*, 41(4), S398–S398.
- Mackintosh, J. A., Duhig, E.E., Reddy, T., Stephens, E.K.H., Fong, K.M. and Yang, I.A.** (2022). Interstitial abnormalities from solid and haematological cancers. In M. A. Martinez-Garcia, Gaga, M., Fong, K.M., Calverley, P.M.A. (Ed.), *Lung diseases and cancer* (pp. 225–240). Sheffield, United Kingdom: European Respiratory Society.
- Mackintosh, J. A., & Chambers, D. C.** (2022). Genomic lung allograft surveillance – is it primer time? *Journal of Heart and Lung Transplantation*, 41(4), 467–469.
- Mackintosh, J. A., & Chambers, D. C.** (2022). Towards truly 'idiopathic' pulmonary fibrosis. *Respirology*, 27(9), 682–683.
- Madden, D. E., Baird, T., Bell, S. C., McCarthy, K. L., Price, E. P., & Sarovich, D. S.** (2022). Keeping up with the pathogens: Improved antimicrobial resistance detection and prediction in *Pseudomonas aeruginosa*. *medRxiv*, doi:10.1101/2022.08.11.22278689
- Madden, D. E., McCarthy, K. L., Bell, S. C., Olagoke, O., Baird, T., Neill, J., . . . Price, E. P.** (2022). Rapid fluoroquinolone resistance detection in *Pseudomonas aeruginosa* using mismatch amplification mutation assay-based real-time PCR. *J Med Microbiol*, 71(10).
- Madden, D. E., Olagoke, O., Baird, T., Neill, J., Ramsay, K. A., Fraser, T. A., . . . Price, E. P.** (2022). Express Yourself: Quantitative Real-Time PCR Assays for Rapid Chromosomal Antimicrobial Resistance Detection in *Pseudomonas aeruginosa*. *Antimicrob Agents Chemother*, 66(5), e0020422.
- Malfertheiner, S. F., Brodie, D., Burrell, A., Taccone, F. S., Broman, L. M., Shekar, K., . . . Malfertheiner, M. V.** (2022). Extracorporeal membrane oxygenation during pregnancy and peripart. An international retrospective multicenter study. *Perfusion*, doi:10.1177/02676591221090668
- Mao, D., Flynn, D. E., Yerkovich, S., Tran, K., Gurunathan, U., & Chandrasegaram, M. D.** (2022). Effect of obesity on post-operative outcomes following colorectal cancer surgery. *World J Gastrointest Oncol*, 14(7), 1324–1336.
- Marathe, S. P., Hussein, N., Wallace, F. R. O., Bell, D., Yong, M., Betts, K. S., . . . Alphonso, N.** (2022). Comparison of homografts and bovine jugular vein conduits in the pulmonary position in patients <20 years of age. *J Thorac Cardiovasc Surg*, 164(3), 752–762.e758.
- Marshall, H. M., Vemula, M., Hay, K., McCaul, E., Passmore, L., Yang, I. A., . . . Fong, K. M.** (2022). Active screening for lung cancer increases smoking abstinence in Australia. *Asia Pac J Clin Oncol*.
- Martí, J.-D., Martínez-Alejos, R., Pilar-Díaz, X., Yang, H., Pagliara, F., Battaglini, D., . . . Torres, A.** (2022). Effects of Mechanical Insufflation-Exsufflation With Different Pressure Settings on Respiratory Mucus Displacement During Invasive Ventilation. *Respiratory Care*, respcare.10173.
- Martinez-Garcia, M.A., Gaga, M., & Fong, K.F. eds.** *Lung Diseases and Cancer*. (2022). doi:10.1183/2312508X.erm9822; ISBN: 978-1-84984-155-9
- Martinez, F. J., Wijnsbeek, M. S., Raghu, G., Flaherty, K. R., Maher, T. M., Wuys, W. A., . . . Richeldi, L.** (2022). Phase 2B Study of Inhaled RVT-1601 for Chronic Cough in Idiopathic Pulmonary Fibrosis A Multicenter, Randomized, Placebo-controlled Study (SCENIC Trial). *American Journal of Respiratory and Critical Care Medicine*, 205(9), 1084–1092.

