

# RESEARCH REPORT 2023-2024







We, Barwon Health, acknowledge the Traditional Owners of the land, the Wadawurrung people of the Kulin Nation. We pay our respects to Elders past, present and emerging.

We thank the Traditional Owners for custodianship of the land and celebrate the continuing culture of the Wadawurrung people, acknowledging the memory of honourable ancestors.



## Be Proud

Barwon Health is committed to LGBTIQ+ inclusion



At Barwon Health we recognise that members of the LGBTIQ+ community and their biological and chosen families have unique needs.

### ALTERNATIVE FORMATS

Contact us if you need this information in an accessible format, please call 03 4215 1119 or email [comms@barwonhealth.org.au](mailto:comms@barwonhealth.org.au). This document is also available in PDF format from our website [www.barwonhealth.org.au/about-us/publications](http://www.barwonhealth.org.au/about-us/publications)

*Cover image: Barwon Health – Deakin University Clinical Trials Fellow Dr Jessica Green (mental health) and Dr Emmy Sneath (oncology)*

*Above: Jen Allen, Adrian Costa Clinical Trials Centre (ACCTC) Administrator*

# CONTENTS

<b>MESSAGE FROM THE CLINICAL AND CO-DIRECTOR OF RESEARCH</b>	<b>4</b>		
<b>BARWON HEALTH FOUNDATION MESSAGE</b>	<b>8</b>		
<b>BARWON HEALTH RESEARCH CELEBRATES DUALITY IN DISCOVERY</b>	<b>10</b>		
<b>RESEARCH DIRECTORATE REPORT</b>	<b>12</b>		
<b>RESEARCH COMMITTEES</b>	<b>16</b>		
<i>Meet our RAC Consumer Representative, Barry Comben OAM</i>	17		
<b>RESEARCH ACTIVITY</b>	<b>18</b>		
<b>BARWON HEALTH RESEARCH GROUP NEWS AND REPORTS</b>	<b>22</b>		
Allied Health Research and Translation	23	General Surgery	43
<i>Researcher Profile: Rupert Sangster, Allied Health</i>	24	Infectious Diseases	44
<i>Research News: Announcing our first Clinician Scientist Pathway Scholarship recipient</i>	25	<i>Research News: RSV vaccine trialled at Barwon Health approved for pregnant women in US</i>	45
Anaesthetics	26	Institute for Mental and Physical Health and Clinical Translation (IMPACT)	46
Barwon South West Region Integrated Cancer Services (BSWRICS)	27	<i>Research News: IMPACT researchers named on 2023 Highly Cited Researchers list</i>	48
Cancer Services Trials Unit (CSTU)	28	<i>Research News: Congratulations to Western Alliance Emerging Researcher Grant recipients</i>	49
<i>Research News: Barwon Health to lead life-changing cancer clinical trials for regional Victorians</i>	29	Intensive Care	50
Cardiology	30	Neuroscience	52
<i>Research News: Cardiology Clinical Trials at Barwon Health leading the way</i>	31	Oral Health	53
Cardiothoracic Surgery	32	Orthopaedics: Barwon Centre for Orthopaedic Research and Education (B-CORE)	54
Centre for Quality and Patient Safety Research	33	<i>Researcher Profile: Prof Richard Page, B-CORE</i>	55
<i>Research News: Researching virtual experiences for real benefits</i>	34	Palliative Care	56
Child Health Research Unit at Barwon Health (ChERUB)	35	Pharmacy	57
<i>Research News: Barwon Infant Study researchers: is perinatal depression caused by inflammation?</i>	37	<i>Research News: Australian researchers present potential new treatment option for nicotine addiction</i>	58
Centre for Innovation in Infectious Disease and Immunology Research (CIIDIR)	38	<i>Researcher Profile: Dr Diana Bortoletto</i>	59
Ear, Nose, Throat, Head and Neck Surgery	39	Radiation Oncology	60
Emergency	40	Urology	61
<i>Researcher Profile: Dr Jeremy Furyk, Emergency Care</i>	41	<i>Research News: 2023 Barwon Health Research Symposium</i>	62
Endocrinology and Diabetes	42	<i>Researcher Profile: Nicola Lloyd, Allied Health</i>	64
		<i>Research News: Research in Geelong leads to a worldwide advance in diagnosing Whipple's Disease</i>	65

# MESSAGE FROM THE CLINICAL & CO-DIRECTOR OF RESEARCH

## WELCOME TO THE BARWON HEALTH RESEARCH REPORT FOR 2023-2024.

Research-active health services deliver better outcomes.

Research harnesses creativity that leads to innovation, fosters critical thinking to promote evidence-informed care, and helps us partner with our community to deliver person-centred outcomes. In this context, we launched our first Barwon Health Research Strategic Plan (2022-2032) with the vision that within ten years, Barwon Health will make internationally important research contributions that have a measurable impact on the health of our community and that we will achieve this by developing a strategic, well-governed, and synergistic research ecosystem that creates opportunities and drives change.

So, how are we travelling?

Our researchers published 612 peer-reviewed papers in the past 12 months, a fantastic achievement. Each represents hundreds, if not thousands, of hours of collective endeavour, culminating in a clear and concise report. Whether it is a new strategy for tackling nicotine addiction<sup>1</sup> or a co-designed approach to eliminating restrictive practices in mental health services,<sup>2</sup> our scientific papers attest to the diversity of our research and teamwork in pursuit of excellence. We led papers on improved shared decision-making in end-of-life care<sup>3</sup> and proposed creative strategies to prevent Buruli ulcer.<sup>4</sup> We generated exciting evidence regarding a Mediterranean-based dietary intervention in irritable bowel syndrome,<sup>5</sup> inflammation and perinatal depression<sup>6</sup> and the safety and immunogenicity of new vaccines for older Australians.<sup>7</sup> We reported on new diagnostic assays<sup>8</sup> and highlighted the opportunities to reduce emissions in our renewably powered health service.<sup>9</sup>

We established the Research Directorate alongside Barwon Health's clinical directorates, embedding research as core business. We implemented a cogent committee and reporting structure to improve the visibility of research, promote collaboration and provide a clear voice to our research teams. Within these committees, we've shared the fantastic breadth of research underway, recognising that understanding one another's work enables cross-pollination to drive innovation.

Barwon Health was the first health service in Victoria to be accredited against the National Clinical Trials Governance Framework (NCTGF). Rather than just an accreditation hurdle, the NCTGF is about genuinely integrating clinical trials in health service activities, reporting and governance. It emphasises the critical importance of organisational culture in driving a shared purpose. Guided by the Adrian Costa Clinical Trials Centre (ACCTC) team, we performed extremely well, which is a credit to our clinical trials teams and the organisation as a whole. Our trials teams are regularly selected as the first and lead site in multicentre trials, which reflects a reputation built over many years of excellence. Most importantly, they continue to provide access to novel therapies and contribute to findings that impact practice and policy locally and internationally.

Barwon Health has committed to become a signatory to *marra ngarrgoo, marra goorri*, the Victorian Aboriginal Health, Medical and Wellbeing Research Accord, which positions First Nations peoples' cultures, worldviews, belief systems and governance at the centre of the research process. The *marra ngarrgoo, marra goorri* vision is to improve the ethical standards of First Nations peoples' health, medical and wellbeing research in Victoria so that they align with First Nations principles of self-determination. Supporting this vision at Barwon Health over coming years means being directly guided by community on how our research can contribute to improved community health and wellbeing outcomes – a shared journey through which we build a shared understanding.

The Centre for Innovation in Infectious Diseases and Immunology Research (CIIDIR) got off to a cracking start, creating an exciting and collaborative focus for cutting-edge laboratory-based research, leveraging our world-class cohort studies and clinical trial biobanks.

We launched the Clinician Scientist Pathway with support from the Barwon Health Foundation and Percy Baxter Charitable Trust, and awarded our first scholarship to Catherine Williams, oncology physiotherapist. The Pathway is an innovative model to enable allied health, nursing, midwifery and medical clinicians to combine a PhD program with their clinical roles. In collaboration with Deakin University, we appointed three clinical trial fellows; Dr Emmy Sneath (oncology), Dr Jessica Green (mental health) and Dr Anna Anderson (endocrinology).



Four Barwon Health employees completed the Western Alliance STaRR mentored research training program, and 19 completed the STaRRlite workshop, which provided fundamental research knowledge and skills.

Nonetheless, we have a long way to go. Creating opportunities and building workforce capability will take time and concerted effort at all levels. Improving support for early-stage projects, funding applications, data management and analysis are crucial. Infrastructure and protected research time remain precious commodities. Systems to support partnering with consumers and strategic translation are at an early stage.

Barwon Health's continued investment in research is vital if we are to deliver on our vision. Strategic planning and a deliberate, transparent and reflective implementation process are critically important. So too, though, is culture, which comes from all of us. The Annual Report is an opportunity to celebrate one another's achievements and then reflect on where we are going and the part each of us can play in achieving the vision: creating change through outstanding research and improving health outcomes for our community.



**Professor Peter Vuillermin**  
Clinical Director of Research



**Erica Grundell**  
Co-Director of Research

## REFERENCES

1. Weeks GR, Gobarani RK, Abramson MJ, et al. Varenicline and Nicotine Replacement Therapy for Smokers Admitted to Hospitals: A Randomized Clinical Trial. *JAMA Netw Open* 2024;7(6):e2418120.
2. Bennetts SL, Pepin G, Moylan S, et al. Co-designing restrictive practice elimination: A systems thinking approach with mental health service users and practitioners in rural/regional Australia. *Int J Ment Health Nurs* [Internet] 2024; Available from: <http://dx.doi.org/10.1111/inm.13352>
3. Tierney AP, Milnes S, Phillips A, et al. Effect of a person-centred goals-of-care form and clinical communication training on shared decision-making and outcomes in an acute hospital: a prospective longitudinal interventional study. *Intern Med J* 2024;54(7):1197–204.
4. O'Brien DP, Blasdell K, Muhi S, et al. Is BCG vaccination of possums the solution to the Buruli ulcer epidemic in south-eastern Australia? *Med J Aust* 2023;219(11):520–2.
5. Staudacher HM, Mahoney S, Canale K, et al. Clinical trial: A Mediterranean diet is feasible and improves gastrointestinal and psychological symptoms in irritable bowel syndrome. *Aliment Pharmacol Ther* 2024;59(4):492–503.
6. Sominsky L, O'Hely M, Drummond K, et al. Pre-pregnancy obesity is associated with greater systemic inflammation and increased risk of antenatal depression. *Brain Behav Immun* 2023;113:189–202.
7. Athan E, Baber J, Quan K, et al. Safety and Immunogenicity of Bivalent RSVpreF Vaccine Coadministered With Seasonal Inactivated Influenza Vaccine in Older Adults. *Clin Infect Dis* 2024;78(5):1360–8.
8. Liew KC, Nguyen C, Waidyatillake NT, et al. A serological assay using *Tropheryma whipplei* antigens for the presumptive exclusion of Whipple disease. *Pathology* 2024;56(1):98–103.
9. Thanekar UD, Hensher M, Patrick R, Keel G, Forrester M. Exploring opportunities to reduce scope 3 emissions in renewably powered health services. *Med J Aust* 2024;220(11):550–3.

# KEY PARTNERSHIPS

*This year also saw the further development and strengthening of our well-established partnerships across Victoria, nationally and internationally.*

## DEAKIN UNIVERSITY

Barwon Health and Deakin University have a longstanding strategic partnership built on our shared commitment to improve health and wellbeing outcomes in the communities we serve. Our partnership is committed to a vibrant culture of education, training and research that leverages Barwon Health's clinical and healthcare expertise and Deakin's research excellence and innovative education. The partnership facilitates and supports critical capacity-building and quality-generating initiatives to meet the workforce and research demands of the future.

Together, we aim to:

- Innovate for community benefit in response to current and future sector challenges
- Operate as an integrated research-practice partnership that facilitates innovation and translation
- Build capacity in education, training and leadership, fostering an enquiring culture that builds workforce capacity and capability
- Leverage university and health service capability to achieve outcomes that are translated directly to improved care
- Leverage our respective networks and engagement with regional consumers and communities to support research
- Partner with the community to conduct and translate internationally significant population-based studies and clinical trials
- Prioritise strategic joint investments that support our aims to impact positively across the community

More than 3700 participants joined us for the weekly Barwon – Deakin Grand Round Seminar series throughout 2023 – 2024, showcasing diverse research and enabling direct clinician engagement with researchers. During the first half of 2024, we also explored the potential for a stronger future Barwon – Deakin alliance on clinical trials, work that is continuing in 2024-2025.

## WESTERN ALLIANCE

Western Alliance is a collaboration of health services, universities, and the Western Victoria Primary Health Network across western Victoria. It supports its members in improving the health of their communities through research-based and evidence-informed healthcare. Barwon Health is proud to be a governing partner of Western Alliance.

Our partnership with Western Alliance continues to provide benefits at an organisational level, as well as for Barwon Health employees, in terms of research funding, support and capability building. This approach supports improvements in care across the greater Barwon South West region.

## INSTITUTIONAL PARTNERS

Effective partnerships between public hospitals, research institutes and universities are vital in tackling the community's many health challenges. Barwon Health collaborates with organisations across Australia and internationally including:

- Burnet Institute
- Cancer Council Victoria
- Commonwealth Scientific and Industrial Research Organisation (CSIRO)
- Doherty Institute
- Florey Institute
- Latrobe University
- Monash University
- Murdoch Children's Research Institute (MCRI)
- University of Melbourne
- Victorian Comprehensive Cancer Centre (VCCC) Alliance
- Walter and Eliza Hall Institute of Medical Research (WEHI)



### BARWON SOUTH WEST COMMUNITY

Our community continues its strong support for Barwon Health research and the delivery and growth of research - as trial participants, consumer advisors, research project co-designers and focus group contributors. More than 2000 community members were participating in active clinical trials at Barwon Health in June 2024. We thank each participant for their input and support.



...ing contribution  
of the Costa family, in  
partnership with the  
Barwon Health Foundation,  
will bring the project to  
life, with a goal of creating  
a smarter, healthier future  
for our community.

In memory of the late Adrian Costa,  
this centre has been funded with  
a \$2.5 million donation from the  
Costa family for its establishment  
and to advance clinical trials at  
Barwon Health's future.



# BARWON HEALTH FOUNDATION MESSAGE





*The Barwon Health Foundation is most proud to be able to support medical research at Barwon Health from the provision of equipment, to supporting scholarships, to hosting events and providing for staff well-being. We see the investment as vitally important to further the advancement of knowledge.*

Our mantra at the Foundation is that “Geelong deserves the very best” ... and this rings true with support for research. The commitment becomes even more vital when applied to our regional communities, where unique health disparities and challenges often require localised solutions. In addition to improving individual health, research initiatives can help reduce the burden on our healthcare system by promoting prevention and early intervention, ultimately reducing long-term costs.

Most importantly for patients, research can also bring hope where previously there may have been none and help attract and retain the brightest minds to our region across a broad range of research areas.

Supporting medical research presents a unique and powerful opportunity for donors considering how to make a meaningful impact.

When individuals donate to local research efforts, they contribute directly to improving the health and well-being of their communities. This sense of local impact can be incredibly rewarding, as donors can witness firsthand how their contributions lead to tangible improvements in healthcare services and outcomes.

Furthermore, supporting medical research has long-term benefits. Donors who invest in these efforts contribute to a lasting legacy, knowing that their contributions can lead to discoveries that benefit not just their communities but the world. Breakthroughs in one community can have global implications, advancing medical knowledge in ways that affect healthcare systems everywhere. For donors, this is an opportunity to be part of something larger than themselves—an investment that transcends geographic boundaries.

**We would love to hear from you to discuss opportunities to support research at Barwon Health. Please reach out to [ftrainor@barwonhealth.org.au](mailto:ftrainor@barwonhealth.org.au).**



**Francis Trainor**  
Acting Executive Director  
Barwon Health Foundation

*Pictured: Members of the Costa family during a tour of the Adrian Costa Clinical Trials Centre (ACCTC), with senior Barwon Health Foundation and ACCTC representatives.*

# BARWON HEALTH RESEARCH CELEBRATES DUALITY IN DISCOVERY

*Barwon Health's Research Directorate commissioned local First Nations artist "leni", a proud Wotjobaluk woman living gratefully and respectfully on Wadawurrung Country, to create a unique artwork that is displayed at the Adrian Costa Clinical Trials Centre.*

'Duality in Discovery' is a beautiful work that pays respect to Traditional Owners and acknowledges the ongoing strength and resilience of First Nations peoples in sustaining the world's oldest living culture.

Barwon Health is proud to display this artwork as a demonstration of our commitment to enabling culturally safe and sensitive research that promotes positive health outcomes for First Nations Peoples.

## LENI (B. 1960S- ) DUALITY IN DISCOVERY, 2024

**Acrylic on canvas**

**Commissioned by Barwon Health  
Research Directorate  
Wellbeing, Healing, Culture,  
Connection, Working Together**

Each of the five coloured pods reflects on the key themes of Wellbeing, Healing, Culture, Connection, and Working Together. These are all intrinsic to the piece's power and balance, its success as a structured work, and its reminder of interconnectedness in not only an artist's concept but also the power of complex and collaborative research.