- Mattison, G., Canfell, O., Forrester, D., Dobbins, C., Smith, D., Töyräs, J., & Sullivan, C.** (2022). The Influence of Wearables on Health Care Outcomes in Chronic Disease: Systematic Review. *J Med Internet Res*, 24(7), e36690.
- Mayall, J., Pillar, A., Daly, K., Brown, A., Essilfie, A., Gomez, H., . . . Horvat, J.** (2022). Crucial role of iron metabolism in determining outcomes of influenza A virus infection and disease. *European Respiratory Journal*, 60(suppl 66), 877.
- McNamee, A. P., Kuck, L., & Simmonds, M. J.** (2022). Bovine erythrocytes are poor surrogates for human when exposed to sublethal shear stress. *Int J Artif Organs*, 45(6), 580–587.
- Menz, H. B., Williams, C. M., Lazzarini, P. A., Gordon, J., & Harrison, C.** (2022). Foot, ankle, and leg problems in Australian primary care: consultation patterns, management practices, and costs. *Fam Pract*. doi:10.1093/fampra/cmab122
- Miles, S. J., Fulbrook, P., & Williams, D. M.** (2022). Skin tear prevalence in an Australian acute care hospital: A 10-year analysis. *Int Wound J*, 19(6), 1418–1427.
- Miller, R. A., Luke, J. J., Hu, S., Mahabhashyam, S., Jones, W. B., Marron, T., . . . Willingham, S. B.** (2022). Anti-CD73 antibody activates human B cells, enhances humoral responses and induces redistribution of B cells in patients with cancer. *J Immunother Cancer*, 10(12).
- Moore, I., Wrobel, J., Jackson, D., Mackintosh, J., Glaspole, I., Grainge, C., . . . Corte, T.** (2022). Australia and New Zealand interstitial lung disease registry (ANZ ILD) 2021 update-Progress during the pandemic. *Respirology*, 27, 177–177.
- Moore, J. P. R., Shehabi, Y., Reade, M. C., Bailey, M., Fraser, J. F., Murray, L., . . . Singer, M.** (2022). Stress response during early sedation with dexmedetomidine compared with usual-care in ventilated critically ill patients. *Critical Care*, 26(1), 359.
- Morton, J. I., Lazzarini, P. A., Polkinghorne, K. R., Carstensen, B., Magliano, D. J., & Shaw, J. E.** (2022). The association of attained age, age at diagnosis, and duration of type 2 diabetes with the long-term risk for major diabetes-related complications. *Diabetes Res Clin Pract*, 190, 110022.
- Morton, J. I., Lazzarini, P. A., Shaw, J. E., & Magliano, D. J.** (2022). Trends in the Incidence of Hospitalization for Major Diabetes-Related Complications in People With Type 1 and Type 2 Diabetes in Australia, 2010–2019. *Diabetes Care*, 45(4), 789–797.
- Mudge, A. M., McRae, P., Banks, M., Blackberry, I., Barrimore, S., Endacott, J., . . . Inouye, S. K.** (2022). Effect of a Ward-Based Program on Hospital-Associated Complications and Length of Stay for Older Inpatients: The Cluster Randomized CHERISH Trial. *JAMA Intern Med*, 182(3), 274–282.
- Myers, J., Morris, N., Chambers, D., Yerkovich, S., Hopkins, P., & Walsh, J.** (2022). Factors influencing physical activity levels in chronic obstructive pulmonary disease. *Respirology*, 27, 131–131.
- Naing, P., Lau, K., Wiemers, P., Mulligan, A., Burrage, M. K., & Scalia, G. M.** (2022). Acute Bioprosthetic Mitral Valve Failure Diagnosed Using Point-of-Care Ultrasound Leading to Prompt Treatment and Good Outcome. *CASE (Phila)*, 6(6), 281–283.
- Nair, L., Senanayake, E., & Thomson, B.** (2022). Simple left ventricular apical cannulation for temporary mechanical circulatory support. *J Card Surg*, 37(6), 1787–1792.
- Nair, L., Senanayake, E., & Thomson, B.** (2022). Temporary biventricular mechanical circulatory support utilizing a simple left ventricular apical cannulation technique. *J Card Surg*, 37(11), 3967–3972.
- Neaves, B., Bell, J. J., & McCray, S.** (2022). Impact of room service on nutritional intake, plate and production waste, meal quality and patient satisfaction and meal costs: A single site pre-post evaluation. *Nutr Diet*, 79(2), 187–196.
- Ngo, L., Ali, A., Ganesan, A., Woodman, R., Adams, R., & Ranasinghe, I.** (2022). Ten-year trends in mortality and complications following catheter ablation of atrial fibrillation. *Eur Heart J Qual Care Clin Outcomes*, 8(4), 398–408.
- Ngo, L., Ali, A., Ganesan, A., Woodman, R., Krumholz, H. M., Adams, R., & Ranasinghe, I.** (2022). Institutional Variation in 30-Day Complications Following Catheter Ablation of Atrial Fibrillation. *J Am Heart Assoc*, 11(4), e022009.
- Ngo, L., Denman, R., & Ranasinghe, I.** (2022). Leadless Pacing—Uncertainties Remain About Safety and Efficacy. *JAMA Cardiol*, 7(3), 361.
- Ngo, P., Goldsbury, D. E., Karikios, D., Yap, S., Yap, M. L., Egger, S., . . . Weber, M. F.** (2022). Lung cancer treatment patterns and factors relating to systemic therapy use in Australia. *Asia Pac J Clin Oncol*, 18(5), e235–e246.
- Nguyen, M., Segelov, E., Goldstein, D., Pavlakis, N., Shapiro, J., Price, T. J., . . . Roy, A. C.** (2022). Update on optimal management for pancreatic cancer: expert perspectives from members of the Australasian Gastrointestinal Trials Group (AGITG) with invited international faculty. *Expert Rev Anticancer Ther*, 22(1), 39–51.
- Odo, D. B., Yang, I. A., Dey, S., Hammer, M. S., van Donkelaar, A., Martin, R. V., . . . Knibbs, L. D.** (2022). Ambient air pollution and acute respiratory infection in children aged under 5 years living in 35 developing countries. *Environ Int*, 159, 107019.
- O'Farrell, H. E., Bowman, R. V., Fong, K. M., & Yang, I. A.** (2022). Plasma Extracellular Vesicle miRNA Profiles Distinguish Chronic Obstructive Pulmonary Disease Exacerbations and Disease Severity. *Int J Chron Obstruct Pulmon Dis*, 17, 2821–2833.
- Olive, G. N., Yang, I. A., Marshall, H., Bowman, R. V., & Fong, K. M.** (2022). More than meets the eye. *Eur Respir J*, 60(3). doi:10.1183/13993003.00763-2022
- Olson, R. E., Goldsmith, L., Winter, S., Spaulding, E., Dunn, N., Mander, S., . . . Marshall, H. M.** (2022). Emotions and lung cancer screening: Prioritising a humanistic approach to care. *Health Soc Care Community*, 30(6), e5259–e5269.

## Publications continued...

**Olson, R. E., Wen, E. X., Staines, Z., Goh, F., & Marshall, H. M.** (2022). Imperatives of health or happiness: Narrative constructions of long-term smoking after undergoing lung screening. *Health (London)*, doi:10.1177/13634593221099108

**Lazzarini, P. A.** (2022). Commentary on: Mobility advice to help prevent re-ulceration in diabetes. *Foot and Ankle Quarterly* 33, 12–14.

**Pandeya, N., Huang, N., Jiyad, Z., Plasmeijer, E. I., Way, M., Isabel, N., . . . Green, A. C.** (2022). Basal cell carcinomas in organ transplant recipients versus the general population: clinicopathologic study. *Archives of Dermatological Research*. doi:10.1007/s00403-022-02403-6

**Patel, A., Ngo, L., Woodman, R. J., Aliprandi-Costa, B., Bennetts, J., Psaltis, P. J., & Ranasinghe, I.** (2022). Institutional variation in early mortality following isolated coronary artery bypass graft surgery. *Int J Cardiol*, 362, 35–41.

**Pearse, I., Corley, A., Suen, J., & Fraser, J. F.** (2022). Extracorporeal Membrane Oxygenation Cannulae-related Infection: Diagnostic Difficulties and Potential Prevention. *ASAIO Journal*, 68(2), e34–e35.

**Pearse, I., Marsh, N., Rickard, C. M., Ullman, A. J., Larsen, E., Pelecanos, A., . . . Corley, A.** (2022). Polyhexamethylene biguanide discs versus unmedicated dressings for prevention of central venous catheter-associated infection in the intensive care unit: A pilot randomised controlled trial to assess protocol safety and feasibility. *Aust Crit Care*, 35(5), 512–519.

**Peng, Y., Ngo, L., Hay, K., Alghamry, A., Colebourne, K., & Ranasinghe, I.** (2022). Long-Term Survival, Stroke Recurrence, and Life Expectancy After an Acute Stroke in Australia and New Zealand From 2008–2017: A Population-Wide Cohort Study. *Stroke*, 53(8), 2538–2548.

**Phipps, G., Sowden, N., Mikkelsen, K., Fincher, G., Ranasinghe, I. & Chan, W.** (2022). Benefits of early diuretic administration in the emergency department presentations of acute heart failure. *Journal of Heart Lung & Circulation*, 31(3), S71.

**Pillar, A., Brown, A., Mayall, J., Weaver, J., Essilfie, A., Hoefel, G., . . . Horvat, J.** (2022). Relationship between interleukin-13 and transferrin receptor-1 responses in the pathogenesis of asthma. *European Respiratory Journal*, 60(suppl 66), 4211.