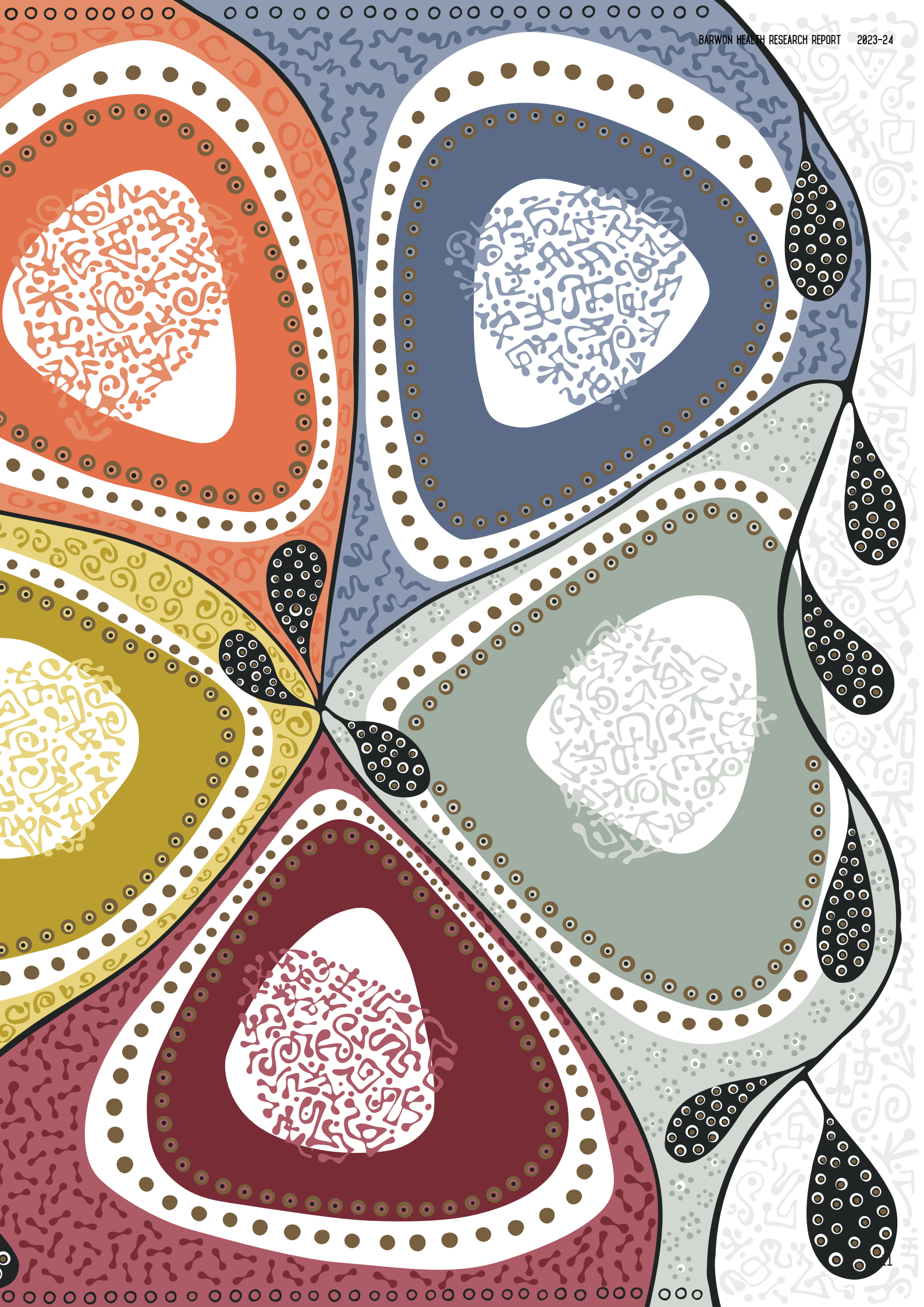
The black lines between each theme enable the separation of thoughts, yet the solder between them strengthens the other. The black pods reflect the oldest living cultural history within Country, and the white dots represent the latest knowledge that has been sewn across this sacred space. The gold highlights the immense worth when layered with respect and relevance to each other.

The "leni language" inside the pods stands as a testament to unspoken unknowns that exist and uplift through our drive to create and our endeavours to grow.

When working within the research process, there is a deep and untapped capacity for duality in discovery. One must always respect the wealth and wonder generated by acceptance and reverence.







# RESEARCH DIRECTORATE REPORT

## RESEARCH STRATEGIC PLAN UPDATE

We made progress on key Research Strategic Plan goals during 2023 – 2024, with strong support from our Barwon Health research community. Throughout the year, the Research Advisory Committee provided valuable advice to guide the Directorate's work, and we thank Committee members and invitees for their continuing commitment and contributions.

Research Directorate representation is now embedded into major Barwon Health Committees and the Directorate's Clinical/Co-Director structure aligns with other Barwon Health Directorates.

The oversight, guidance and support of the Research Executive Subcommittee ensured that all our activities were consistent with Research Strategic Plan goals.

The Clinical and Co-Director presented the Directorate's Research Strategic Plan annual update and outlook for the year ahead to the Barwon Health Board in October 2023 and welcomed the Board's support for foundational work on Plan implementation.

## ACCREDITATION

- Successful NCTGF outcome

## GOVERNANCE

- Directorate and Research Executive Subcommittee established
- Directorate Performance Management cycle established with Chief Medical Officer oversight
- Consolidated suite of research metrics developed and in use

## ADVISORY STRUCTURES

- Research Advisory Committee established and supporting Research Strategic Plan delivery

## WORKFORCE CAPABILITY BUILDING

- Launch of Barwon Health - Deakin University Clinician Scientist Pathway and award of first scholarship
- Three Barwon Health - Deakin University Clinical Trials Fellows appointed in mental health, endocrinology and oncology

## COMMUNITY ENGAGEMENT

- Friends of Barwon Health Research program continues to grow
- Almost 300 community members receive a quarterly newsletter about events, news and developments from Barwon Health research teams, participation in trials and on trial design
- Friends of Research and the greater community are also invited to regular community research webinars delivered by Barwon Health clinician researchers



## ADRIAN COSTA CLINICAL TRIALS CENTRE (ACCTC)



**Bree Sarah**  
**ACCTC Operations Manager**

The Adrian Costa Clinical Trials Centre continues to support and enable investigator-initiated and industry-sponsored clinical trials for our community.

Health services conducting more clinical trials provide better care, and patients participating in clinical trials have better outcomes. This is because clinical trials involve meticulous attention to delivering the best of current care while concurrently evaluating something novel. Our expert teams work closely with participants to deliver both clinical care and scientific outcomes.

The ACCTC is the largest Victorian clinical trial service outside metropolitan Melbourne, delivering access to clinical trials in more than 14 specialities, including oncology, from Phase 1b to Phase 4. We are fully accredited to the Australian Commission on Safety and Quality in Health Care's National Safety and Quality Standards under the National Clinical Trials Governance Framework (NCTGF), ensuring Barwon Health trials run within a comprehensive framework benchmarked nationally to ensure best practice.

The ACCTC's clinical trial teams have extensive expertise in running trials to the highest levels of international regulatory compliance. Our teams may include medical, nursing and allied health practitioners and scientists, depending on the trial. All practitioners required to comply with the Health Practitioner Regulation National Law (Victoria) Act 2009 are AHPRA-registered.

Often selected as the lead site in Australia, the ACCTC has dedicated clinical trial facilities and equipment with a strong focus on patient care and trial safety monitoring. The ACCTC team provides support and advice to researchers, staff, participants and external stakeholders in all aspects of research, from trial inception to site initiation and full recruitment. We welcome all Barwon Health staff, participants and their families at Level 2, 73 Little Ryrie St Geelong.

### 2023 – 2024 HIGHLIGHTS

#### NCTGF accreditation

Barwon Health was the first health service in Victoria to receive NCTGF accreditation reflecting significant service-wide achievement and progress over two years. Critical to this achievement was intensive preparatory work and engagement facilitated through the Research Directorate, underpinned by Barwon Health Executive and Board engagement on Research Strategic Plan implementation and integration of clinical trials as clinical care at Barwon Health.

This organisation-wide engagement is reflected in the newly implemented committee, reporting and governance structures, risk monitoring and quality improvement mechanisms, strategic investments and commitment to integrating meaningful research metrics into key organisational accountabilities.

Our goal is that Barwon Health is rated as 'established' on all NCTGF standards at its next accreditation, which will, in turn, underpin progress toward our vision of a world-class research ecosystem driving continuous improvements in patient care and community outcomes.

To foster engagement with other health services, ACCTC shared its NCTGF perspective at the 2024 Victorian Department of Health's (DoH) Clinical Trials Governance Experience Workshop.

## RESEARCH LABORATORY



### Service Lead

**Dr Jason Hodge**  
**Laboratory Research Manager**

The Research Laboratory, located at the Health Education & Research Building (HERB), provides laboratory science management and clinical trial support to a range of research programs and departments within Barwon Health and has significant collaborations with co-located Deakin University research staff.

The team helps translate clinical needs into research investigations and provides support for staff in research design, data analysis, and research publications.

The HERB laboratory houses the Centre for Innovation in Infectious Diseases and Immunology Research (CIIDIR) as well as contributing to the implementation of the Secure Health data and Biobank platform (SHeBa) and management of the Barwon Infant Study (BIS) biobank and database. In addition, ongoing support is provided to various research teams within the Institute for Mental and Physical Health and Clinical Translation (IMPACT), including the Epi-Centre for Healthy Ageing (Geelong Osteoporosis Study), Food and Mood Centre, Barwon Centre for Orthopaedic Research and Education (B-CORE) and Conexus.

In 2023 – 2024, significant research contributions have been made by members of the various teams, including BIS and CIIDIR. The BIS lab team have been working hard to facilitate sample processing for the ongoing primary school review, in which BIS participants undergo measurements of growth, physical activity, cardiovascular measures, dental health, lung function and neurodevelopmental measures. Fifteen sample types are processed and stored in the BIS biobank per child. These biosamples will contribute to more than 150,000 variables already collected in BIS and have already contributed to more than 90 scientific papers published since the cohort inception. An additional two PhD students and two Honours students have commenced their studies with CIIDIR in 2024 and one PhD student successfully submitted their thesis from a Conexus/ HERB Research Laboratory collaboration.

In addition, the Australian Rickettsial Reference Laboratory (ARRL) has completed its initial move to the HERB laboratory space and brings expertise in pathology testing, vaccine development, and research. Two PhD candidates are currently working in partnership with CIIDIR.

### Community Connections

ACCTC staff led and participated in successful community and stakeholder events, including:

- An ACCTC tour and reception for the Costa family
- A presentation to the Barwon Health Foundation Legacy Lunch: What is a Clinical Trial?
- The Run Geelong Research Team, which comprised 16 members and raised over \$1800
- The Community Research Update Webinar Series, covering topics including *Battling Buruli Ulcer and Clinical Trials and You*
- A celebration to recognise International Clinical Trials Day with our trial teams, participants and their families

The Friends of Barwon Health Research Program continues to grow, providing its almost 300 members with a regular newsletter promoting opportunities to attend events, partner with researchers in designing research at Barwon Health, and participate in clinical trials and other research.

### RESEARCH ACHIEVEMENTS

- Trial drug breakthroughs in two trials run by the Clinical Trials Unit in the ACCTC as the lead site for Australia Respiratory Syncytial Virus (RSV) and Type 2 Diabetes Mellitus
- Barwon Health commencing the FLASH trial at ACCTC and the outpatient clinic at the Wathaurong Aboriginal Co-operative, which is the first clinical trial for First Nations people at Barwon Health
- The Cardiology Research Unit successfully recruited the first participant in Australia in three new cardiovascular trials

## RESEARCH DEVELOPMENT UNIT (RDU)



### Service Lead

**Dr Nicola Cooley**  
Manager

The RDU facilitates high-quality research at Barwon Health by ensuring research projects receive a robust ethical review and conform to relevant National and State legislation, regulations and research guidelines.

The RDU team has extensive expertise in research ethics, governance and research management. The RDU:

- Provides support, advice and training to experienced and novice researchers on research design, data management and analysis, ethics applications and research dissemination
- Provides support for research oversight to regional partners and collaborator
- Coordinates all aspects of research oversight and compliance for research carried out under the auspices of Barwon Health
- Coordinates and convenes the Barwon Health Human Research Ethics Committee (HREC) and its associated sub-committee, the Research Review Committee
- Reviews and manages insurance, indemnity and contract documentation associated with clinical trials and multi-site research projects

In 2023 – 2024, the RDU facilitated ethics and governance review and approval of 102 new research projects and 70 new negligible risk and case study projects, through Barwon Health's HREC and the Research Management Committee. In addition, the RDU maintains oversight of over 645 projects through managing amendments, safety events, progress reports, and project closures.

### 2023 – 2024 HIGHLIGHTS

RDU highlights included:

- Establishing closer connections with other metropolitan and regional health service research offices through Victorian Regional and Rural Ethics and Governance Network (VRREGN) meetings and the research hospital manager meetings
- Working closely with Barwon Health Safety and Quality and Monash Health partners in establishing guidelines for research projects versus quality improvement projects
- Implementing a more streamlined governance process to ease the workload for researchers
- Establishing new collaborations with Australasian Leukaemia & Lymphoma Group, Curtin University, Deakin University, MCRI, Monash University, University of Melbourne, University of Sydney, VCCC Alliance, Western Alliance
- Commencing new commercial projects with Bayer Australia, GSK, Novo Nordisk Pharmaceuticals and Pfizer

## BIostatISTICS SUPPORT SERVICE



### Service Lead

**Dr Kabir Ahmad**  
Biostatistician

The Barwon Health Biostatistics Support Service provides statistical support for research undertaken within Barwon Health. All projects are collaborative, and a statistician should be consulted in the early stages of a research project to ensure the statistical integrity and validity of the study.

In 2023 – 2024, the service supported consultations and collaborative research work with clinicians across Barwon Health. Among these were data analysis mentoring projects that enhanced clinicians' data analysis capacity. The service also participated in three conferences and supported clinicians in presenting study findings at multiple conferences.



# RESEARCH COMMITTEES

## RESEARCH EXECUTIVE SUBCOMMITTEE

The Research Executive Sub-committee (RESC) is a sub-committee of the Barwon Health Executive Committee, comprising the Barwon Health Chief Executive (Chair), Chief Medical Officer, Chief Nursing and Midwifery Officer and Chief Strategy and Planning Officer. Standing invitees are the Clinical Director and Co-Director of Research, Chair in Nursing and Director, Allied Health.

The RESC is responsible for:

- Monitoring the development and implementation of the Research Strategic Plan and NCTGF
- Providing high-level oversight of research activities and reports to ensure alignment with organisational strategy
- Monitoring risks and mitigations as they relate to research
- Providing financial oversight of research activities within Barwon Health
- Identifying investment priorities.

## RESEARCH ADVISORY COMMITTEE

As part of implementing the Research Strategic Plan, the Research Advisory Committee (RAC) commenced in July 2023. Research leads from the following Barwon Health research programs are represented on the RAC: Aged Care, Allied Health, Anaesthetics, Cardiology, Child Health Research Unit, Nursing, Cancer Services, Emergency Medicine, Endocrinology, General Surgery, Infectious Diseases, Intensive Care, Medical Imaging, Mental Health, Oral Health, Orthopaedics, Obstetrics, Paediatrics, Pharmacy, Palliative Care, Public Health and Urology.

Standing RAC invitees are the Clinical Director of Research, Co-Director of Research, consumer representative, RDU Manager, ACCTC Operations Manager, Research Quality Manager, HERB Laboratory representative and Senior Scientist, Deakin University Waurin Ponds Laboratory representative, together with nominees from IMPACT and Western Alliance.

The RAC is responsible for monitoring research programs within the Research Strategic Plan and advising and making recommendations to the Clinical Director and Co-Director of Research. RAC Research Leads provide annual reports on research within their area/program, outlining their progress, future outlook, planning, and key deliverables.

## RESEARCH MANAGEMENT COMMITTEE

The Barwon Health Research Management Committee (RMC) meets weekly and is responsible for providing efficient and rigorous governance oversight of research at Barwon Health. The RMC comprises the Chief Medical Officer, the Director and Co-Director of Research, General Counsel, the ACCTC Operations Manager, the RDU Manager, the Research Quality Manager, and an RDU Research Governance Officer and/or HREC Officer.

## RESEARCH OPERATIONS COMMITTEE

The Research Operations Committee (ROC) meets monthly to provide clinical trial and research operational and strategic advice to the Barwon Health Research Advisory Committee and build capacity to undertake high-quality research.

The ROC comprises Clinical Trial Unit Managers, Research Unit Managers, the Clinical Trial Pharmacist, the ACCTC Operations Manager, the RDU Manager, the Research Governance Officer and the Research Quality Manager.

## BARWON HEALTH HUMAN RESEARCH ETHICS COMMITTEE

The Barwon Health Human Research Ethics Committee (HREC) is responsible for the ethical oversight and monitoring of research proposals involving human participants to ensure they are ethically acceptable and in accordance with relevant standards and guidelines. The RDU supports the HREC.

The BH HREC reviewed 41 projects in 2023 - 2024, ranging from pharmaceutical clinical trials to exploratory qualitative studies.

The HREC sincerely thanks the following members whose terms concluded or who ceased membership during the 2023 - 2024 financial year:

Dr Damien Elsworth  
Dr Ian McKenzie  
Dr Cameron Osborne  
Dr Jessica Snir  
Ms Katherine Snowden  
Mr Darryl Towers  
Dr Heather Wellington

A special thanks to Darryl Towers, who provided the HREC with over a decade of service.

## HREC MEMBERSHIP

Chair: Dr Giuliana Fuscaldo  
Mr Lynsey Blakston  
Dr Anita Breen  
Dr Tracey Caulfield  
Mr Paul Dodemaide  
Dr Renee Fiolet  
Ms Janine Fisher  
Dr Denise Jones  
Dr Olivia King (Deputy Chair)  
Dr Jane Loke  
Ms Lauren Mahoney  
Ms Alison Mitchell  
Dr Susan Perlen  
Ms Louise Scerri  
Mr Patrick Sheehan  
Mr Chris Thompson  
Dr Megan Turner  
Dr Greg Weeks  
Dr Lauren Young

## MEET OUR RAC CONSUMER REPRESENTATIVE, BARRY COMBEN OAM



### What is your background?

After a long and varied career in the automotive industry, I chaired the Federal Automotive Cooperative Research Centre, which provided valuable exposure to research and industry - university partnerships.

As a Geelong resident, it is important to me to contribute to the local community, which led me to apply to volunteer at Barwon Health. A voluntary role as consumer representative on the newly formed Research Advisory Committee was a perfect fit for my interest and experience.

### What is your role on the Barwon Health Research Advisory Committee?

My role is to help ensure that the activities of the committee and people engaged in research remain focussed on ensuring that the outcomes of the research will serve the community that Barwon Health services.

### What have you learnt since joining RAC?

I've learnt that there are a lot of acronyms in healthcare and research! I've been very surprised and impressed by the huge variety and number of research programs and projects undertaken across all clinical departments at Barwon Health at any given time.

### Why is it important for health services to conduct research?

Like every other work environment, progress in clinical environments comes from continual learning and applying newly found ways of doing things to the activity of the group concerned (in this case, health service providers). Engaging in a comprehensive research program on a planned and continuous basis is terribly important for both an organisation and its people to continue to advance their skills.

### Why is a consumer voice important in research?

A consumer voice helps ensure that the research being undertaken remains focused on benefiting consumers. The research outcomes' ultimate application leads to improved health outcomes for our community.