**Premraj, L., Brown, A., Burrell, A., Fraser, J. F., & Pilcher, D.** (2022). Hyperoxia during venoarterial ECMO: Culprit or co-variate? A comment from the BLENDER investigators. *Critical Care*, 26(1), 345.

**Purtell, L., Whiting, E., Muller, K., McSherry, C., Gillespie, K., Havas, K., & Bonner, A.** (2022). Evaluation of a General Practitioner with Special Interest model: lessons learned from staff experiences. *Aust J Prim Health*, 28(4), 330–337.

**Quigley, M., Morton, J. I., Lazzarini, P. A., Zoungas, S., Shaw, J. E., & Magliano, D. J.** (2022). Trends in diabetes-related foot disease hospitalizations and amputations in Australia, 2010 to 2019. *Diabetes Res Clin Pract*, 194, 110189.

**Rad, H. S., Shiravand, Y., Radfar, P., Ladwa, R., Perry, C., Han, X., . . . Kulasinghe, A.** (2022). Understanding the tumor microenvironment in head and neck squamous cell carcinoma. *Clin Transl Immunology*, 11(6), e1397.

**Raghu, G., Mouded, M., Chambers, D. C., Martinez, F. J., Richeldi, L., Lancaster, L. H., . . . Behr, J.** (2022). A Phase IIb Randomized Clinical Study of an Anti- $\alpha\text{v}\beta 6$  Monoclonal Antibody in Idiopathic Pulmonary Fibrosis. *American journal of respiratory and critical care medicine*, 206(9), 1128–1139.

**Ramsey, B. W., & Bell, S. C.** (2022). Cystic Fibrosis: A Disease in Transformation, yet More Work to Be Done! *American journal of respiratory and critical care medicine*, 205(5), 487–489.

**Rathnayake, A., Chang, O., & Mejia, R.** (2022). Acute Type-A dissection in a 15-year-old Australian indigenous male – a case report. *J Surg Case Rep*, 2022(12), rjac607.

**Rathnayake, A., Chang, O., Narita, T., & Mejia, R.** (2022). Aortic mural thrombus in a normal ascending aorta. *ANZ J Surg*, 92(11), 3082–3083.

**Ratnatunga, C. N., Tungatt, K., Proietti, C., Halstrom, S., Holt, M. R., Lutzky, V. P., . . . Miles, J. J.** (2022). Characterizing and correcting immune dysfunction in non-tuberculous mycobacterial disease. *Front Immunol*, 13, 1047781.

**Raza, S., & Eckhaus, J.** (2022). Does surgical fixation improve pain and quality of life in patients with non-flail rib fractures? A best evidence topic review. *Interact Cardiovasc Thorac Surg*, 35(3). doi:10.1093/icvts/ivac214

**Rischin, D., Harrington, K. J., Greil, R., Soulières, D., Tahara, M., de Castro, G., Jr., . . . Burtneess, B.** (2022). Pembrolizumab alone or with chemotherapy for recurrent or metastatic head and neck squamous cell carcinoma: Health-related quality-of-life results from KEYNOTE-048. *Oral Oncol*, 128, 105815.

**Roberts, T., Horner, D. E., Chu, K., Than, M., Kelly, A.-M., Klim, S., . . . Laribi, S.** (2022). Thunderclap headache syndrome presenting to the emergency department: an international multicentre observational cohort study. *Emergency Medicine Journal*, 39(11), 803–809.

**Rozencwajg, S., Wu, E. L., Heinsar, S., Stevens, M., Chinchilla, J., Fraser, J. F., & Pauls, J. P.** (2022). A mock circulation loop to evaluate differential hypoxemia during peripheral venoarterial extracorporeal membrane oxygenation. *Perfusion*, 02676591211056567.

**Ruseckaite, R., Salimi, F., Earnest, A., Bell, S. C., Douglas, T., Frayman, K., . . . Ahern, S.** (2022). Survival of people with cystic fibrosis in Australia. *Sci Rep*, 12(1), 19748.