# RESEARCH ACTIVITY

## RESEARCH PROJECTS

Figure 1: Projects by Research Type

RESEARCH PROJECT TYPE	NEW PROJECTS APPROVED IN 2023-2024	ALL OPEN PROJECTS AT 30 JUNE 2024
Case Study	13	24
Clinical Trial	33	166
Registry	11	58
Clinical research	23	120
Quality Assurance/Audit	45	151
Other	47	126
Total	172	645

Figure 2: Research Projects by Clinical Directorate

CLINICAL DIRECTORATE	OPEN PROJECTS AT 30 JUNE 2024
Aged Care	11
Community Health, Rehab and Palliative care	33
Medicine, Specialist Medicine and Emergency Medicine	279
Mental Health, Drugs and Alcohol Services	23
Public Health and Primary Care	21
Surgical and Critical Care	140
Women, Children and Families	37
Other	101
Total	645



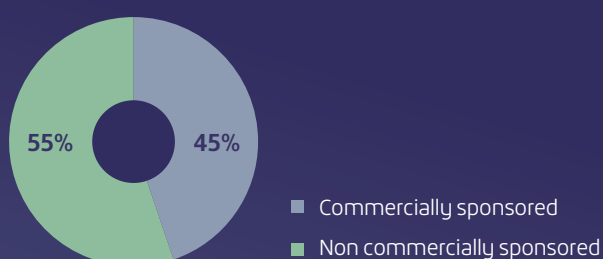
## CLINICAL TRIALS

**Figure 3: Clinical Trials by Clinical Directorate**

NB. Active trials = study teams still engaging with participants

CLINICAL DIRECTORATE	OPEN TRIALS AT 30 JUNE 2024	ACTIVE TRIALS AT 30 JUNE 2024
Community Health, Rehab and Palliative Care	4	2
Medicine, Specialist Medicine and Emergency Medicine	95	84
Public Health and Primary Care	1	0
Surgical and Critical Care	36	28
Women, Children and Families	3	3
Other	27	8
<b>Total</b>	<b>166</b>	<b>125</b>

**Figure 4: Active clinical trials by sponsor type**

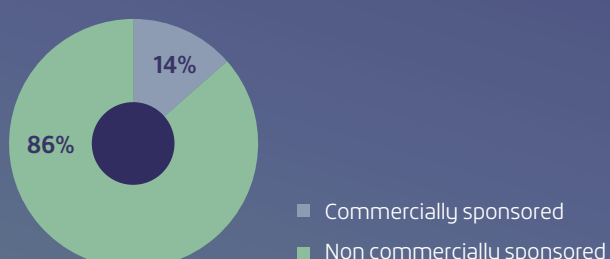


**Figure 5: Number of participants in clinical trials by clinical directorate**

NB. Active trials = study teams still engaging with participants

CLINICAL DIRECTORATE	OPEN TRIALS AT 30 JUNE 2024	ACTIVE TRIALS AT 30 JUNE 2024
Community Health, Rehab and Palliative Care	89	76
Medicine, Specialist Medicine and Emergency Medicine	745	688
Surgical and Critical Care	1507	684
Women, Children and Families	16	16
Other	1184	651
<b>Total</b>	<b>3541</b>	<b>2115</b>

**Figure 6: Number of participants in active trials by sponsor type**



## RESEARCH INCOME

Figure 7: Research income by funding type

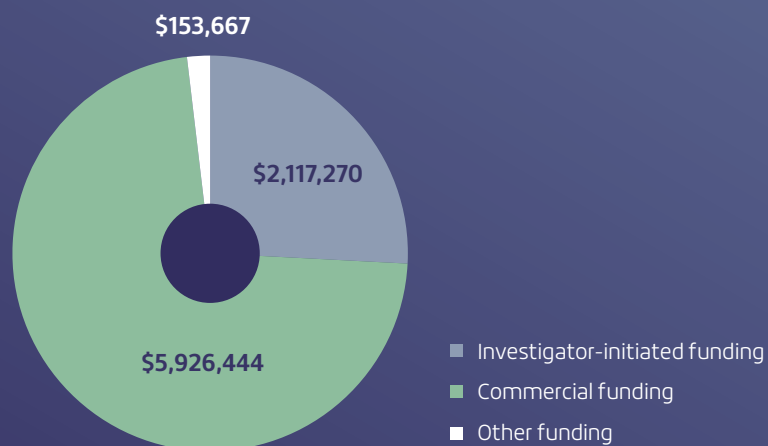


Figure 8: Investigator-initiated funding by clinical directorate

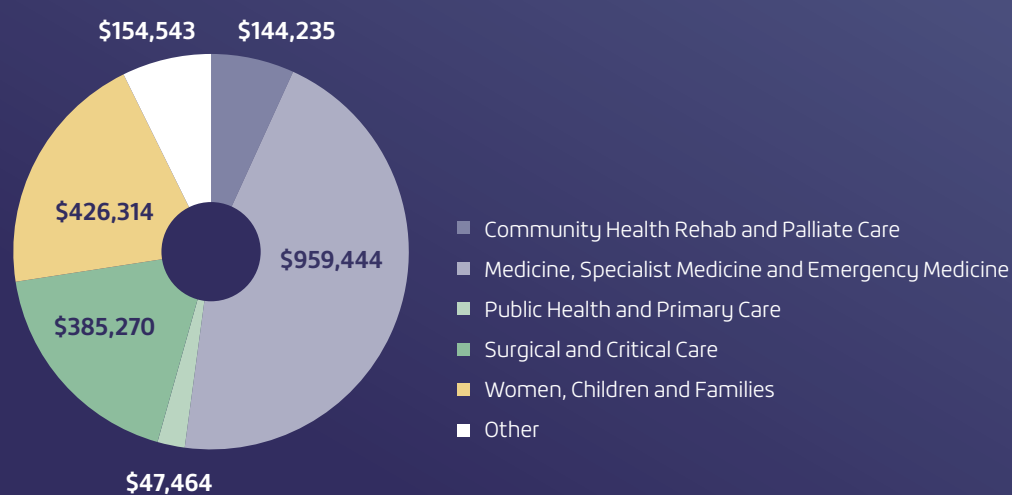
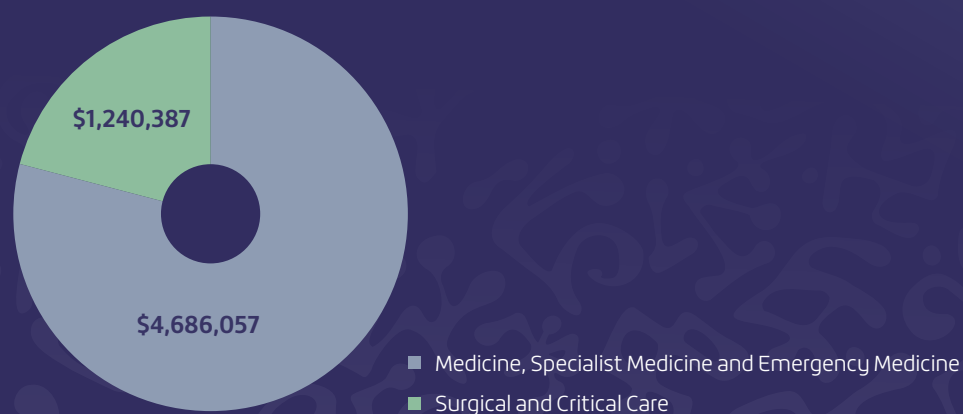


Figure 9: Commercial funding by clinical directorate



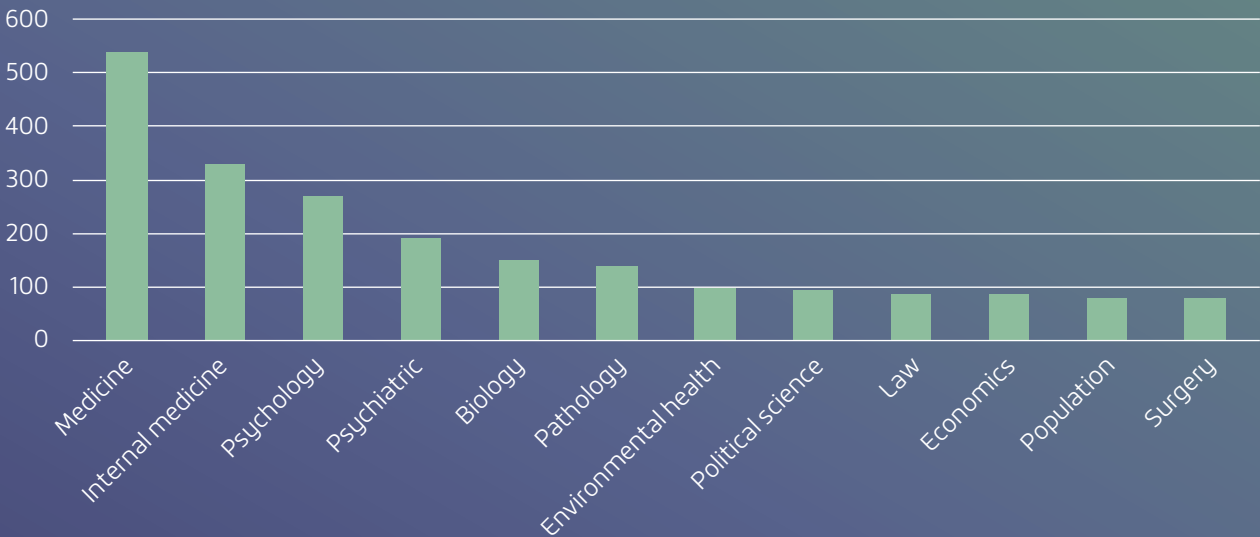
## RESEARCH PUBLICATIONS

Publications by Barwon Health affiliated authors:

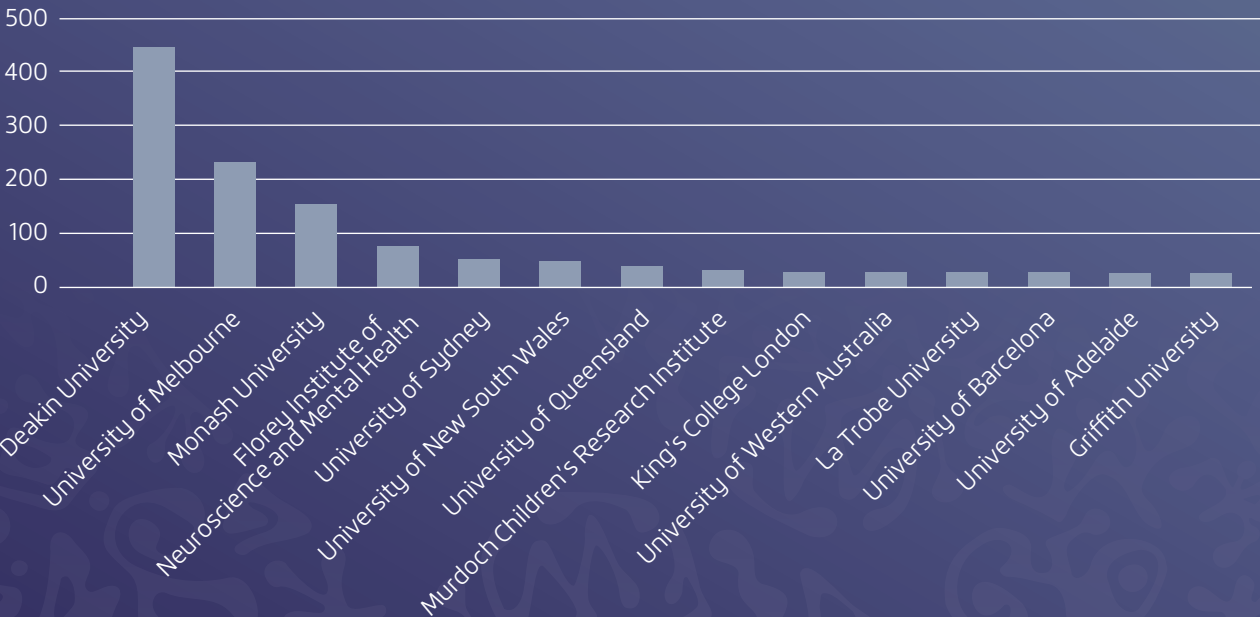
- 2023 – 2024: 612 publications, with approximately 40% the first and/or last author

**Figure 10: Top fields of study for 23-24 publications**

NB: publications may have multiple nominated fields of study



**Figure 11: Top collaborating institutions in 23-24 publications**







# BARWON HEALTH RESEARCH GROUP NEWS AND REPORTS

## ALLIED HEALTH RESEARCH AND TRANSLATION



### Research Lead

Dr Denise Jones,  
Allied Health Research & Knowledge Translation Lead

### OVERVIEW

Allied Health represents a diverse interprofessional group of clinicians who work across all settings at Barwon Health, within numerous programs, services, and specialty clinics. Some allied health professions include physiotherapy, occupational therapy, speech pathology, dietetics, social work, podiatry, psychology, audiology, exercise physiology, and spiritual care.

There are more than 60 allied health clinicians currently involved in research, in both primary lead and co-investigator roles. Some of the kinds of research projects allied health clinicians are currently involved in at Barwon Health include:

- Health services research (to provide insight into how health services, programs and clinicians can deliver care in the safest, most effective, efficient and consumer-centred way)
- Translation research (translating research into practice on a systems level and measuring translation outcomes)
- Clinical research

An important feature of many Allied Health-led projects is that they involve interprofessional research teams. This has made for more seamless and direct translation of the knowledge generated into evidence-informed changes in clinical practice.

### KEY RESEARCH AREAS

- Oncology research
- Health service response to family violence
- Health providers' recognition and response to elder abuse
- Hospital discharge planning process for adults with newly acquired disability and complex support needs
- Implementation science
- Hip fracture supplemental therapy
- Healthcare gaps and barriers to service utilisation within Geelong refugee communities
- Public involvement in health service design

- Provision of prescribed food, fluid and mealtime supervision requirements
- Pain management
- Clinical education & training
- Hearing technology
- Pelvic pain
- Paediatric eating disorders Hospital in the Home
- Osteoarthritis data registry
- Recovery after joint replacement surgery

### 2023-2024 HIGHLIGHTS

Physiotherapist Catherine Williams is the first Barwon Health and Deakin University Clinician Scientist Pathway Scholarship recipient. The Clinical Scientist Pathway supports clinicians in maintaining a clinical role at up to 0.5 FTE with protected PhD research time, blending patient care with research.

Allied Health secured an Australian Physiotherapy Association Pat Cosh Trust Fund Grant to support ongoing research on improving support for clinical educators.

For the first time, Barwon Health oncology dietitians implemented the Victorian Cancer Services Malnutrition Point Prevalence Study. This survey is undertaken every two years across Victoria to assess the prevalence of malnutrition risk and identify areas requiring local improvement in managing and treating malnutrition in Victorian Cancer Services.

The HIPSTER study [HIP fracture Supplemental Therapy to Enhance Recovery] has completed recruitment. HIPSTER is a multi-site Australian trial led by Rupert Sangster (Principal Investigator) and funded by the National Health and Medical Research Council (NHMRC) that investigates the effects of a more intensive early physiotherapy program on the recovery of patients with hip fractures.

The Allied Health Clinical Trials Unit is in its formative stages. While currently focusing on oncology trials [supported by grant funding from Cancer Council Victoria, the Victorian Cancer Agency and Western Alliance], the team, led by Catherine Williams, is developing mechanisms to support allied health staff involvement in clinical trials, alongside consumer input.

The 2024 Dr Renée Sheedy Scholarship was awarded to the Barwon Health Speech Pathology team. Funds were awarded to progress research supporting a risk feeding policy and education programme led by speech pathologist Chloe Brown. Beth Davidson (Allied Health Clinical Trials Coordinator [ACT-ONC project] and dietitian) received funding to support her attendance at the World Indigenous Cancer Conference.



## COLLABORATING ORGANISATIONS

Australian Clinical Trials Education Centre (A-CTEC)  
Alfred Health  
Barwon South West Regional Integrated Cancer Service (BSWRICS)  
Bionics Institute  
Chris O'Brien Lifehouse  
Deakin University  
Federation University  
Grampians Health  
IMPACT  
Institute of Physical Activity and Nutrition (IPAN)  
La Trobe University  
Monash University  
South West Healthcare  
University of Melbourne  
Victoria University  
VCCC Alliance  
Western Alliance  
Western Health

## RESEARCH GRANTS

Pat Cosh Trust Fund Grant - Supporting physiotherapy clinical educators – Identifying key competencies as a foundation for physiotherapy clinical educator career progression within a healthcare environment: 2024

Western Alliance - Translating research into practice: improving texture modification systems in Residential Aged Care Facilities in rural and regional Western Victoria: 2023

Western Alliance Emerging Researcher Seed Grant - Surgery for breast cancer - Barriers and enablers to engagement with prehabilitation: 2023

Western Alliance Rapid Applied Research Grant - Translating research into practice: improving texture modification systems in Residential Aged Care Facilities (RACFs) in rural and regional Western Victoria: 2023

Western Alliance - Improving the provision of prescribed food, fluid and mealtime supervision requirements in inpatient and aged care settings: 2022

Cancer Council Victoria and Victorian Cancer Agency Management Scheme Competitive Grant - Allied Health Clinical Trials (Oncology): 2021

Western Alliance Academic Health Science Centre Funding Support - Allied Health Clinical Trials (Oncology): 2021

Allied Health also receives funding as part of externally led multisite studies through the National Health and Medical Research Council (NHMRC, HIPSTER study) and the Victorian Medical Research Acceleration Fund (VMRAF), awarded to the Bionics Institute for the EarGenie® study.

## RESEARCHER PROFILE

### RUPERT SANGSTER, ALLIED HEALTH



Principal Investigator (PI), HIPSTER Trial (HIP fracture Supplemental Therapy to Enhance Recovery)

#### What is your background?

I am from country Victoria, now residing in Torquay. I am working in my seventh year as a physiotherapist, having attended La Trobe University in Melbourne. I have worked at Alfred Health but am currently at Barwon Health in acute orthopaedics.

#### What is your research focus?

My current focus is being the site lead of University Hospital Geelong, working alongside seven other sites across the country to deliver the research protocol that focuses on whether extra physiotherapy after surgery helps people get back on their feet more quickly following a hip fracture. We have finished the recruitment phase and are now bringing together all of the data and finishing the follow-up period.

#### How did you get into research?

Some former colleagues at Alfred approached me to represent a 'rural' hospital in the HIPSTER Trial. After some initial discussions, we decided Barwon Health would love to be a part of it. Despite my naivety of not truly understanding the full compass of being a PI, I put my hand up to be that person, thrusting myself into the deep end of research! I was supported by Peter Schoch, Clinical Lead Orthopaedics—Physiotherapy.

#### Why should clinicians conduct research?

Clinicians should strongly encourage research, as it has not only developed my research knowledge but also given me a set of tools that are so transferrable across the healthcare delivery domain. Being involved in research also gives you a feeling of contributing to your profession, an area that has given me so much over the years.

#### What is your advice for clinicians considering starting or leading research?

My advice is don't let the fear of the unknown hold you back from dipping your toes into research. Take the plunge and you will find yourself making fantastic contributions to evidence-based practice, leaving you with great satisfaction for making that leap.





## RESEARCH NEWS

# ANNOUNCING OUR FIRST CLINICIAN SCIENTIST PATHWAY SCHOLARSHIP RECIPIENT

**May 2024**

Barwon Health and Deakin University are delighted to announce that Catherine Williams is the recipient of the first Clinician Scientist Pathway PhD Scholarship.

Catherine, an oncology physiotherapist at Barwon Health, told us a little about her path to becoming a clinician-researcher, and explained how the Clinician Scientist Pathway works.

### **What prompted you to transition from clinician to clinician-researcher?**

I have always been interested in the interface between clinical research and clinical care. When my primary clinical focus became oncology, I felt completely immersed – every team meeting, decision, and ‘corridor conversation’ about a patient or program was grounded in the latest research.

I completed a Graduate Certificate in Epidemiology in 2021, and successfully applied for a grant from Cancer Council Victoria and the Victorian Cancer Agency to lead an Allied Health Clinical Trials Unit – Oncology (ACT-ONC) Project. This has led to conducting a 3-year funded project aiming to build capacity for allied health professionals to lead more clinical trials, particularly trials addressing cancer supportive care and survivorship needs.

### **What is your PhD about?**

My PhD explores the best methods to provide training and education to allied health professionals to increase their engagement with, and ability to lead more clinical trials.

There is substantial evidence that shows the introduction of clinical trials to healthcare organisations leads to improvements in access to innovative care for patients, increased employment and training opportunities for staff, and economic benefits for organisations and industry. Despite this, allied health trials are vastly under-represented in the clinical trials space.

With the introduction of the National Clinical Trials Governance Framework and the inclusion of clinical trials in health service accreditation, it is vitally important that we are equipped to do clinical trials, and to do them well.

### **What steps helped you enrol in your PhD?**

Having a clear picture about a gap in knowledge that I felt a ‘fire in my gut’ to answer was probably number one. I sought out others with the same passion who really helped me flesh out my idea. It can feel daunting to reach out to other researchers, but I have not come across one yet who isn’t keen to talk to interested clinicians about their work!

Depending on your career and study history, you may immediately meet the entry requirements for a PhD, or (like me) you may take a slightly different path to PhD candidature – my big piece of advice is don’t write yourself off just because you haven’t just completed a Masters degree, or have a huge amount of published work. Also, don’t think a PhD isn’t for you because you work part-time or have other life commitments! Innovations such as the Clinician Scientist Pathway can help.

### **What does the Clinician Scientist Pathway (CSP) mean for you?**

The CSP is a shared commitment – between me, Barwon Health and Deakin University. Not only will there be some practical support for me in conducting my PhD, but the area I am studying is important to both organisations, therefore the outcomes and outputs are viewed as a good fit for our future research, clinical and strategic priority areas. This pathway is an attractive option for clinicians.

The Graduate Certificate of Health and Medical Research can be supported as part of the pathway which can help to bridge gaps you may have in your research knowledge and experience – it’s heartening to see Barwon Health and Deakin University leading the industry with a program like this.

### **What would be your advice for others?**

Try to be open to becoming involved in research opportunities when they arise, even if you are someone who has historically felt like research is ‘just not your thing.’

It can appear daunting and too hard or time-consuming initially, but it offers such a strong pathway for ensuring we are offering every person who walks through our doors the absolute best care we currently know of, as well as an avenue for improving the way allied health is viewed and recognised within the organisation and the broader healthcare industry.

## ANAESTHETICS

### Research Leads



Dr Nathan Fifer  
Manager, Anaesthesia  
Research Unit



Dr Melissa Formica  
Research Fellow

### OVERVIEW

Research is an essential part of healthcare development. The Anaesthetics Research Unit collaborates with local and global organisations to ensure patients receive the most appropriate care and have the best possible outcomes before, during and after surgery.

Our Unit is well regarded in leading and participating in clinical trials of new techniques, medicines and technologies to address some of the most common complications of surgery, from nausea and vomiting to chronic pain and cognitive dysfunction.

The Unit recruits patients into a number of Australian and New Zealand College of Anaesthetists (ANZCA) Clinical Trials Network multicentre public good trials, helping seek definitive answers in the fields of anaesthesia, perioperative medicine and pain that are relevant to patients, practitioners and policymakers.

### KEY RESEARCH AREAS

- The POPCORN Study - examining the effect of lifestyle factors on post-operative cognitive decline
- The POCID Trial - assessing delivery methods for detecting iron deficiency
- The PANACEA Trial - preventing post-operative cognitive dysfunction
- The ROCKET Trial - reducing chronic post-surgical pain
- The NATO Study - effect of iron deficiency on recovery in colorectal patients
- The DECS-II Trial - improving recovery after cardiac surgery
- The TRIGS Trial - improving recovery after gastrointestinal surgery
- The LOUPOP Trial - Lidocaine infusions for breast cancer surgery
- The SNaPP Study - Sugammadex, Neostigmine and Postoperative Pulmonary Complications

### 2023-2024 HIGHLIGHTS

The unit has completed recruiting for the POCID trial. Results are currently being analysed by the team at the CSIRO, with a view to publication.

Data collected from the PANACEA trial is currently being prepared for analysis.

Dr Andrew Marriott and Ms Sara Aldred were invited to present at the ANZCA Clinical Trials Network on the topic of 'Managing a research department'.

Dr Nathan Fifer, consultant Anaesthetist, has taken over management of the Anaesthesia Research Unit from Dr Andrew Marriott. Nathan brings with him a wealth of research knowledge and we look forward to his positive impact.

### RESEARCH TEAM

#### Research staff

Dr Nathan Fifer, Unit Manager  
Dr Andrew Marriott, Group Leader  
Dr Claire Furryk, Group Leader  
Dr Cameron Osborne, Group Leader  
Dr Melissa Formica, Research Fellow  
Ms Rachel Fiddes, Research Nurse  
Ms Madeleine Newell, Research Nurse  
Ms Sara Aldred, Research Nurse  
Ms Kayla Eldridge, Research Scientist

### COLLABORATING ORGANISATIONS

Alfred Health  
Austin Health  
CSIRO  
Deakin University  
Melbourne Health  
University of Melbourne

## BARWON SOUTH WEST REGION INTEGRATED CANCER SERVICES (BSWRICS)

### Research Leads



Alison Patrick  
Program Manager



Leigh Matheson  
Deputy Program Manager  
Health Information  
Manager

### OVERVIEW

Barwon South Western Regional Integrated Cancer Services (BSWRICS) is located at Barwon Health, and works in partnership with health services to promote coordinated planning, system integration and improvement of cancer services across their respective regions. BSWRICS is funded by the Victorian Department of Health and our vision is to improve patient experiences and outcomes by connecting cancer care and driving best practice.

We manage the Evaluation of Cancer Outcomes Barwon South West Registry (ECOBSW Registry), a regional dataset on diagnosis, clinical pathways and outcomes for all patients with cancer attending a hospital within the Barwon South West Region. The registry supplies evidence-based data for service redesign projects.

### KEY RESEARCH AREAS

- Evaluation of cancer pathways

### 2023- 2024 HIGHLIGHTS

This past year has seen the ECOBSW Registry reach a major milestone, now holding a comprehensive dataset on over 20,000 people who have been diagnosed with cancer.

The ECOBSW Registry team presented a poster at the Clinical Oncology Society of Australia (COSA) 49th Annual Scientific Meeting entitled "Impact of COVID-19 on cancer notifications in the BSW region of Victoria".

### RESEARCH TEAM

#### BSWRICS

Alison Patrick, Program Manager  
Leigh Matheson, Deputy Program Manager/Health Information Manager  
Melody Mitchell, Data Collection Officer  
Anam Khalid, Cancer Data & Information Analyst

#### Clinical Support Team

Dr Graham Pitson, BSWRICS Co-Clinical Director  
Dr Theresa Hayes, BSWRICS Co-Clinical Director, South West Oncology  
A/Prof Philip Campbell, Director, Andrew Love Cancer Centre  
A/Prof Ian Collins, South West Oncology  
A/Prof Cheng-Hon Yap, Barwon Health  
Dr Karen White, SJOG Geelong

### COLLABORATING ORGANISATIONS

Australian Department of Health  
Cancer Council Victoria  
Colac Area Health  
Department of Health Victoria  
Epworth Geelong  
Icon Geelong  
Icon Group Warrnambool  
Portland District Hospital  
South West Healthcare  
St John of God Health Care  
Western District Health Service



## CANCER SERVICES TRIALS UNIT (CSTU)

### Research Leads



A/Prof Philip Campbell  
Director of Cancer Services



Dr Chiara Bortolasci  
Clinical Trials Manager



Dr Hannah Rose  
Head of Haematology



Dr David Campbell  
Head of Medical Oncology

Dr Caitlin Murphy  
Medical Oncologist and  
Clinical Trial Research  
Associate

### OVERVIEW

Cancer Services at Barwon Health has a long and distinguished history conducting clinical research through a dedicated clinical trials unit established in 1997 at the Andrew Love Cancer Centre – the Cancer Services Trials Unit (previously known as the Haematology and Oncology Trials Team).

The unit conducts cooperative, investigator-initiated and sponsored phase 1b-III/IV studies across a wide range of haematological malignancies and solid tumours. Trials are selected by investigators according to scientific and ethical merit, as well as clinical need, enabling local patients to access novel therapies in the first-line treatment setting or beyond second-line when patients are less likely to have readily available and accessible standard of care treatment options.

Our clinical trial portfolio has grown significantly in recent years and our aim is to provide patients with increasing access to clinical trials in line with the Victorian government's Victorian Cancer Plan. The CSTU is currently involved in 80 active trials involving more than 700 patients, with 30 more now open for recruitment and roughly 12 new trials opening per year. These trials span a range of cancer types including lymphoma, leukaemia, myeloma, breast, melanoma, lung, prostate, head and neck, colorectal and urology.

Our research activity benefits our regional patients, minimising their requirement to travel to larger metropolitan centres to access the latest novel therapies. We also support workforce training in clinical trials via the Victorian Comprehensive Cancer Centre (VCCC) Alliance SKILLED Clinical Trial Internship Program.

### KEY RESEARCH AREAS

- Medical Oncology clinical trials in breast cancer, gastrointestinal cancers, genitourinary cancers, head and neck cancer, lung cancer, melanoma, rare cancers
- Haematology clinical trials in leukaemia, lymphoma and multiple myeloma
- Clinical registries in medical oncology and haematology

### 2023- 2024 HIGHLIGHTS

The Medical Oncology Research Fellow position was implemented.

Taylor Gardner received the 2024 Australian and New Zealand Urogenital and Prostate (ANZUP) Cancer Trials Group Study Coordinator Scholarship.

A patient experience survey in collaboration with other Victorian health services was implemented.

### RESEARCH TEAM



#### Director

A/Prof Philip Campbell – Director of Cancer Services

#### Haematology Investigators

A/Prof Philip Campbell

Dr Hannah Rose

Dr Sam Hunt

Dr Sumita Ratnasingham

Mridula Mokoonlall

Medical Oncology Investigators

Dr David Campbell

Dr Patricia Banks

Dr Anna Lomax

Dr Caitlin Murphy

Dr Madhu Singh

Dr Karen White

Dr Shu Fen Wong

Dr Catherine Dunn

Dr Emmy Sneath

**Radiation Oncology Investigators**

Dr Michael Francis

**Haematology & Oncology Trials Team**

Dr Chiara Bortolasci

Sonja Gauci

Katrina Golden

Adele Stronach

Alana Napier

Bianca Sawyer

Chloe Ristevski

Emily Knights

Jamie Wright

Lisa McGrenaghan

Mandy McPhee

Peta Pocock

Roxanne Alexander

Scott Betteridge

Taylor Gardner

Sara Biviano

Jodie Toohey

Amy Dang

Katherine Snowden

Omer Kebire

Deirdre Martin

Elizabeth Gail Wilmot

Lauren Smith

Alana Neale

**COLLABORATING ORGANISATIONS**

ANZ Gynaecological Oncology Group (ANZGOG)

ANZ Urogenital and Prostate Cancer Trials Group (ANZUP)

Australasian Gastro-Intestinal Trials Group (AGITG)

Australasian Leukaemia & Lymphoma Group (ALLG)

Australian Lung Cancer Trials Group (ALTG)

Breast Cancer Trials (BCT)

Cancer Council Victoria (CCV)

Cancer Trials Australia (CTA)

Clinical Oncology Society of Australia (COSA)

Medical Oncology Group of Australia (MOGA)

Monash University School of Public Health and Preventive Medicine

National Health and Medical Research Council (NHMRC)

The Trans-Tasman Radiation Oncology Group (TROG)

Victorian Comprehensive Cancer Centre (VCCC)

**RESEARCH GRANTS**

Commonwealth Department of Health - ReViTALISE Project: Bridging the metro-regional trials gap by 2025: 2021-2026

Victorian Cancer Agency - Improving rural health outcomes through the Regional Trials Network-Victoria: 2021-2024

**RESEARCH NEWS**

## BARWON HEALTH TO LEAD LIFE-CHANGING CANCER CLINICAL TRIALS FOR REGIONAL VICTORIANS

**May 2024**

People living with cancer in regional and rural communities will soon have access to two life-changing clinical trials at Barwon Health.

Cancer Council Victoria has paved the way for developing two crucial clinical trials at Barwon Health with support from the Victorian Government through the Victorian Cancer Agency.

The first regional Allied Health Clinical Trials Unit is based at the Adrian Costa Clinical Trials Centre at Barwon Health. The unit, led by oncology physiotherapist Catherine Williams, pictured (right) with Erika Kotowicz, senior physiotherapist, is working with allied health clinicians, research and industry partners and consumers of cancer care, to develop resources and build capacity in the allied health workforce to lead more clinical trials.

"Allied health plays a key role in the diagnosis and supportive care of the physical, emotional, psychological and day-to-day practical impacts of cancer and its treatments, both in the immediate and longer term."

In applying for the grant, Catherine was particularly interested in people in regional and rural areas having more access to clinical trials closer to home. Thanks to the grant, in the next 12 months, Allied Health will take the lead in the running of two trials.

The first trial is to help monitor the exercise of people diagnosed with multiple myeloma who are doing prehabilitation in preparation for a stem cell transplant.

The second trial is to investigate the impact of different exercise programs using a new device for the prevention of a condition known as trismus in people diagnosed with head and neck cancer.

## CARDIOLOGY

### Research Leads



A/Prof John Amerena  
Director of Cardiology



Krystle Wilson  
Acting Research Manager



Karen Fogarty  
Research Manager

### OVERVIEW

Since its establishment in June 2000 under the direction of A/Prof John Amerena, the Geelong Cardiology Research Unit (CRU) has participated in numerous large-scale global clinical trials in cardiovascular disease. It is recognised both nationally and internationally for conducting high quality clinical research and exceeding expected recruitment goals.

The CRU has been involved in approximately 250 pharmaceutical trials over the past 24 years. Up to 200 patients per year in the greater Geelong region are enrolled in our clinical trials at any one time. Their involvement provides local patients with the opportunity to gain access to medications that are not on the market, as well as additional clinical monitoring and healthcare. The CRU has had a number of participants who have gone from study to study over the 24-year period due to their positive experiences.

In addition, the CRU is an active member of the Melbourne Interventional Group (MIG) Registry.

The CRU has been involved in the development of several new therapies, treatment options, and interventional procedures, which have now become the standard of care for patients with cardiovascular disease.

A/Prof Amerena frequently performs the role of Australian National Coordinator for global clinical trials in cardiovascular disease and holds positions on international steering committees/ endpoint committees overseeing the conduct of various clinical trials.

Karen Fogarty, CRU Manager, is the National Study Coordinator for Australia on several studies and also sits on a global expert panel.

### KEY RESEARCH AREAS

The CRU specialises in investigations into the following therapeutic areas:

- Heart failure
- Heart attack and unstable angina
- High cholesterol and new cholesterol markers
- Atrial fibrillation / atrial flutter
- Peripheral vascular disease
- Type 2 diabetes
- High blood pressure
- Obesity
- Inflammation
- Kidney protection in cardiovascular disease



## 2023- 2024 HIGHLIGHTS

The SELECT study (Semaglutide in obesity and established CVD but without diabetes) found that in patients with overweight or obesity and established cardiovascular disease without diabetes, once-weekly subcutaneous semaglutide was associated with a 20% reduction in major adverse cardiac events during a mean exposure period of 33 months.

The CRU recruited the first participant in Australia for three large international clinical trials within the space of seven days (the ARTEMIS, TRIUMPH OUTCOMES and BALANCED- HF trials).

Krystle Wilson presented poster presentations relating to women in clinical trials at the 2023 Barwon Health Research Symposium.

The Cardiac Distress Inventory study to assess a tool used to identify distress in patients following a cardiac event should prove to be a useful clinical assessment tool, as well as a research instrument.

Karen Fogarty was appointed to a global expert panel for Novo Nordisk and appointed national lead for the ARTEMIS study.

A/Prof John Amerena was appointed national lead for a large international clinical trial (the Balanced HF study).

## RESEARCH TEAM

A/Prof John Amerena, Director of Cardiology Research  
 Dr Sarah Keating, Research Fellow  
 Karen Fogarty, Research Manager  
 Krystle Wilson, Acting Research Manager  
 Donna Soraghan, Study Coordinator  
 Kate Sanders, Study Coordinator  
 Kayla Eldridge, Study Coordinator  
 Emily Picken, Study Coordinator  
 Jacqui Hopwood, Clinical Trials Administrative Assistant

## COLLABORATING ORGANISATIONS

Deakin University  
 Monash University  
 Melbourne Interventional Group Registry



## RESEARCH NEWS

### CARDIOLOGY CLINICAL TRIALS AT BARWON HEALTH LEADING THE WAY

#### June 2024

The Barwon Health Cardiology Research Unit (pictured) recently recruited the first participant in Australia for three large international clinical trials within the space of seven days:

- The ARTEMIS trial of a new medication to treat people who were admitted to hospital because of a heart attack
- The Balanced trial of a new treatment for patients with heart failure and impaired kidney function
- The TRIUMPH trial of an investigational medication and its impact on weight management in people with known cardiovascular disease

This achievement is a great reflection of the team's deep expertise, drive and focus. It is exciting for patients at Barwon Health to be given the opportunity to be involved in these important trials.

## CARDIOTHORACIC SURGERY

### Research Leads



Dr Michael Byrom



Dr Michael Seitz

A/Prof Cheng Hon Yap

### OVERVIEW

The Cardiothoracic Surgery Unit at Barwon Health is the major tertiary provider of adult cardiac surgery and major thoracic oncologic surgery in Geelong and south-west Victoria. Established in 1997, the Cardiothoracic Surgery Unit reached a milestone of 10,000 cardiac operations in 2023. It is one of six tertiary hospital cardiothoracic units in Victoria, and the only regional unit of its kind in the state. The current surgical workload averages 450-500 per annum. The unit provides a range cardiac and thoracic procedures, with the exception of transplant and paediatric surgery.

### KEY RESEARCH AREAS

The unit is a founding member of the Australian and New Zealand Society of Cardiac and Thoracic Surgeons (ANZSCTS) cardiac surgery database project.

The unit is also currently participating in a variety of research activities and clinical trials. Projects for which the unit holds principal investigator positions include:

The STABLE-MATES Trial: Principal Investigator: A/Prof Cheng Hon Yap. A Randomized Phase III Study of Sublobar Resection versus Stereotactic Ablative Radiotherapy in High Risk Patients with Stage I Non-Small Cell Lung Cancer

TEG Study: Principal Investigator Dr Michael Seitz. This observational study analyses platelet function utilising thromboelastography (TEG) in patients who have received a P2Y12 inhibitor during presentation for acute coronary syndrome and have been referred for coronary artery bypass surgery

EVH Study: Principal Investigator Dr Michael Seitz. This observational study investigates clinical outcomes when comparing endoscopic vein harvesting (EVH) versus open harvesting techniques

Printed 3D model of bronchovascular anatomy: Principal Investigator Dr Michael Byrom. This novel project has led to a 3D-printed model of the intricate lung anatomy relevant to surgical lung resection, for the purposes of education and clinical discussion

### RESEARCH TEAM

Prof Cheng Hon Yap MBBS FRACS Masters of Surgery

Dr Michael Seitz BMedSc MBBS FRACS

Dr Michael Byrom BHB MBChB FRACS PhD GradDip Surg

### COLLABORATING ORGANISATIONS

ANZSCTS

The Australian and New Zealand Thoracic clinical quality registry (ANZTHOR)

St John of God Geelong

## CENTRE FOR QUALITY AND PATIENT SAFETY RESEARCH



### Research Lead

Deakin Distinguished Prof Alison Hutchinson  
Chair in Nursing

### OVERVIEW

The Centre for Quality and Patient Safety Research-Barwon Health Partnership was established in 2007 and is uniquely positioned to tackle some of the most salient and complex challenges related to quality and patient safety issues in healthcare. Our focus areas are:

- Patient experience
- Patient safety
- Health workforce

Our researchers have expertise in evaluation, generating knowledge for evidence, supporting knowledge translation efforts, and utilising a range of research methods.