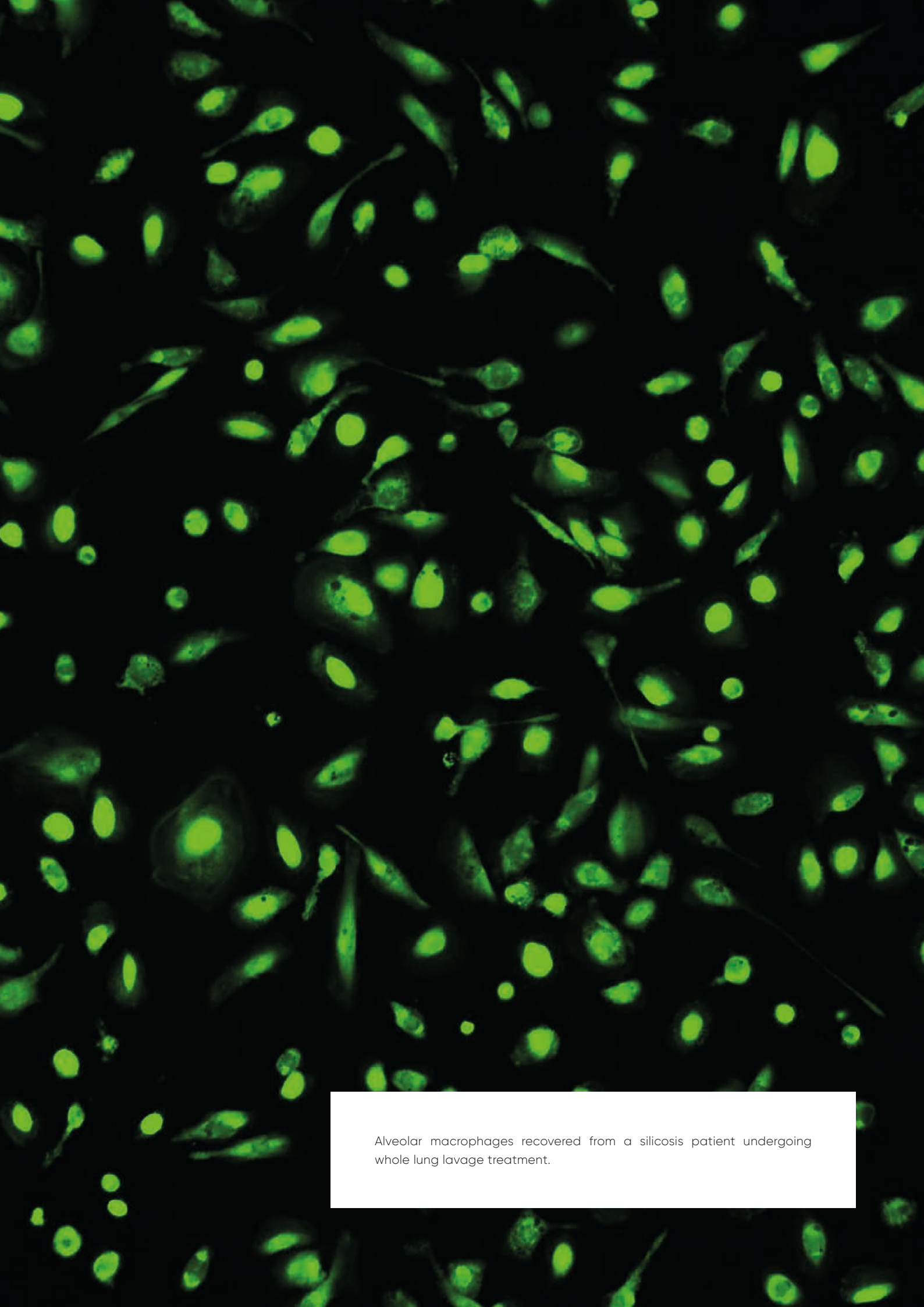
**Rushton, A., Bauer, J., Young, A., Keller, H., & Bell, J.** (2022). Barriers and Enablers to Delegating Malnutrition Care Activities to Dietitian Assistants. *Nutrients*, 14(5). doi:10.3390/nu14051037

**Sadeghirad, H., Monkman, J., Mehdi, A. M., Ladwa, R., O'Byrne, K., Hughes, B. G. M., & Kulasinghe, A.** (2022). Dissecting Tissue Compartment-Specific Protein Signatures in Primary and Metastatic Oropharyngeal Squamous Cell Carcinomas. *Front Immunol*, 13, 895513.