### KEY RESEARCH AREAS

Health workforce projects include:

- Nurturing registered undergraduate students of nursing and midwifery to optimise their experience in practice settings
- Improving workforce capability and capacity in communicating with people living with dementia using an artificially intelligent avatar, "Talk with Ted"
- Equipping Australia to Implement Trauma and Violence Informed Care to enhance Aboriginal and/or Torres Strait Islander healthcare experiences (EquipAus)

Patient experience projects include:

- Virtual reality experiences for residential aged care residents with mild dementia

### 2023- 2024 HIGHLIGHTS

In December 2023, Prof Alison Hutchinson was appointed as an Adjunct Professor in Nursing, University of Southern Denmark.

Members of the centre are investigators on successful grant applications to the value of approximately \$6 million in funding.

In May 2024, we welcomed Dr Jen Whan-Cooper to our team.

### RESEARCH TEAM



Deakin Distinguished Prof Alison Hutchinson,  
Chair in Nursing

Dr Susan Perlen, Research Fellow

Dr Renee Fiolet, Post-doctoral Research Fellow in  
Knowledge Translation

Dr Vanessa Watkins, Research Fellow

Dr Jen Whan-Cooper, Research Associate

### COLLABORATING ORGANISATIONS

Deakin University

National Ageing Research Institute

Dementia Australia

SILVR Adventure

### RESEARCH GRANTS

An analysis of triggers, responses, and outcomes for code grey events during acute hospitalisation (2023). Prof Hutchinson, Centre for Quality and Patient Safety within the Institute for Health Transformation (Deakin University).

Evaluating the implementation of a multi-component intervention to optimise the timing and use of induction of labour (2023). Dr S. Perlen, Centre for Quality and Patient Safety within the Institute for Health Transformation (Deakin University).

Workforce Qualitative Analysis within Victorian Public Sector Residential Aged Care (2024). Prof A. Hutchinson, Public Sector Residential Aged Care Leadership Committee.

Preventing and Responding to Secondary Trauma in Researchers addressing Sensitive issues: The PRESTARSS Study (2023). Dr Renee Fiolet, The ALIVE National Centre for Mental Health Research Translation.

Our Sovereignty, Our Healing (2023). Dr Renee Fiolet, Give Where You Live.



## RESEARCH NEWS

# RESEARCHING VIRTUAL EXPERIENCES FOR REAL BENEFITS

### January 2024

A NEW study in residential aged care at Barwon Health is investigating the social benefits of virtual reality experiences for people with mild dementia.

The collaboration between Barwon Health, Deakin University and SILVR Adventures aims to address the loneliness and social isolation that challenges many people living in residential aged care, particularly since the beginning of the COVID-19 pandemic.

Centre for Quality and Patient Safety Research researcher Dr Vanessa Watkins said the VR experiences had been selected specifically for older people. They offer residents at Barwon Health's Alan David Lodge and Wallace Lodge a wide variety of virtual tours of places that would be difficult to visit, such as Ireland's countryside, the Eiffel Tower, or familiar Australian landmarks.

"We have multiple headsets that can be used simultaneously, so these sessions can be undertaken as a group, enabling social interaction in a shared experience," she said.

"Reminiscing and story-sharing activities have been shown to have a positive impact on those living with mild dementia, so this project is implementing VR experiences and evaluating benefits for residential aged care residents."

Alan David Lodge lifestyle officer Janette Purcell said residents enjoyed using the sessions to engage socially, as well as venture into virtual worlds for unique experiences.

"The technology shows residents what the world has to offer now, while also allowing them to have visual experiences from the world they remember when they were younger," she said.

With funding support from Aged Care Research & Industry Innovation Australia (ARIIA), the research will be completed and evaluated later this year, including a post-participation survey, and interviews that explore residents' experiences and perceptions of VR technology use.



## CHILD HEALTH RESEARCH UNIT AT BARWON HEALTH (CHERUB)



### Research Lead

Prof Peter Vuillermin  
Paediatrician  
Clinical Director of Research

### OVERVIEW

Childhood inflammatory diseases have become much more common in many parts of the world. Food allergy, asthma, and type 1 diabetes are each underpinned by abnormal immune development and uncontrolled inflammation. Similarly, inflammation impacts brain development and may be contributing to the increasing rates of autism spectrum disorder, attention deficit hyperactivity disorder, anxiety and depression. These inflammatory conditions are associated with profound health and socioeconomic impacts throughout life. We currently lack preventive strategies for each.

Our program is designed to harness the Medici Effect: de-siloing expertise and diverse lines of investigation fosters cross-pollination to drive discovery and innovation. We have assembled a world-class transdisciplinary team investigating cutting-edge mechanistic hypotheses within the context of our NHMRC-funded cohort studies and clinical trials. To expedite translation, we have established high-value intellectual property and commercial partnerships, designed and built the Secure Health Data and Biosample Platform (SHeBa) to enable aggregation and analysis of material assembled in both the research in clinical space, and co-led the establishment of the Pregnancy Research and Translation Ecosystem (PRT-E) and the Children's Inpatient Research Collaboration of Australian and New Zealand (CIRCAN).

An example of our bench-to-bedside program is our work on preventing childhood asthma. Within the context of the Barwon Infant Study (BIS), we were the first team in the world to show that the protective effect of having older siblings on a baby's risk of allergic disease and asthma is driven by differences in the gut's commensal (or friendly) bacteria. Building on this finding, we are now conducting ARROW, which is the largest clinical trial of a microbe-immune intervention in the world. We lead a team from over 40 hospitals around Australia and New Zealand and are on track to recruit more than 1000 children with asthma into the trial, which is testing whether a bacterial lysate (killed bacteria) taken orally can stimulate healthy immune development in children with asthma and prevent them having severe asthma attacks. If ARROW is successful, it will change asthma management around the world.

### KEY RESEARCH AREAS

- The Barwon Infant Study (BIS)
- The Environmental Determinants of Islet Autoimmunity (ENDIA) Study
- Assessing the Reduction of Recurrent admissions using OM-85 for the treatment of preschool Wheeze (ARROW)
- Pregnancy Research and Translation Ecosystem (PRT-E)

## 2023- 2024 HIGHLIGHTS

BIS achieved 85% retention to nine years of the 1074 babies in the inception cohort.

Over 560 children were recruited to ARROW across 43 sites, making it the largest Barwon Health and Deakin University-led clinical trial ever. ARROW is testing the role of an orally administered mixture of bacteria in preventing hospital admissions among preschool-aged children with asthma.

Fifteen peer-reviewed manuscripts were published, including world-first evidence that plastic pollutants increase the risk of autism by suppressing the production of estrogen in the developing baby's brain (Nature Comm, 2024); that the gut microbiome mediates the protective effect of siblings on baby's risk of allergic disease (Gao, JACI, 2023); and that poor quality diet during pregnancy partially mediates the impact of socioeconomic disadvantage of child cognitive (thinking) skills.

Leveraging findings from BIS, and the establishment of PRT-E and SHeBa, the Medical Research Future Fund funded the Bugs and Bumps trial to test a world-first intervention targeting improved diet during pregnancy to improve baby's brain development.

## RESEARCH TEAM

### Research staff

Jasmin Foster, BIS Operations Co-manager  
Jacinta MaMahon, BIS Operations Co-manager  
Nakita Clements, BIS Ethics Officer  
Dr Martin O'Hely, Bioinformatician  
Carlie Butterworth, Research Assistant  
Aneeshya Nidhin, Research Assistant  
Thao Tran, Laboratory Assistant  
Callum Hollis, Research Officer  
Malia Lardelli, Research Assistant  
Todd Wallace, Research Assistant  
Jordan Levinter, Research Assistant  
Sharon Jones, Clinical Trials Coordinator

### Research Students

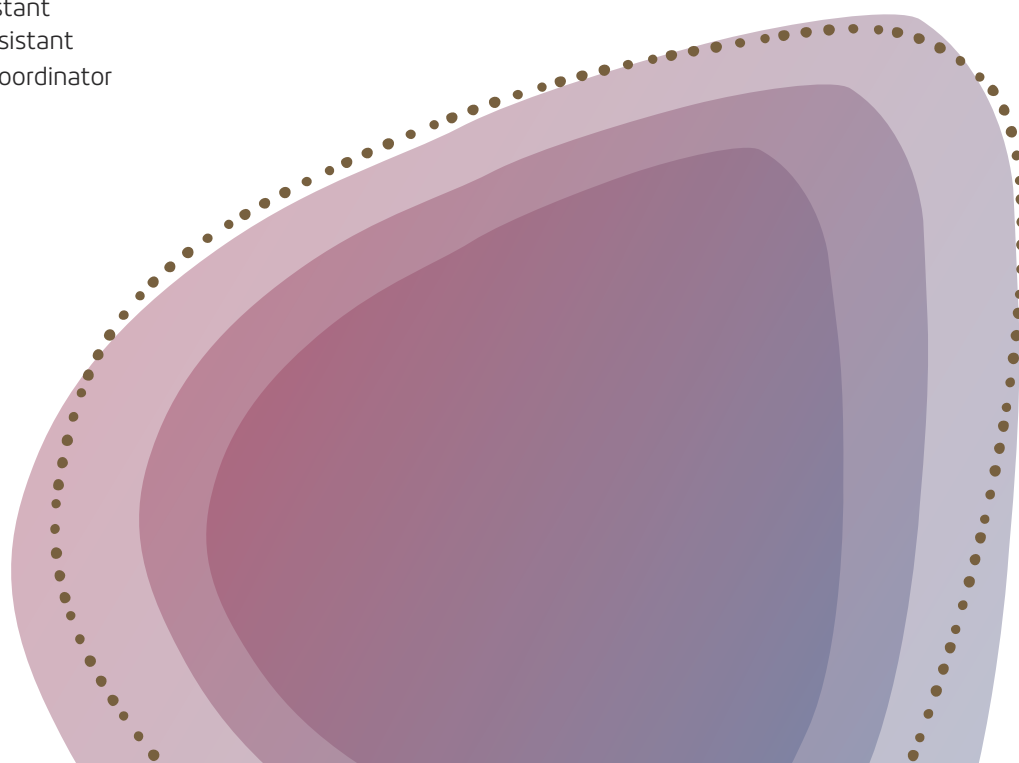
Chloe Love, PhD  
Jess Costa-Pinto, PhD  
Rachel Morgan, PhD  
Viet Nguyen, PhD  
Post-doctoral researchers  
Luba Sominsky  
Poshmar Dhar  
Samantha Dawson  
Yuan Gao

## COLLABORATING ORGANISATIONS

Agency for Science, Technology and Research (A\*STAR)  
Australian National Phenomes Centre  
Baker Heart and Diabetes Institute  
Beijing Genomics Institute  
Children's Inpatient Research Collaboration of Australia and New Zealand (CIRCAN)  
Deakin University  
Griffith University  
Mater Research Institute  
Max Planck Institute for Psycholinguistics  
Murdoch Children's Research Institute  
Technical University of Denmark  
The Florey Institute of Neuroscience and Mental Health  
The University of Melbourne  
The University of Queensland  
The University of Sydney  
University of Auckland  
University of Copenhagen  
WEHI

## RESEARCH GRANTS

NHMRC - Prevention of wheeze-associated hospitalisation in preschoolers with the immunomodulator OM85: a multi-centre, randomised, double-blind, placebo-controlled trial: 2021-2025  
NHMRC - A longitudinal population-based study of the development of cardiovascular risk in early childhood: 2019-2024  
MRFF - The Bugs and Bumps trial: 2024-2025  
The Australian Food Allergy Foundation - The placental transcriptome and infant food allergy: 2023-2024



## RESEARCH NEWS

## BARWON INFANT STUDY RESEARCHERS: IS PERINATAL DEPRESSION CAUSED BY INFLAMMATION?

**August 2023**

Almost one in five women in Australia experience depression during pregnancy or in the first year following the birth of their baby. Although perinatal depression can have serious consequences for mothers and their families, we are yet to fully understand what puts women at risk of developing depression during this period of life, and there are no effective prevention strategies.

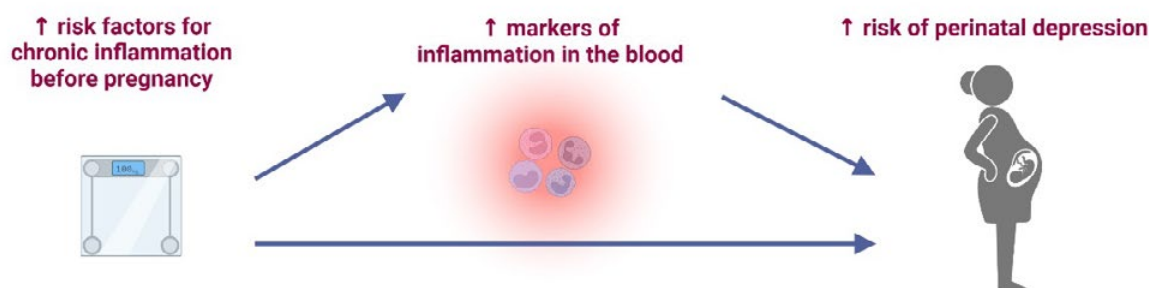
Findings from the Barwon Infant Study, published in *Brain, Behaviour, and Immunity* journal, provide evidence that chronic activation of the body's immune system, also known as inflammation, increases the risk of developing perinatal depression.

The team, led by paediatrician and Barwon Health Clinical Director of Research Prof Peter Vuillermin, collected blood samples from nearly 1000 pregnant women and also collected information regarding the women's mental health.

Barwon Health and Deakin University senior scientist Dr Luba Sominsky led the analysis of inflammatory markers in the blood samples. The team then analysed whether differences in the levels of these inflammatory markers were related to perinatal depression risk.

Dr Sominsky said the study showed pregnant women with high concentrations of inflammatory markers in their blood were more likely to experience depression and stress symptoms during pregnancy.

"Women with high body mass index (BMI) before pregnancy are at a particular risk, due to the link that exists between excess BMI and inflammation," Dr Sominsky said. "However, women at the lower end of the BMI range in our study were also likely to experience poor mental health during pregnancy. These findings indicate the importance of a healthy lifestyle and its impact on mental health."





## CENTRE FOR INNOVATION IN INFECTIOUS DISEASE AND IMMUNOLOGY RESEARCH (CIIDIR)

### Research Leads



Prof Alyssa Barry  
Scientific Director



Prof Eugene Athan  
Clinical Director

### OVERVIEW

CIIDIR is an important and timely initiative of Barwon Health and Deakin University that aims to unify our infectious disease, microbiome, and immunology expertise. It brings together a vibrant network of researchers working collectively to reduce the burden of infectious and immune-mediated disease in our community and beyond.

CIIDIR encompasses four main research pillars:

- Molecular microbiology
- Immunity and inflammation
- Population health and biology
- Clinical and public health research

Several of the research groups have expertise and projects in more than one pillar. CIIDIR encourages collaboration and projects that overlap with more than one research pillar by providing small research grants, with eight grants provided so far to teams.

CIIDIR has several cross-cutting activities that operate across all research pillars to ensure access to the best training, resources and enabling technologies as well as ensuring discoveries are translated into solutions for human health.

Since CIIDIR launched in December 2022, there have been several exciting developments:

- The CIIDIR website launched at <https://ciidir.com.au>, which includes information on programs, projects, our research team and news.
- Seed and Project Grants: A call for proposals for small projects intended to stimulate new ideas and multidisciplinary collaborations was launched in early 2023. CIIDIR received 14 excellent applications from eight different research groups and spanning all four research pillars. Of these, we were able to fund nine proposals. This has stimulated new collaborations on a range of topics including Buruli ulcer therapeutics, COVID-19 and antimicrobial resistance.
- Major grant funding: Several CIIDIR members have been successful as Chief Investigator on major grant bids worth over \$12 million including from the National Health and Medical Research Council, Medical Research Future Fund, the USA Food and Drug Administration, Ian Potter Foundation, and the Victorian Critical Vaccines Collection.

### KEY RESEARCH AREAS

#### Clinical and public health research:

- COVID-19 post recovery
- Buruli Ulcer transmission
- Antimicrobial stewardship in respiratory tract infections

#### Immunity and inflammation:

- Immune evasion in malaria

#### Population health and biology:

- Coxiella burnetii vaccine development
- Drivers of asymptomatic malaria

#### Molecular microbiology

- Host- parasite interactions in malaria
- Cytokine regulation in respiratory disease
- Prosthetic joint and cardiac device infections

### 2023-2024 HIGHLIGHTS

#### Awards

- Dr Bridgette McNamara: Best Research Paper of the Year, Barwon Health Symposium
- Dr Luba Sominsky: Best Research Paper of the Year, Barwon Health Symposium
- Katelyn Stanhope: Best Early Career Researcher Poster - Malaria in Melbourne
- Paolo Bareng: Most Outstanding Young Investigator Award - Joint International Tropical Medicine and Malaria meeting, Thailand
- Dr Luba Sominsky: Robert Ader New Investigator Award to an outstanding new research scientist who has made exciting contributions to psychoneuroimmunology

## Conferences

- 81st International Pharmaceutical Federation (FIP) World Congress of Pharmacy and Pharmaceutical Science
- Molecular Approaches to Malaria Conference 2024

## Events

- CIIDIR hosted its first Day of Immunology Event at the Health Education and Research Building in Geelong.

## RESEARCH TEAM

Prof Alyssa Barry, Co-Director – CIIDIR, Systems epidemiology of infection

Prof Eugene Athan, Co-Director – CIIDIR, Infectious diseases

Prof Tania de Koning Ward, Molecular microbiology

Prof John Stambas, Virology

Prof Alister Ward, Preclinical studies

Prof Catherine Bennett, Epidemiology

Prof Julie Pasco, Epidemiology

A/Prof Cenk Suphioglu, Biomedical science

A/Prof Hassan Valley, Infectious disease epidemiology

Dr Stephane Bouchoucha, Infection prevention and control

Prof Anastacia Hutchinson, Infection prevention and control

Dr John Stenos, Director, Australian Rickettsial Reference Laboratory

Dr Vinod Sundaramoorthy, Viral pathogenesis

Dr Kirsty McCann, Scientific Coordinator – CIIDIR, and Associate Research Fellow

Dr Darcie Cooper, Research Fellow

Dr Carly Botheras, Associate Research Fellow

Prof Peter Vuillermin, Clinical Director of Research, Barwon Health

Dr Luba Sominsky, Senior Scientist

Dr Poshmaal Dhar, Executive Dean Research Fellow

Dr Charles Narh, Executive Dean Research Fellow

Dr Zahra Razook, Research Assistant

Dr Christine Roder, Infectious disease and public health Researcher

Dr Amanda Wade, Infectious diseases Physician

Dr Michael Muleme, Epidemiologist

Dr Bridgette McNamara, Epidemiologist

Dr Sajal Kumar Saha, Executive Dean Health Research Fellow

A/Prof Daniel O'Brien, Director of Infectious Diseases, Barwon Health

## COLLABORATING ORGANISATIONS

Deakin University

Barwon Health

CSIRO Australian Centre for Disease Preparedness

MCRI

University of Melbourne

Burnet Institute

Doherty Institute

WEHI

# EAR, NOSE, THROAT, HEAD AND NECK SURGERY

## Research Lead

Mr Michael Borschmann

Director of ENT Surgery

## OVERVIEW

The Department of ENT Surgery specialises in treating ear, nose and throat diseases with a special interest in thyroid surgery, head and neck cancer and sinus surgery. The department has a research focus supporting surgical education and training and encourages the involvement of trainees and junior surgical doctors in our research projects.

## KEY RESEARCH AREAS

- Implementing sustainability practices to reduce wastage and costs for adenotonsillectomy
- Equity of treatment for Head and Neck cancer in the Barwon South Western region of Victoria
- The perspective of final year students on the current education in Australia and New Zealand

## 2023- 2024 HIGHLIGHTS

### Feature publications include:

Grenness A, Connolly T, Russell N, Agar NJM, Nicholson R, Borschmann M. Evaluation of the safety of carbon dioxide laser and transnasal humidified rapid insufflation ventilatory exchange in laryngeal surgery. Aust J Otolaryngol 2024;7:18

Eqbal H, Borschmann M. Virtual multidisciplinary meetings in a new COVID-19 world: how well are we doing it? Aust J Otolaryngol 2023;6:9.

## RESEARCH TEAM

Michael Borschmann

Nicholas Agar

Roy Nicholson

## COLLABORATING ORGANISATIONS

St John of God Hospital Geelong

Epworth Hospital Geelong

## EMERGENCY

### Research Leads



Dr Julian Stella  
Co-Director, Emergency  
Research



Dr Jeremy Furyk  
Co-Director, Emergency  
Research

### OVERVIEW

Over many years, the University Hospital Geelong Emergency Department research team has been involved in a wide range of clinical and systems-based research on emergency department care. Multisite and collaborative studies and clinical trials have been undertaken to investigate acute emergencies, diagnostics, treatments, and public health issues related to emergency presentations.

A spectrum of methodologies have been employed in previous and current research, including quantitative, qualitative, and mixed methodology approaches. The broad range of clinical care provided in the University Hospital Geelong Emergency Department has lent itself to a wide range of clinical, translational and systems research with multiple internal and external collaborations to broaden the scope of research outside of local emergency care.

The early uptake of new modalities of care, systems approaches and models of supervision has also been a consistent theme of the Emergency Department and is reflected in the research undertaken both in the past and currently. Increasing participation in larger collaborative clinical research projects is an ongoing focus.

### KEY RESEARCH AREAS

- EDNAV (Emerging Drugs Network of Australia Vic)
- Netball Women's Injury Study
- Trampoline Injuries Study
- PREDICT (Paediatric Research in Emergency Departments International Collaborative) network trials
- Paediatric cervical spine injury project
- ARISE (Australasian Resuscitation In Sepsis Evaluation) Fluids trial

### 2023- 2024 HIGHLIGHTS

A fixed term research nurse was secured for the Emergency Department for two years.

We navigated the introduction of the ARISE fluids in sepsis clinical trial with excellent clinician interest and recruitment rates locally.

The high levels of engagement with the EDNAV study have been recognised with an increase in funding (more than doubling of the initial funding arrangement).

Participation in the NHMRC funded FEBCON trial, which will be the world's largest study of antipyretics in the treatment of febrile convulsions in young children.

### RESEARCH TEAM

We have a whole-of-department approach to research with many contributors from medical, nursing and other clinical groups. Key contributors include:

- Dr Julian Stella, Co-Director Research in the Emergency Department
- Dr Jeremy Furyk, Co-Director of Research in the Emergency Department
- Nicole Lowry, Research Assistant
- Dr Stephen Gill, Physiotherapist and Researcher
- Dr Belinda Hibble, Director of Emergency Department
- Dr Bruce Bartley, Deputy Director Emergency Department
- Dr Jeremy Friend, Paediatric Emergency Physician and PREDICT member

### COLLABORATING ORGANISATIONS

- Ambulance Victoria
- Australasian College of Emergency Medicine
- Australian Football League
- Australian and New Zealand Intensive Care Research Centre
- B-CORE
- Colac Area Health
- Deakin University
- Epworth HealthCare
- PREDICT
- South West Healthcare
- St John of God Health Care

### RESEARCH GRANTS

Emerging Drugs Network of Australia VIC, 2023 – 2026 (recently increased)

FEBCON Antipyretics for Febrile Convulsions trial - NHMRC 2023-2026

ARISE Fluids in sepsis trial - NHMRC funded 2023- ongoing



## RESEARCHER PROFILE

### DR JEREMY FURYK, EMERGENCY CARE

Emergency Physician,  
Co-Director of Emergency Research

#### What is your background?

I trained in Emergency Medicine in Melbourne and Townsville, Queensland, where I also worked as an Emergency Physician. There, I developed an interest in research, completed my PhD, and led the research program there. I returned to Victoria and Geelong in 2018 and have been involved in the research program in the Emergency Department.

#### What is your research focus?

My research interests are broad, although I am currently interested in paediatric clinical trials with the PREDICT network. I also have an interest in acute mental health.

I have been encouraged by the continuing development of research capacity in Emergency Care at Geelong, which is involved in a number of ongoing clinical trials. We were fortunate to be part of a successful NHMRC grant to support a paediatric clinical trial in ED.

#### How did you get into research?

When I started as a consultant in Townsville, there was very little research happening and very few local mentors. However, I was fortunate to receive some support from the Emergency Medicine Foundation and experienced emergency researchers from around Queensland to guide my development.

#### Why should clinicians conduct research?

Emergency Medicine is a unique branch of medicine, and research underpins everything we do. It is imperative that the research addresses questions relevant to emergency physicians, engages a broad emergency medicine community, and embeds research into clinical practice.

#### What is your advice for clinicians considering starting or leading research?

I am constantly amazed at how generous experienced researchers are with their time, and how available they are to support emerging researchers. My advice to emerging (or potential) researchers would be to simply take that first step, and approach colleagues and experienced researchers for guidance and support.



# ENDOCRINOLOGY AND DIABETES

## Research Leads



Dr Anna Anderson  
Endocrinologist



Kate Ellis  
Clinical Trials Unit Manager

## OVERVIEW

The main focus of the Endocrinology and Diabetes Research team and the Clinical Trials Unit (CTU) is type 1 diabetes mellitus, type 2 diabetes mellitus and obesity.

The CTU is currently collaborating with the Wathaurong Aboriginal Co-operative for the Flash Study. First Nations people with type 2 diabetes are invited to trial a continuous glucose monitoring device to see if they can improve their blood glucose management.

The CTU was previously particularly focused on osteoporosis, a disease affecting over one million Australians that makes bones become brittle, leading to a higher risk of breaks than in normal bone. Much of our research uses data from the Geelong Osteoporosis Study and clinical data gathered through our clinical practices. Recent analyses have focused on muscle loss, frailty, and the effect of diabetes on the skeleton. In collaboration with Barwon Health's Intensive Care Unit, we are also examining the impact of critical illness on skeletal health and mortality.

Our CTU is national lead on the majority of its commercially sponsored clinical trials and is renowned for its high standards of clinical care and ethical standards, as well as start-up timelines and trial completion.

## KEY RESEARCH AREAS

- Geelong Osteoporosis Study
- Skeletal Outcomes Following Intensive Care (SOFTER)
- Early intervention for Paget's disease of bone (ZiPP study)
- Diabetes medication trials
- Obesity studies
- Diabetic retinopathy
- The Environmental Determinants of Islet Autoimmunity (ENDIA) Study

## 2023- 2024 RESEARCH HIGHLIGHTS

The Geelong Osteoporosis Study collaborated with the University of Sheffield to contribute data to update the FRAX Fracture Risk Assessment Tool with the aim of incorporating falls and previous fractures into the risk assessment.

The initial results of the ZiPP Study examining the effect of a single dose of zoledronic acid versus placebo in individuals at increased risk of Paget's Disease of Bone published in *Annals of Rheumatic Disease* demonstrated evidence that early intervention may prevent development and progression of Paget's Disease lesions. This supports the hypothesis that bisphosphonate treatment can prevent complications of this disease.

## RESEARCH TEAM

### Research staff

Dr Shannon McCarthy, Clinical Trial Principal Investigator  
Dr Aaron Choy, Clinical Trial Principal Investigator  
Dr Anna Cunliffe, Endocrine Fellow 2024  
Dr Anna Anderson, Endocrinology representative on Research Advisory Committee  
Dr Kimberly Cukier, Director, Department of Endocrinology and Diabetes  
Kate Ellis, Clinical Trials Unit Manager  
Anne Welsh, Clinical Trials Nurse Coordinator  
Alicia Waight, Clinical Trials Nurse Coordinator  
Fahriya Zandari, Clinical Trials Nurse Coordinator

### Research Students

Sam Hawthorne, MPhil  
Jacob Harland, PhD

## COLLABORATING ORGANISATIONS

Active Life Sciences, California  
Centre for Eye Research Australia  
Hospital del Mar-IMIM, Autonomous, University of Barcelona  
Hudson Institute of Medical Research  
IMPACT  
Lausanne University Hospital, Switzerland  
Monash Health  
University of Edinburgh, Western General Hospital  
Westmead Hospital

## RESEARCH GRANTS

2020-2025 MRFF: Bone Loss Prevention with Zoledronic Acid or Denosumab in Critically Ill Women – A Randomised Controlled Trial (Bone Zone)

2021-2025 MRFF: Safer medicines To reduce falls and refractures for Osteoporosis (#STOP)

## GENERAL SURGERY

### Research Leads



Prof David Watters  
General Surgeon,  
Academic



A/Prof Douglas Stupart  
General Surgeon,  
Academic



Prof Glenn Guest  
General Surgeon,  
Academic



Dr Sonal Nagra  
Director of General  
Surgery, Academic

### OVERVIEW

The Department of Surgery has a strong research focus and a productive publication output and constantly strives to improve patient outcomes. The Department collaborates with local and global organisations to ensure patients receive the best surgical outcomes. The Department strives to embrace new technologies and the latest surgical research, promoting and encouraging students to undertake PhD, Masters of Surgery, and Honours programs, which are supervised by department academics.

### 2023 – 2024 HIGHLIGHTS

General Surgery won the Barwon Best Care Awards 2023 Personal Care Award for "Working Towards Work Life Balance in General Surgery".

A/Prof Sonal Nagra received The Richard Hallows Prize, awarded to the doctor considered an outstanding clinical teacher.

A/Prof Sonal Nagra received the Hasan Al-Khayyat prize, awarded to the doctor who best embodies Dr. Al-Khayyat's values of empathy, diligence, clinical acumen, collegiality, and compassion.

A/Prof Sonal Nagra received the 2023 Geelong Clinical School Outstanding Clinician -Teacher Year 3.

### RESEARCH TEAM

#### Research staff

Alfred Deakin Prof David Watters, General Surgeon, Academic  
Prof Glenn Guest, General Surgeon, Academic  
A/Prof Douglas, General Surgeon, Academic  
Dr Sonal Nagra, General Surgeon, Academic  
A/Prof Saleh Abbas, Hon, Clinical Associate Professor  
Ms Stephanie Kempton, Trauma Audit Coordinator  
Mrs Anne Vandewater, Executive Assistant to the Chair of Surgery

#### Research Students

Dr Wendy Crebbin, PhD  
Dr Amelia McGuinness, PhD  
Dr Louis Scarrold, Master of Surgical Research  
Dr Hamish Morgan, Master of Surgical Research  
Dr Anh Vu, Master of Surgical Research  
Dr Henry Drysdale, Master of Surgical Research  
Dr John Kefalianos, Master of Surgical Research  
Dr Pranav Divakaran, Master of Surgical Research  
Dr Daniel Ng, Master of Surgical Research

### COLLABORATING ORGANISATIONS

Cancer Council Victoria  
Deakin University  
Epworth Geelong  
Institute for Intelligent Systems Research and Innovation  
Royal Australasian College of Surgeons (RACS)  
Safer Care Victoria  
The Royal Children's Hospital Melbourne  
The University of Edinburgh  
The University of Melbourne  
Victorian Perioperative Consultative Council (VPCC)

# INFECTIOUS DISEASES

## Research Leads



Prof Eugene Athan  
Director, Public Health Unit



A/Prof Daniel O'Brien  
Director, Department of  
Infectious Diseases



Kate Ellis  
Clinical Trials Unit Manager

## OVERVIEW

The Department of Infectious Diseases Research Team, in partnership with CIIDIR, is a multidisciplinary group that tackles the transmission, treatment and prevention of some of our most pressing health challenges, including:

- COVID-19
- Healthcare-associated infections
- Emerging infectious diseases
- Mycobacteria ulcerans (Buruli Ulcer)
- Infections of medical devices
- C. difficile infection
- Hepatitis C and B
- Infective endocarditis (infection of the heart)
- Antimicrobial resistance
- HIV
- Staphylococcal infections

In addition, we are leaders in the development of strategies and safeguards in the areas of refugee health and antimicrobial stewardship (responsible use of antibiotics).

Our Department is also a significant and active member of the Barwon Health Clinical Trials Unit (CTU), which, over 25 years and with the contribution of thousands of volunteers, is regarded as one of the leading hubs for clinical trials in the development of new treatments and technologies. Recent CTU clinical trials include the MATISSE Trial of a vaccine against respiratory syncytial virus (RSV) for pregnant women, as well as a trial of an RSV vaccine for older adults.

## KEY RESEARCH AREAS

- Transmission of Buruli Ulcer
- Real world Efficacy of Antiviral therapy in Chronic Hepatitis C (REACH-C)
- COVID-19 research

## 2023 – 2024 RESEARCH HIGHLIGHTS

The Barwon Health Clinical Trials Unit, along with Principal Investigator Prof Eugene Athan and 26 volunteers from our region, were involved in the phase 3 clinical trial of Australia's first RSV (respiratory syncytial virus) vaccine AREXVY, which has been approved by the Therapeutics Goods Administration (TGA) for Australians 60 and over. We provided essential data to help show that the vaccine reduced the risk of people aged 60 and older developing lower respiratory tract disease from RSV.

The Infectious Diseases Unit and the Barwon Health Clinical Trials Unit commenced a world first treatment trail for Buruli ulcer with a new antibiotic called Telacebec. This offers treatment that is safer, less complex and more effective. The trial plans to enrol 40 people with Buruli ulcer.

## RESEARCH TEAM

### Research staff

Prof Eugene Athan, Director Barwon South West Public Health Unit  
A/Prof Daniel O'Brien, Director Department of Infectious Diseases  
Dr Caroline Bartolo, Infectious Diseases Physician  
A/Prof Andrew Hughes, Infectious Diseases Physician  
Dr Amanda Wade, Infectious Diseases Physician  
Dr Sarah Huffam, Infectious Diseases Physician  
Dr Aaron Walton, Infectious Diseases Physician and Clinical Microbiologist  
Dr Cameron Jeremiah, Infectious Diseases Physician  
Dr Nomvuyo Mothobi, Infectious Diseases Physician and Clinical Microbiologist  
Dr Callum Maggs, Infectious Diseases Physician  
Dr Bridgette McNamara, Epidemiologist  
Dr Michael Muleme, Epidemiologist  
Dr Christine Roder, Research Assistant  
Jo Chambers, Clinical Trial Coordinator  
Fahriya Zandari, Clinical Trial Coordinator  
Kate Ellis, Clinical Trial Unit Manager  
Anne Welsh, Clinical Trial Coordinator  
Dr Darcie Cooper, Associate Research Fellow  
Dr Carly Botheras, CIIDIR Research Fellow, Clinical Trial Coordinator

### Research Student

Rochelle Hamilton, PhD



## COLLABORATING ORGANISATIONS

Burnet Institute  
CIIDIR  
CSIRO  
Deakin University  
Doherty Institute  
Kirby Institute  
University of Melbourne  
WEHI

## RESEARCH GRANTS

National Institute of Allergy and Infectious Diseases  
International Centre of Excellence in Malaria Research  
for the Asia Pacific. Co-Investigator Barry (USD4M+3M):  
2024-2029

NHMRC Ideas Grant, Tracking the emergence and  
spread of drug resistance in malaria parasites. Chief  
Investigator Barry: 2023

NHMRC Synergy Targeting Roadblocks to Malaria  
Elimination. Chief Investigator Barry: 2023 - 2027

NHMRC Centres of Research Excellence ACREME  
'MASTER-MAP'. Chief Investigator Barry: 2023

Department of Jobs, Precincts & Regions- Inflammatory  
cytokine profiles in a Victorian long-term cohort of  
patients recovered from SARS CoV-2 compared to a  
vaccinated control group: 2023-2024

## RESEARCH NEWS

### RSV VACCINE TRIALLED AT BARWON HEALTH APPROVED FOR PREGNANT WOMEN IN US

#### September 2023

The United States Food and Drug Administration (US FDA) has approved Pfizer's Abrysvo vaccine as the first maternal vaccine to help protect infants from birth through six months from lower respiratory tract disease caused by Respiratory syncytial virus (RSV).

RSV causes cold-like symptoms, but infants and older adults are more likely to develop severe cases. The disease burden of RSV in young children is extremely high, with virtually all children getting an RSV infection by the time they are two years old.

Bree Sarah, Research Operations Manager at Barwon Health's Adrian Costa Clinical Trials Centre, said the health service's clinical trials unit had four participants enrolled in the study during pregnancy.

"The trial involved a single vaccine (blinded to either placebo or the RSV vaccine), a seven-day diary to monitor for any reactions to this vaccine, and two blood tests," Ms Sarah said.

Abrysvo, administered as a single dose injection into the muscle, is approved for use in the US at 32 through 36 weeks' gestational age of pregnancy. There are currently no RSV vaccines registered for use in Australia. The Australian Government Therapeutic Goods Administration has commenced evaluating an application from Pfizer Australia to register Abrysvo for use in Australia.

This is not the first contribution made by Barwon Health to the development of RSV vaccines. Earlier this year, the ACCTC took part in another trial of the GSK Arexvy RSV vaccine, this time for older adults. The US FDA has since approved the Arexvy vaccine, which will enable adults aged 60 years and older to be protected from RSV disease for the first time, and the vaccine is currently being evaluated by the Australian Government Therapeutic Goods Administration.