- Santucci, J., Tacey, M., Thomson, B., Michael, M., Wong, R., Shapiro, J., . . . Lee, B.** (2022). Impact of first-line FOLFIRINOX versus Gemcitabine/Nab-Paclitaxel chemotherapy on survival in advanced pancreatic cancer: Evidence from the prospective international multicentre PURPLE pancreatic cancer registry. *Eur J Cancer*, 174, 102-112.
- Sato, K., Chan, J., Appadurai, V., Obonyo, N., See Hoe, L., Suen, J. Y., & Fraser, J. F.** (2022). Exploration of the Utility of Speckle-Tracking Echocardiography During Mechanical Ventilation and Mechanical Circulatory Support. *Critical Care Explorations*, 4(4), e0666.
- Sato, K., White, N., Fanning, J. P., Obonyo, N., Yamashita, M. H., Appadurai, V., . . . Fraser, J. F.** (2022). Impact of renin-angiotensin-aldosterone system inhibition on mortality in critically ill COVID-19 patients with pre-existing hypertension: a prospective cohort study. *BMC Cardiovascular Disorders*, 22(1), 123.
- Savage, M. L., Hay, K., Anderson, B., Scalia, G., Burstow, D., Murdoch, D., . . . Raffel, O. C.** (2022). The Prognostic Value of Echocardiographic Wall Motion Score Index in ST-Segment Elevation Myocardial Infarction. *Crit Care Res Pract*, 2022, 8343785.
- Savage, M. L., Hay, K., Murdoch, D. J., Doan, T., Bosley, E., Walters, D. L., . . . Raffel, O. C.** (2022). Clinical Outcomes in Pre-Hospital Activation and Direct Cardiac Catheterisation Laboratory Transfer of STEMI for Primary PCI. *Heart Lung Circ*, 31(7), 974-984.
- Savage, M. L., Hay, K., Murdoch, D. J., Walters, D. L., Denman, R., Ranasinghe, I., & Raffel, C.** (2022). Sex differences in time to primary percutaneous coronary intervention and outcomes in patients presenting with ST-segment elevation myocardial infarction. *Catheter Cardiovasc Interv*, 100(4), 520-529.
- Sharma, V., Doig, F., Maxwell, R., Grout, D., Saeed, U., & Wall, D.** (2022). Anomalous Right Coronary Artery Originating From the Pulmonary Artery (ARCAPA): A Rare Presentation in the Fifth Decade. *World J Pediatr Congenit Heart Surg*, 21501351221141437.
- Sharma, V., Simpson, F. H., Hwang, J. K., & Thomson, B.** (2022). Cardiac Autotransplantation and Commando Operation for Complex Multivalvular Infective Endocarditis. *Ann Thorac Surg*. doi:10.1016/j.athoracsur.2022.06.010
- Sherrard, L. J., Wee, B. A., Duplancic, C., Ramsay, K. A., Dave, K. A., Ballard, E., . . . Bell, S. C.** (2022). Emergence and impact of oprD mutations in *Pseudomonas aeruginosa* strains in cystic fibrosis. *J Cyst Fibros*, 21(1), e35-e43.
- Silva, T. D., Voisey, J., Hopkins, P., Apte, S., Chambers, D., & O'Sullivan, B.** (2022). Markers of rejection of a lung allograft: State of the art. *Biomarkers in Medicine*, 16(6), 483-498.
- Smith, D. J., & Bell, S. C.** (2022). Next steps on managing pulmonary exacerbations: Is the future less, shorter and or more targeted treatments? *J Cyst Fibros*, 21(5), 739-740.
- Smith, S., Brand, M., Harden, S., Briggs, L., Leigh, L., Brims, F., . . . Stirling, R. G.** (2022). Development of an Australia and New Zealand Lung Cancer Clinical Quality Registry: a protocol paper. *BMJ Open*, 12(8), e060907.
- Sneath, E., Tippet, V., Bowman, R. V., Fong, K. M., Hazell, W., Masel, P. J., . . . Yang, I. A.** (2022). The clinical journey of patients with a severe exacerbation of chronic obstructive pulmonary disease (COPD): from the ambulance to the emergency department to the hospital ward. *J Thorac Dis*, 14(12), 4601-4613.
- Sullivan, D. P.** (2022). Furthering the understanding of behavioral aspects of sleep and headaches: another piece of the puzzle. *Sleep*, 45(5). doi:10.1093/sleep/zsac012
- Sullivan, D. P., Martin, P. R., Boschen, M. J., & Bandarian-Balooch, S.** (2022). Dysfunctional sleep beliefs and behaviours: Psychological factors in sleep-related headaches. *Behav Res Ther*, 153, 104094.
- Sutharsan, S., McKone, E. F., Downey, D. G., Duckers, J., MacGregor, G., Tullis, E., . . . Mall, M. A.** (2022). Efficacy and safety of elexacaftor plus tezacaftor plus ivacaftor versus tezacaftor plus ivacaftor in people with cystic fibrosis homozygous for F508del-CFTR: a 24-week, multicentre, randomised, double-blind, active-controlled, phase 3b trial. *Lancet Respir Med*, 10(3), 267-277.
- Sutt, A-L., Cornwell, P. L., Hay, K., Fraser, J. F., & Rose, L.** (2022). Communication Success and Speaking Valve Use in Intensive Care Patients Receiving Mechanical Ventilation. *American Journal of Critical Care*, 31(5), 411-415.
- Tammemägi, M. C., Ruparel, M., Tremblay, A., Myers, R., Mayo, J., Yee, J., . . . Lam, S.** (2022). USPSTF2013 versus PLCom2012 lung cancer screening eligibility criteria (International Lung Screening Trial): interim analysis of a prospective cohort study. *Lancet Oncol*, 23(1), 138-148.
- Tan, H. L., Aplin, T., McAuliffe, T., & Gullo, H.** (2022). An exploration of smartphone use by, and support for people with vision impairment: a scoping review. *Disabil Rehabil Assist Technol*, 1-26.
- Teoh, A. K. Y., Holland, A. E., Morisset, J., Flaherty, K. R., Wells, A. U., Walsh, S. L. F., . . . Zappala, C.** (2022). Essential Features of an Interstitial Lung Disease Multidisciplinary Meeting An International Delphi Survey. *Annals of the American Thoracic Society*, 19(1), 66-73.
- Tie, J., Cohen, J. D., Lahouel, K., Lo, S. N., Wang, Y., Kosmider, S., . . . Gibbs, P.** (2022). Circulating Tumor DNA Analysis Guiding Adjuvant Therapy in Stage II Colon Cancer. *N Engl J Med*, 386(24), 2261-2272.
- Tiller, N. B., Wheatley-Guy, C. M., Fermoy, C. C., Robach, P., Ziegler, B., Gavet, A., . . . Stewart, G. M.** (2022). Sex-Specific Physiological Responses to Ultramarathon. *Med Sci Sports Exerc*, 54(10), 1647-1656.
- Toloo, G., Lim, D., Chu, K., Kinnear, F. B., Morel, D. G., Wraith, D., & FitzGerald, G.** (2022). Acceptability of emergency department triage nurse's advice for patients to attend general practice: A cross-sectional survey. *Emergency Medicine Australasia*, 34(3), 376-384.