# INSTITUTE FOR MENTAL AND PHYSICAL HEALTH AND CLINICAL TRANSLATION (IMPACT)

## Research Leads



Deakin Distinguished  
Prof Michael Berk  
Director



Prof Ken Walder  
Co-Director  
Theme Lead, Drug  
Discovery Repurposing  
Therapeutics and  
Biomarkers

## OVERVIEW

IMPACT develops new and effective responses to mental and physical health for our community. We use cutting-edge approaches to translate our medical research from the laboratory to real-world solutions.

Our team of over 300 researchers has a shared aim to improve the quality of life of our global community. We work to develop innovative diagnostics, treatments and therapies for mental health conditions and chronic diseases.

IMPACT is unique in its transdisciplinary and collaborative structure. Our silo-free approach allows us to tackle the complex mental and physical disorders that are a significant burden of disease in Australia, and across the world.

Recent IMPACT Trials include:

- The TINA Trial, testing whether the antidepressant drug, mirtazapine can help people to stop using ice
- The CADET Trial of candesartan in reducing symptoms of depression and improving general quality of life
- The CALM trial, a group-based, telehealth clinical trial designed to support positive lifestyle changes aimed at improving mental health for adults experiencing psychological distress

## RESEARCH THEMES

- Clinical Trials and Interventions
- Food and Mood
- Infection, Immunity and Cancer
- Mental Health and Neuroscience
- Molecular Medicine
- Drug Discovery, Repurposing Therapeutics and Biomarkers
- Population Health

## 2023- 2024 HIGHLIGHTS

Researchers from Barwon Health, Deakin University and Murdoch Children's Research Institute found a big piece of the food allergy puzzle. Their research highlighted how siblings can speed up the rate at which babies develop their gut microbiome and that this protects them from future allergic diseases. Researcher Yuan Gao completed the research as part of her PhD studies.

Dr Roey Elnathan, an ARC Future Fellow, successfully found a way to inject beneficial genetic material into white blood cells in a world-first breakthrough that could significantly improve treatment options for certain types of blood cancer.

Four IMPACT researchers were announced on the Clarivate Highly Cited Researchers List. This includes Deakin Distinguished Prof Felice Jacka OAM, Deakin Distinguished Prof Michael Berk, Prof Alison Yung and Dr Andre Caravilho.

## RESEARCH TEAM

### Directors

Deakin Distinguished Prof Michael Berk, Director  
Prof Ken Walder, Co-Director

### Research Theme Leads

Dr Alynna Turner, Clinical Trials and Interventions  
Deakin Distinguished Prof Felice Jacka, Food and Mood  
Prof Tania De Koning-Ward, Infection, Immunity and Cancer  
Prof Alison Yung, Mental Health and Neuroscience  
Prof Sean McGee, Molecular Medicine  
Prof Ken Walder, Drug Discovery Repurposing  
Therapeutics and Biomarkers  
Prof Julie Pasco, Population Health

### COLLABORATING ORGANISATIONS

For a full list of national and international collaborators, visit the IMPACT website.

## RESEARCH GRANTS

Highlights include:

2023 NHMRC Clinical Trials and Cohort Studies: Enhancing work participation after stroke: supporting regional and rural Australians - Dr Alynna Turner

2023 NHMRC Ideas Grant: Predicting the emergence and spread of drug resistant malaria parasites - Prof Alyssa Barry

2023 NHMRC Investigator Grant: Negative symptoms and metabolic abnormalities in early psychosis - Prof Alison Yung

Medical Research Futures Fund (MRFF): Million Minds Mental Health Research Mission, Beyond Bugs and Bumps - Dr Sam Dawson

Medical Research Futures Fund (MRFF): Mental Health Australia General Clinical Trial Network (MAGNET) - Prof Michael Berk: 2021 - 2026

NHMRC MRFF: Efficient Use of existing medicines - Prof Michael Berk, Dr Alynna Turner, Prof Olivia Dean: 2021 - 2025

NHMRC Investigator Grant: Nutritional Psychiatry: extending the evidence and ensuring translation - Prof Felice Jacka, 2021 - 2026

Stanley Medical Research Institute: A clinical trial of trimetazidine for bipolar depression in Spain and India - Prof Ken Walder: 2021- 2024

2022 NHMRC Investigator Grant: Development of a bench to bedside platform for novel therapy development for psychiatric disorders - Prof Michael Berk

2022 NHMRC Investigator Grant: 'Food, mood and microbes: Improving mental health through diet' project - Dr Heidi Staudacher

2022 ARC Future Fellowship: Prefrontal dopamine in the dynamic processes of learning across lifetime - A/Prof Jee Hyun Kim

2022 ARC Future Fellowship: Engineering nanoscale tools for cellular interrogation - Dr Roey Elnathan



## RESEARCH NEWS

### IMPACT RESEARCHERS NAMED ON 2023 HIGHLY CITED RESEARCHERS LIST

Congratulations to Barwon Health- affiliated IMPACT research leaders Prof Michael Berk, Prof Felice Jacka OAM and Prof Alison Yung, who were included in the 2023 Clarivate Highly Cited Researchers List. A Highly Cited Researcher is an individual who has demonstrated significant and broad influence in their field(s) of research. Of the world's population of scientists and social scientists, Highly Cited Researchers are 1 in 1000.

Their achievements are a testament to the excellence and innovation in research being undertaken at IMPACT.

#### Deakin Distinguished Professor Michael Berk

Prof. Berk is the Director of IMPACT and leads the Mental Health Australia General Clinical Trial Network (MAGNET) funded by the Medical Research Future Fund (MRFF).



- Known as one of the world's leading scientific minds, according to Thompson Reuters ISI (2015-2020).
- Ranked the top expert in the world in the field of psychiatry according to expertscape.
- Awarded grants from the ARC, MRFF, National Health and Medical Research Council (NHMRC), Wellcome Trust, Stanley Medical Research Institute, Centre of Research Excellence, Australian Research Council, Patient-Centred Outcomes Research Institute and Congressionally Directed Medical Research Programs.
- Published over 1400 scientific papers across his career.

#### Deakin Distinguished Professor Felice Jacka OAM

Prof. Jacka is widely regarded as being responsible for the development of the highly innovative field of 'nutritional psychiatry', establishing diet as a risk factor and treatment target for common mental disorders.



- Awarded a Medal of the Order of Australia (OAM) in 2021 for her services to nutritional psychiatry.
- Founder and Director of Deakin's Food & Mood Centre and the International Society for Nutritional Psychiatry Research.
- Cited in more than 100 policy documents globally, including by WHO and UNICEF, as well as influencing clinical practice guidelines in psychiatry in Australia and beyond.

#### Professor Alison Yung

Prof. Yung is the Leader of IMPACT's Mental Health and Neuroscience theme, and has appeared on the Highly Cited Researchers list since 2015.



- Developed the criteria for identifying individuals at high risk for psychosis and created a crucial instrument to assess risk, called the Comprehensive Assessment of At Risk Mental States (CAARMS).
- Awarded the Founders' Medal by the Society of Mental Health Research to recognise how she has transformed treatment delivery for people with early psychosis.
- Received the Schizophrenia International Research Society's Outstanding Translational Research Award
- President of the IEPA Early Intervention in Mental Health.
- Established the first clinic in the world for individuals identified as being at imminent high risk of psychotic disorder, otherwise known as ultra-high risk (UHR).

## RESEARCH NEWS

## CONGRATULATIONS TO WESTERN ALLIANCE EMERGING RESEARCHER GRANT RECIPIENTS

## October 2023

Western Alliance is committed to building research in western Victoria and supporting the translation of research findings into healthcare. Central to this commitment is the Western Alliance Supporting Translation of Research in Rural and Regional setting (STaRR) Program, which builds health practitioners' research and research translation skills, and supports STaRR participants to put their research skills into practice in a translation-focused research project.

Our congratulations to these emerging Barwon Health researchers, who were successful in applying for STaRR Emerging Researcher Seed and Translation Grants.

STaRR Emerging Researcher Seed Grants for past STaRR participants to conduct a research project to generate new evidence:

- April Chiu, Physiotherapist, Barwon Health: Barriers and Enablers to Prehabilitation prior to Breast Cancer Surgery in a Regional Health Service.
- Jessica Wynn, Unaccredited Urology Registrar, Barwon Health: Why patients have chosen Botox injections as their preferred treatment for overactive bladder symptoms.

STaRR Emerging Researcher Translation Grants for past STaRR participants and past Emerging Researcher grant recipients to translate research evidence into practice:

- Rhiannon Beggs and Cara Hill, Speech Pathologists, Barwon Health: Improving the provision of prescribed food, fluid, and mealtime supervisions requirements in inpatient aged care settings.



## INTENSIVE CARE



### Research Lead

A/Prof Neil Orford  
Senior Intensive Care Staff Specialist  
Head of ICU Research

### OVERVIEW

Research is a pillar of intensive care medicine. It is essential to inform us how we best treat patients who are critically ill. Conducting research in the ICU requires a careful and considered approach to the unique aspects of this environment. Our patients are often unconscious, with acute diseases that put them at high risk of dying. Their families are particularly stressed and dealing with their own uncertainty while trying to advocate and support their loved one.

Clinical trials currently underway at the Barwon Health ICU are investigating:

- Respiratory support after cardiac surgery
- Medications to prevent bone loss and fractures in the years after critical illness
- Choice of antibiotics and steroids for treating pneumonia
- Use of sodium bicarbonate to treat metabolic acidosis
- Lung-protective strategies for ventilated patients
- Patient-reported outcomes and experiences of critical illness
- Optimal blood oxygen levels to target
- Effective management of extracorporeal life support

Barwon Health ICU is a member of the Australian and New Zealand Intensive Care Society–Clinical Trials Group (ANZICS-CTG) and conducts research ranging from multi-centre clinical trials to observational studies, single site studies, and healthcare registry studies.

### KEY RESEARCH AREAS

- Skeletal outcomes after intensive care
- Goals of patient care (iValidate)
- Patient-reported outcomes and experiences of critical illness
- Investigator-initiated clinical trials including:
  - Randomised embedded, multifactorial adaptive platform trial for community-acquired pneumonia (REMAP-CAP)
  - A comprehensive national registry on the treatment and outcomes of patients requiring ECMO (EXCEL)
  - Bone loss prevention with Zoledronic Acid or Denosumab in critically ill women (BONE-ZONE)
  - Sodium bicarbonate for metabolic acidosis in the intensive care unit (SODa-BIC)
  - Driving pressure ventilation in hypoxemic respiratory failure – randomised control trial (DRIVE RCT)
  - ANZICS Point Prevalence Program (PPP)
  - The mega randomised registry trial comparing conservative vs liberal oxygen targets (Mega-ROX)
  - Short period incidence study of severe acute respiratory infection (SPRINT-SARI)
  - Effect of denosumab on bone turnover markers in critically ill women (SOFTER)

## 2023- 2024 HIGHLIGHTS

SOFTER was awarded 2023 Barwon Health Research Symposium Best Paper of the Year.

iValidate reached 10 years of publication with two new papers.

PROEMS ANZICS-CORE commenced, a unique e-based, person-centred follow-up collaboration between ICU Research and ICU Safety & Quality.

A/Prof Orford received an MRFF grant for DRIVING PrEssure Limited Ventilation in Hypoxemic Respiratory Failure- Randomised Control Trial: The DRIVE Trial.

## RESEARCH TEAM

### Research staff

A/Prof Neil Orford, Head of ICU Research  
Erfana Thashneem, Deputy Head of Research  
Simone Fitzgerald, ICU Research Nurse  
Jemma Trickey, ICU Research Nurse  
Stacey Hawker, ICU Research Nurse

## COLLABORATING ORGANISATIONS

IMPACT, School of Medicine, Deakin University  
ANZICS-RC, SPHDM, Monash University  
La Trobe University  
The George Institute for Global Health  
Australia & New Zealand Intensive Care Society – Clinical Trials Group  
College of Intensive Care Medicine

## RESEARCH GRANTS

2023/2024: MRFF: DRIVING PrEssure Limited Ventilation in Hypoxemic Respiratory Failure- Randomised Control Trial- The DRIVE Trial. Chief Investigator: A/Prof Neil Orford

2023: MRFF MNHS Grant: Generating new evidence to reduce complications and improve the safety and efficacy of extracorporeal membrane oxygenation (ECMO) in patients with severe cardiac and respiratory failure: THE RECOMMEND Platform Trial. Associate Investigator: A/Prof Neil Orford

2023: MRFF: iCare – An interactive online portal to improve health and wellbeing for people living with complex cancers, and their informal carers: a Phase II randomised controlled trial. Chief Investigator: A/Prof Neil Orford

2020: MRFF RCRDUN Grant: Bone Zone. Bone loss prevention with zoledronic acid or denosumab in critically ill women – A randomised controlled trial. Chief Investigator: A/Prof Neil Orford



## NEUROSCIENCE



### Research Lead

Prof Paul Talman  
Consultant Neurologist

### OVERVIEW

The Department of Neuroscience at Barwon Health researches the brain and the nervous system. Participating in large-scale global and national clinical trials, as well as investigator-initiated studies, we are held in high regard with our contribution to research into stroke, Multiple Sclerosis (MS), Motor Neurone Disease (MND), headaches and migraines, and autoimmune encephalitis.

Barwon Health is the primary centre for the national Motor Neurone Disease (MND) research database, which has patients registered from all over Australia from the 13 major MND clinics.

We are also involved in investigating new therapies for MS, which are evolving rapidly. Due to their complexity, these therapies require a high level of testing and oversight. The department has a dedicated MS Nurse who monitors patients receiving these and other experimental therapies.

### KEY RESEARCH AREAS

- MiNDAUS NHMRC partnership. Motor Neurone Disease: patient-centred care for a progressive neurological disease-evidence driving policy
- AVERT DOSE – determining optimal early rehabilitation after Stroke
- Autoimmune Encephalitis and Other Neuroinflammatory Conditions

### RESEARCH TEAM

Prof Paul Talman, Consultant Neurologist  
A/Prof Ben Clissold, Consultant Neurologist  
Dr Cassie Nesbitt, Consultant Neurologist  
Ms Katrina Sangster, Clinical Research Nurse  
Ms Michelle Hiddleston, Stroke Coordinator,  
Stroke Services

### COLLABORATING ORGANISATIONS

Alfred Health  
Calvary Health Care Bethlehem  
Deakin University  
Florey Institute of Neuroscience and Mental Health  
MND Australia  
Monash University  
University of Queensland  
University of Sydney

### RESEARCH GRANTS

MiNDAUS NHMRC partnership. Motor Neurone Disease: Patient-centred care for a progressive neurological disease-evidence driving policy. Prof Paul Talman, 3 years

## ORAL HEALTH

### Research Leads



A/Prof Michael Smith  
Director



A/Prof Rachel Martin

### OVERVIEW

Oral health is essential to general health and wellbeing at every stage of life. The mouth serves as a “window” to the rest of the body, providing signals of general health disorders, while oral conditions themselves can also have an impact on overall health and disease, such as bacteria from the mouth causing infection in other parts of the body.

Research is an integral part of Oral Health Services at Barwon Health. Research aligned with performance measures allows the service to monitor where and how our dental care can best promote good oral health. It also evaluates new public health initiatives, especially in rural and regional communities.

### KEY RESEARCH AREAS

- Early childhood caries
- Teledentistry at Barwon Health and Colac Area Health Oral Health Service

### 2023- 2024 HIGHLIGHTS

Affiliate A/Prof Michael Smith attended the Australian Dental Congress and the FDI Congress in Sydney (September 2023) to be inducted as a Fellow of Section VIII of the International College of Dentists (ICD).

A/Prof Rachel Martin joined the research team in 2023. Rachel is a Co-Founder and Director of the Australian Network for the Integration of Oral Health (NIOH), a director of the Australian Dental Research Foundation Board, Chair of the Public Dentists Committee of the ADA Vic Branch, a Member of the World Federation of Public Health Associations Oral Health Working Group and a member and chair on various Committees of the Dental Board of Australia.

### RESEARCH TEAM

#### Research staff

Affiliate A/Prof Michael Smith, Director, Oral Health Services

A/Prof Rachel Martin

Dr Jacqui Pawlak, Ethics Manager

Ms Sharon Lewis, Clinical Manager

Mrs Lindy Carroll, Administration Manager

### COLLABORATING ORGANISATIONS

Adams School of Dentistry, Gillings School of Global Public Health, University of North Carolina at Chapel Hill, USA

Australian Network for Integration of Oral Health (NIOH)

Bristol Dental School, University of Bristol, UK

Child and Community Wellbeing Unit

Dental Health Services Victoria

Department of Odontology, Section of Paedodontics, Umeå, Sweden

La Trobe University

Murdoch Children's Research Institute

Royal Children's Hospital, Melbourne

University of Melbourne

### RESEARCH GRANTS

Behaviour change intervention in association with the Wide Smiles Outreach Program. PI: A/Prof Michael Smith, Funding Body: Dental Health Services, Victoria for Barwon Health (BH) and the Melbourne Children's Campus (incorporating the Royal Children's Hospital, Murdoch Children's Research Institute and the University of Melbourne Department of Paediatrics).

## ORTHOPAEDICS: BARWON CENTRE FOR ORTHOPAEDIC RESEARCH AND EDUCATION (B-CORE)

### Research Leads



Prof Richard Page  
Director of Research



Dr Kirsten Porter  
Research Coordinator



Dr Stephen Gill  
Senior Research Fellow

### OVERVIEW

Barwon Centre for Orthopaedic Research and Education (B-CORE) is one of Australia's broadest and most active research groups dedicated to orthopaedic musculoskeletal health research. B-CORE has extensive clinical trial experience in investigator-initiated, national, and international multi-centre studies. B-CORE is a member of the Institute for Mental and Physical Health and Clinical Translation (IMPACT), under the School of Medicine at Deakin University.

In the past decade, we have expanded to include researchers across multiple disciplines, including sports and exercise sciences, nutrition and dietetics, epidemiology, molecular biology, genomics, political science, and health economics. We collaborate with research teams worldwide to help advance the science of musculoskeletal health.

The B-CORE team explores every aspect of musculoskeletal health. We conduct "bench-top to bedside" research from basic investigations to clinical trials of new treatments, process change in care delivery and population-wide studies of prevention.

While our core mission is to translate this knowledge into new strategies to control musculoskeletal health, many of our investigators are also making scientific progress against other diseases and conditions.