## Publications continued...

- Urner, M., Barnett, A. G., Bassi, G. L., Brodie, D., Dalton, H. J., Ferguson, N. D., . . . Fan, E. (2022). Venovenous extracorporeal membrane oxygenation in patients with acute covid-19 associated respiratory failure: comparative effectiveness study. *BMJ*, 377, e068723.
- Vanka, K. S., Shukla, S., Gomez, H. M., James, C., Palanisami, T., Williams, K., . . . Horvat, J. C. (2022). Understanding the pathogenesis of occupational coal and silica dust-associated lung disease. *European Respiratory Review*, 31(165). doi:10.1183/16000617.0250-2021
- Visvalingam, R., Ridley, E., Barnett, A., Rahman, T., & Fraser, J. F. (2022). Nutrition adequacy, gastrointestinal, and hepatic function during extracorporeal membrane oxygenation in critically ill adults: A retrospective observational study. *Artificial Organs*, 46(9), 1886-1892.
- Vo, T., Boyd, J., & Wall, D. (2022). A rare association of bilateral atrial divisions and quadricuspid aortic valve. *J Card Surg*, 37(5), 1435-1438.
- Walweel, K., Boon, A. C., See Hoe, L. E., Obonyo, N. G., Pedersen, S. E., Diab, S. D., . . . Fraser, J. F. (2022). Brain stem death induces pro-inflammatory cytokine production and cardiac dysfunction in sheep model. *Biomed J*, 45(5), 776-787.
- Webb, K. A., Olagoke, O., Baird, T., Neill, J., Pham, A., Wells, T. J., . . . Price, E. P. (2022). Genomic diversity and antimicrobial resistance of *Prevotella* species isolated from chronic lung disease airways. *Microb Genom*, 8(2). doi:10.1099/mgen.0.000754
- Whiting, E., Scott, I. A., Hines, L., Ward, T., Burkett, E., Cranitch, E., . . . Hubbard, R. E. (2022). A whole-of-health system approach to improving care of frail older persons. *Aust Health Rev*. doi:10.1071/ah22170
- Wildi, K., Hyslop, K., Millar, J., Livingstone, S., Passmore, M. R., Bouquet, M., . . . Suen, J. Y. (2022). Validation of Messenger Ribonucleic Acid Markers Differentiating Among Human Acute Respiratory Distress Syndrome Subgroups in an Ovine Model of Acute Respiratory Distress Syndrome Phenotypes. *Frontiers in Medicine*, 9. doi:10.3389/fmed.2022.961336
- Wilkinson, S. A., Bell, J. J., Neaves, B., McCray, S. J., & Campbell, K. (2022). Qualitative analysis of the implementation of a hospital room service in a large metropolitan hospital: foundations for transformation. *JBIM Evid Implement*, 20(3), 199-208.
- Williams, C. M., Menz, H. B., Lazzarini, P. A., Gordon, J., & Harrison, C. (2022). Australian children's foot, ankle and leg problems in primary care: a secondary analysis of the Bettering the Evaluation and Care of Health (BEACH) data. *BMJ Open*, 12(7), e062063.
- Willson, K. A., Lim, D., Toloo, G.-S., FitzGerald, G., Kinnear, F. B., & Morel, D. G. (2022). Potential role of general practice in reducing emergency department demand: A qualitative study. *Emergency Medicine Australasia*, 34(5), 717-724.
- Woelk, V., Speck, P., Kaambwa, B., Fitridge, R. A., & Ranasinghe, I. (2022). Incidence and causes of early unplanned readmission after hospitalisation with peripheral arterial disease in Australia and New Zealand. *Med J Aust*, 216(2), 80-86.
- Wong, A. S. K., Marwali, E. M., Maclaren, G., Ogino, M., Fraser, J., Chi Keung, P. L., . . . Sin, S. W. C. (2022). ECMO simulation training during a worldwide pandemic: The role of ECMO telesimulation. *Perfusion*, 02676591221093868.
- Woods, T. J., Ngo, L., Speck, P., Kaambwa, B., & Ranasinghe, I. (2022). Thirty-Day Unplanned Readmissions Following Hospitalisation for Atrial Fibrillation in Australia and New Zealand. *Heart Lung Circ*, 31(7), 944-953.
- Xia, Y., Eeles, E., Fripp, J., Pinski, D., Thomas, P., Latter, M., . . . Rose, S. (2022). Reduced cortical cholinergic innervation measured using [(18)F]-FE0BV PET imaging correlates with cognitive decline in mild cognitive impairment. *Neuroimage Clin*, 34, 102992.
- Yang, I. A., Shaw, J.G., Stephens, E.K.H., Chee, T.M., Duhig, E.E., Bowman, R.V., Olive, G.N., Marshall, H.M. and Fong, K.M. (2022). COPD: the risk of cancer and the impact on cancer care. (pp. 91-104) edited by In P. M. A. Calverley, Martinez-Garcia, M.A., Gaga, M., Fong, K.M. (Ed.), *Lung diseases and cancer* (pp. 91-104). Sheffield, United Kingdom: European Respiratory Society.
- Yang, I. A., Jenkins, C. R., & Salvi, S. S. (2022). Chronic obstructive pulmonary disease in never-smokers: risk factors, pathogenesis, and implications for prevention and treatment. *Lancet Respir Med*, 10(5), 497-511.
- You, K. H., Ahern, E., Wyld, D., Lwin, Z., & Roberts, N. (2022). Scoping to analyze oncology trial participation in Australia. *Semin Oncol*, 49(2), 178-181. doi:10.1053/j.seminoncol.2022.04.003
- You, K. H., Lwin, Z., Ahern, E., Wyld, D., & Roberts, N. (2022). Factors that influence clinical trial participation by patients with cancer in Australia: a scoping review protocol. *BMJ Open*, 12(4), e057675.
- Zhang, L. Y., Anderson, J., Higgins, N., Robinson, J., Francey, S., Burke, A., . . . Tay, G. (2022). Screening for obstructive sleep apnoea in patients with serious mental illness. *Australas Psychiatry*, 30(5), 615-618.
- Zhang, M., Chan, C. H. H., Pauls, J. P., Semenzin, C., Ainola, C., Peng, H., . . . Fraser, J. F. (2022). Investigation of heparin-loaded poly(ethylene glycol)-based hydrogels as anti-thrombogenic surface coatings for extracorporeal membrane oxygenation. *Journal of Materials Chemistry B*, 10(26), 4974-4983.
- Zhang, X., Ekanayake Weeramange, C., Hughes, B. G. M., Vasani, S., Liu, Z. Y., Warkiani, M. E., . . . Punyadeera, C. (2022). Application of circulating tumour cells to predict response to treatment in head and neck cancer. *Cell Oncol (Dordr)*, 45(4), 543-555.
- Zhang, Y., Cramb, S., McPhail, S. M., Pacella, R., van Netten, J. J., Cheng, Q., . . . Lazzarini, P. A. (2022). Multiple factors predict longer and shorter time-to-ulcer-free in people with diabetes-related foot ulcers: Survival analyses of a large prospective cohort followed-up for 24-months. *Diabetes Res Clin Pract*, 185, 109239.
- Zhang, Y., Zhang, M., Xu, X., Chan, C. H. H., Peng, H., Hill, D. J. T., . . . Whittaker, A. K. (2022). Anti-Fouling Surfaces for Extracorporeal Membrane Oxygenation by Surface Grafting of Hydrophilic Sulfoxide Polymers. *Biomacromolecules*, 23(10), 4318-4326.



Alveolar macrophages recovered from a silicosis patient undergoing whole lung lavage treatment.



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