### KEY RESEARCH AREAS

- Shoulder conditions and surgery
- Joint replacement surgery including the Barwon Joint Registry
- Sports injuries – epidemiology, prevention and rehabilitation

### RESEARCH TEAM

#### Research staff

Prof Richard Page, Director of Research  
Dr Stephen Gill, Senior Research Fellow  
Dr Kirsten Porter, Research Coordinator  
Amanda Cowland, Data Coordinator  
Tracey Lipsys, Data Coordinator  
Research students  
Masters of Surgical Research Candidates  
Dr Henry Ring

#### PhD Candidates

Mr Nick Emerson, Institute of Frontier Materials  
Dr Sam Lynskey, Orthopaedic Surgery  
Dr Fil Cosic  
Dr Narinder Kumar

### COLLABORATING ORGANISATIONS

#### National

ACDI Collaboration  
AFL  
AOA National Joint Replacement Registry  
Australian and New Zealand Hip Fracture Registry  
Australian Orthopaedic Association  
Deakin University  
Epworth HealthCare  
La Trobe University  
Monash University  
Shoulder and Elbow Society of Australia  
St John of God Health Care  
Sydney University  
University of Melbourne  
University of NSW  
Victorian Orthopaedic Foundation  
Victorian Orthopaedic Trauma Outcomes Registry

#### International

Herlev-Gentofte Hospital, University Of Copenhagen, Denmark  
Hôpitaux Universitaires Genève, Switzerland  
Kaiser Permanente, USA  
Karolinska Institutet, Sweden  
LROI Dutch Joint Registry  
McMaster University, Canada  
Nordic Arthroplasty Registry Association  
Oxford University, (NDORMS) UK  
Schulthess Clinic, Switzerland

## RESEARCH GRANTS

National Institute for Health and Care Research – NHMRC Grant – Reverse or Anatomical (replacement) for Painful Shoulder Osteoarthritis: Differences between Interventions – (RAPSODI-Aus) Deakin University: 2021

MRFF Ideas Grant - Intensive physiotherapy to lower hospital length of stay after hip fracture HIPSTER Study - Monash University 2022

NHMRC Ideas Grant - Predicting fracture outcomes from clinical Registry data using Artificial Intelligence Supplemented models for Evidence-informed treatment (PRAISE) study: 2021 – 2024

Australian Orthopaedic Association (AOA) Research Foundation - Clinical biomarker shoulder study: transcriptomic differences between osteoarthritis of the shoulder, capsulitis and rotator cuff tears: 2021 -2023

AOA Research Foundation PhD research scholarship: 2021 - 2022

Australian Football League - Injury profiles of female Australian Rules football players: a survey of Geelong and South-Western Victoria (AFLW Injury Study): 2018 - 2020

Deakin University - Gender differences in lower limb biomechanics in Australian football players: 2021

De Puy Orthopaedic Fellowship: 2006 - 2024

St John of God Health Care - SJOG Research Fellowship: 2017-2026

Canadian Institutes of Health Research - Advancing the Care of Patients with Musculoskeletal Injuries Worldwide through Multi-National Research Initiatives: 2016 - 2023

## RESEARCHER PROFILE

### PROF RICHARD PAGE, B-CORE

**Professor of Orthopaedics, Director, Barwon Centre for Orthopaedic Research and Education (B-CORE)**

#### What is your background?

I am a specialist shoulder, upper limb and trauma surgeon. Before this I served for ten years in the Royal Australian Navy with active service in Somalia and Indonesia.

#### What is your research focus?

My research interests include the outcomes of shoulder replacement surgery, biomaterials and upper limb biomechanics, and orthopaedic trauma. I'm currently focussed on investigator-initiated and multicentre trials that examine the surgical outcomes of rotator cuff disease and osteoarthritis of the shoulder treated with total joint replacement surgery.

This work complements my long-term interest in large longitudinal datasets for musculoskeletal conditions, including the Barwon Joint Registry (BJR), the Patient Reported Upper Limb Outcome Registry (PRULO), and the national joint replacement registry (AOA NJRR).

#### What have been your research highlights?

I have authored over 300 refereed journal articles, book chapters on shoulder, elbow and joint replacement surgery, and 200 scientific papers at a national or international level.

I established the Barwon Joint Registry (BJR), Australia's largest regional orthopaedic outcome registry covering public and private hospital settings and providing follow-up data for 20+ years.

I am currently the chief investigator on several open clinical national NHMRC-funded and international projects (value~\$17.3M).

#### Why should clinicians conduct research?

Clinicians naturally seek the best care for their patients. Research is the pathway to developing and evaluating best care, challenging existing dogma, and providing necessary evidence to support current best practice.

#### What is your advice for clinicians considering starting or leading research?

Common things occur commonly and are easier to investigate if you are genuinely interested in the question and the answer.



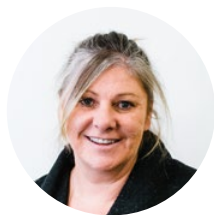


# PALLIATIVE CARE

## Research Leads



Dr Peter Eastman  
Co-head, Palliative Care



Anna Dowd  
Chair, Palliative Care  
Research Group  
Clinical Trial Coordinator

## OVERVIEW

The Barwon Health Palliative Care Research Group aims to improve patients' quality of life by researching commonly experienced palliative care symptoms such as pain, cancer cachexia and breathlessness as well as approaches to optimise service provision. Research is embedded into every aspect of our service delivery, and our team is committed to undertaking and facilitating quality research.

As a member of the national Palliative Care Clinical Studies Collaborative (PaCCSC) and Cancer Symptoms Trials (CST) Group, Barwon Health has been a research site for pivotal multi-centre studies evaluating commonly used symptom management approaches for people with life-limiting diseases. Additionally, we have been involved in international pharmaceutical industry trials for cancer cachexia and have ongoing research projects into this debilitating condition through our cachexia clinic.

The unit has worked hard to build and foster a research culture within the multi-disciplinary palliative care department and has supported the planning and implementation of a wide range of investigator-led projects through the Palliative Care Research Group.

## KEY RESEARCH AREAS

- ReVITALISE palliative and supportive care project
- BETTER-B (AUS) - Better Treatments for Chronic Breathlessness (Australia)
- Improving palliative, aged and chronic care through clinical research and translation rapid program
- Cachexia research
- Assistive equipment use by palliative care community clients
- Evaluating FOCUSau, an online support program for people living with advanced cancer and their family carers

## 2023- 2024 HIGHLIGHTS

### Publications

Dowd A, Davies M, Short S, Morrison R, Spiller C, Carter J, Eastman P. Dying at home: enablers and barriers. Internal Journal of Palliative Nursing. Publication after a number of years of work by the community palliative care team

Eastman, P., Le, B. (2023). Palliative Care and Stroke. In: MacLeod, R.D., Van den Block, L. (eds) Textbook of Palliative Care. Springer, Cham.

### Presentations

Miriam Ferres: Palliative Care clinical trials research in non-metropolitan settings – opportunities for growth. Poster presentation at 2023 Clinical Oncology Society of Australia Annual Scientific Meeting

Peter Eastman: The interface between palliative care and stroke (including a tale of serendipity). Presentation at 2024 Barwon Health and Deakin University Research and Grand Round.

## RESEARCH TEAM

### Research staff

Dr Peter Eastman, Palliative Care Consultant, Director of Palliative Care

Anna Dowd, Clinical Trial Coordinator and Chair of the Palliative Care Research Group

## COLLABORATING ORGANISATIONS

@research by the Regional Research Teaching Hub  
Australasian Lung Cancer Trials Group  
CST

Deakin University

PaCCSC

Regional Trials Network Victoria

ReVITALISE

University of Technology Sydney

## RESEARCH GRANTS

Geelong Hospice Foundation - exploring barriers and enablers to people wanting to die at home

Western Alliance - The rapid adoption of telehealth by a regional community-based palliative care service due to COVID-19: patient and healthcare professional perspectives and opportunities for service enhancement

## PHARMACY



### Research Lead

Dr Greg Weeks  
Director of Pharmacy

### OVERVIEW

The Barwon Health Pharmacy Department has a wide research focus that encompasses advanced hospital pharmacy practice, workforce innovation, telehealth, radiopharmacy, medication safety, antimicrobial stewardship, and smoking cessation. In addition, the Pharmacy Department supports more than 100 investigator-initiated and industry-sponsored clinical trials within Barwon Health.

The Barwon Health Pharmacy Department continues to be heavily involved in supporting clinical trials. The clinical trial pharmacy team supports more than 100 industry-sponsored trials as well as a growing number of Investigator-led studies. Trial activity continues to expand into new areas including early phase trials, genetically modified organisms and CAR-T therapy in cancer. Management of investigational products is the key component of this support. The current trials cover most disciplines including haematology/oncology, infectious disease, anaesthetics, intensive care, paediatrics, cardiology and psychiatry.

### KEY RESEARCH AREAS

- Digital Health reporting for pharmaceuticals
- Trial of an intensive clinical pharmacy intervention versus usual care in patients taking newly initiated oral cancer therapies
- Co-design and evaluation of a perioperative medicines management service at Barwon Health with applicability to regional hospital sites in Western Victoria
- Hospital Pharmacy Educators in Australia: Investigating Scope of Practice and Staffing Allocation
- Enhancing Adherence and Self-management in the Treatment of Respiratory Conditions

### 2023- 2024 HIGHLIGHTS

**Smoking Cessation Research:** Barwon Health played a central role in organising, managing and recruiting over 100 participants into a clinical trial of treatment options for smokers admitted to hospital. The study found that participants treated with both varenicline and nicotine lozenges had 84 per cent greater odds (chance) to abstain from smoking when self-reporting their progress at a 12-month follow up, compared with those taking varenicline alone.

Weeks GR, Gobarani RK, Abramson MJ, et al. Varenicline and Nicotine Replacement Therapy for Smokers Admitted to Hospitals: A Randomized Clinical Trial. JAMA Netw Open. 2024; 7(6):e2418120. Funding source: Global Research Awards for Nicotine Dependence (GRAND) 2017

**The Patient @ Home Study:** This study was completed looking at advanced practice scope for pharmacists embedded in @home services in regional and rural settings. The advanced scope of practice made a positive impact on patient care, with significant timely identification and resolution of medication-related problems and improved pharmacist job satisfaction. The role was well received by patients and the multidisciplinary team. The advanced scope has become an ongoing part of the @home pharmacist role. Funding source: Department of Health Victoria

**Cancer Study:** Recruitment and analysis of data is continuing in a study looking at the impact of a pharmacist-led telephone follow-up for cancer patients taking capecitabine (an oral chemotherapy drug) that may help identify side effects early and allow prompt management. Nhi Le is conducting the project as part of the Monash University Clinical Master of Pharmacy degree.

## RESEARCH TEAM

### Research staff

Dr Greg Weeks, Director of Pharmacy  
Dr Diana Bortoletto, Pharmacy Workforce  
Development and Research Lead  
Janice Chiang, Antimicrobial Stewardship Pharmacist  
Garth Birdsey, Senior Cardiac Pharmacist  
Katherine Snowden, Oncology trials pharmacist  
Nhi Le, Research oncology pharmacist  
Tracy Shields, Clinical trials pharmacist

### Research students

Master of Clinical Pharmacy (Monash University):  
Matt Hollett, Nhi Lee  
Masters of Business Administration (Deakin  
University): Derek Chai  
Masters of Business Administration (University  
of Adelaide): Tommy Sperac

## COLLABORATING ORGANISATIONS

Monash University  
Deakin University  
Department of Health  
Western Alliance  
BSWRICS  
Society of Hospital Pharmacists of Australia

## RESEARCH GRANTS

Department of Health. Advanced practice scope  
for pharmacists embedded in @home services in  
regional and rural settings 2022-2024

BSWRICS. A randomised controlled trial of an  
intensive clinical pharmacy intervention versus usual  
care in patients taking newly initiated oral cancer  
therapies: 2022-2024

Western Alliance Academic Health Science Centre.  
Co-design and evaluation of a perioperative medicines  
management service at regional hospital sites  
in Western Victoria: 2023-2024

## RESEARCH NEWS

### AUSTRALIAN RESEARCHERS PRESENT POTENTIAL NEW TREATMENT OPTION FOR NICOTINE ADDICTION



#### June 2024

Smokers seeking to conquer their addiction may have a new treatment option, following the results from a clinical trial conducted at Barwon Health and other public hospitals, which found a combination of varenicline and nicotine lozenges significantly improved smoking abstinence when compared with varenicline alone.

Both varenicline and nicotine lozenges (a form of nicotine replacement therapy) are medications commonly used for smoking cessation. Varenicline, marketed in Australia as Champix, is the most effective single therapy currently available for smoking cessation.

The 'VANISH' (Varenicline And Nicotine replacement therapy for Smokers admitted to Hospitals) Trial led by Monash University included 320 adult daily smokers across five Australian public hospitals. It found that participants treated with both varenicline and nicotine lozenges had 84 per cent greater odds (chance) to abstain from smoking when self-reporting their progress at a 12-month follow up, compared with those taking varenicline alone.

Dr Greg Weeks (pictured), Director of Pharmacy at Barwon Health, researcher and first author of the study, said "Pharmacists at Barwon Health played a major role in the VANISH study, including randomising participants, providing logistical support to hospitals and recruiting 104 of the 320 participants."

Smoking is the leading cause of preventable disease and death in Australia. While the number of people smoking tobacco cigarettes has dramatically dropped over recent decades, concurrently a new generation of nicotine addiction has escalated due to the introduction of e-cigarettes and vaping. Taking this into account, the more alternative options we can provide smokers that do not involve vaping, the better.

## RESEARCHER PROFILE

### DR DIANA BORTOLETTO

Lead - Pharmacy Workforce  
Development and Research



#### What is your background?

I am a pharmacist with 32 years' experience, having spent the last 22 years at Barwon Health. I have a strong focus on strategic planning and development of educational programs and research leadership.

I was one of the first pharmacists in Victoria to complete a PhD in a pharmacy practice-related field rather than the more traditional (at the time) laboratory-based research.

#### What is your research focus?

My research focus is broad, but mostly relates to advanced scope of practice for pharmacists or other innovative pharmacy practices to improve patient care. I also have a passion for education-related research, either in the learner or educator space.

#### What have been your research highlights?

My research highlights at Barwon Health in 2023-2024 include:

- Co-investigator in two successful grants, supporting pharmacist advance scope of practice
- Leading a study exploring scope of practice of hospital pharmacy educators across Australia, working with some fantastic like-minded pharmacist educators across the country
- Fostering interest in research and supporting our intern and resident pharmacists who are venturing into their first research projects and being rewarded with conference presentations

#### Why should clinicians conduct research?

Participation in research enables clinicians to evaluate their practice and be involved in advancing their discipline. We are working in an evidence-based profession, and you can learn so many skills from conducting research that make you a better clinician around appraising the evidence and thinking critically about a situation.

#### What is your advice for clinicians considering starting or leading research?

Start by identifying a clinical question that excites you. Delve into existing literature to understand gaps and build foundational knowledge. Collaborate with experienced researchers to gain insights and consider the ultimate goal of translating findings into practice.



## RADIATION ONCOLOGY

### Research Contacts



A/Prof Madhavi Chilkuri  
Head of Radiation  
Oncology



Ken Wan  
Chief Radiation Therapist



Thu Tran  
Chief Medical Physicist

### OVERVIEW

The Radiation Oncology team uses various forms of radiation to safely and effectively treat cancer, control the growth of the cancer or to relieve symptoms, such as pain. We understand the importance of research in discovering, designing and testing new treatments, and are actively involved in multiple clinical trials and research projects.

### KEY RESEARCH AREAS

- The EXPERT Phase III Trial (breast cancer)
- Use of data mining and machine learning to assist in radiotherapy clinical decision making

### 2023- 2024 HIGHLIGHTS

Appointment of department lead, A/Prof Madhavi Chilkuri, whose career highlights include previous Dean of Royal Australian and New Zealand College of Radiologists, and International Atomic Energy Agency projects in the Asia-Pacific region.

Inaugural trial of the first Artificial Intelligence (AI) software, AI Contouring, at Barwon Health.

Inaugural utilisation of a 3D Printer to manufacture personalised patient bolus material to customise the radiation beam.

### RESEARCH TEAM

#### Radiation Oncology

A/Prof Madhavi Chilkuri, Head of Radiation Oncology  
Medical Physics  
Thu Tran, Research contact

#### Radiation Therapy

Ken Wan, Research contact  
Tom Ffrench  
Philip Moloney

### COLLABORATING ORGANISATION

Liverpool and Macarthur Cancer Institutes and  
Ingham Institute

# UROLOGY

## Research Leads



A/Prof Richard Grills  
Director of Urological  
Surgery



A/Prof Kathryn McLeod  
Chair, Urology Research  
Group

### OVERVIEW

The Department of Urological Surgery has a strong research focus particularly regarding surgical education and training, rural surgery, bladder overactivity and urological oncology. The unit is involved with the Adrew Love Cancer Centre, and with clinical trials associated with bladder and prostate cancer. We strongly encourage and heavily support the involvement of trainees and junior surgical doctors in our research projects.

### KEY RESEARCH AREAS

- Robotic Surgery – kidney cancer and prostate cancer
- Regional and rural surgery
- Bladder overactivity including Botox and Sacral neuromodulation
- Non-technical skills
- Telehealth before and after COVID
- Urinary tract stone disease
- New treatments for non-muscle invasive bladder cancer
- Qualitative and quantitative research

### 2023- 2024 HIGHLIGHTS

Feature publications from the team including:

McLeod K, Woodward-Kron R, Rashid P, Archer J, Nestel D. (2024) “I’m on an island”: A qualitative study of underperforming surgical trainee perspectives on remediation. The American Journal of Surgery, 234, 11-16.

Wilder S, Kelsey E, O’Connor E, Grills R. (2024) Expanding urological services into regional Australia and reducing interhospital transfers: how the nurse practitioner can help. ANZ Journal of Surgery.

Wombwell A, Holmes A, Grills R. (2024) Are single-use flexible cystoscopes environmentally sustainable? A lifecycle analysis. Journal of Clinical Urology.

### RESEARCH TEAM

A/Prof Richard Grills  
A/Prof Kathryn McLeod

### COLLABORATING ORGANISATIONS

Western District Health Service  
Royal Australasian College of Surgeons (RACS)

## RESEARCH NEWS

# 2023 BARWON HEALTH RESEARCH SYMPOSIUM

### November 2023

The 2023 Barwon Health Research Symposium was a great success. A crowd of over 90 - in person and online - was treated to an impressive line-up of presentations and posters that highlighted the important work being conducted throughout Barwon Health and across the healthcare spectrum.

The Symposium celebrated our year in research and reinforced the strong sense that we're all part of something important. It also demonstrated how our shared endeavours can contribute to better health and wellbeing outcomes - here in the Barwon South West region, nationally and internationally.

The Directorate welcomed Barwon Health Board members and Friends of Barwon Health Research to the Symposium.

Frances Diver, Chief Executive, Barwon Health, presented the 2023 Research Prizes to the following winners:



#### **Best Paper of the Year Award (Scientist):**

**Dr Luba Sominsky, IMPACT and ChERUB:**  
Pre-pregnancy obesity is associated with greater systemic inflammation and increased risk of antenatal depression.



#### **Best Paper of the Year Award (Clinician researcher):**

**Dr Bridgette McNamara, Barwon South West Public Health Unit:** Comprehensive case-control study of protective and risk factors for Buruli Ulcer, southeastern Australia.



### Research Poster Awards:



**Basic Science: Trang Truong, IMPACT, Deakin University:** Network-based drug repurposing for schizophrenia (accepted by Dr Bruna Pannizutti Parry).



**Clinical Registry/ Data Analysis: Dr Tia Smith, Aged Care, Barwon Health:** Evaluation of the utilisation and clinical outcomes of an afterhours emergency telehealth service to residential aged care facilities.



**Clinical Trials: Allison Bone, ICU Research, Barwon Health:** A pilot feasibility randomised controlled trial of bone anti-resorptive agents on bone turnover markers in critically ill women (accepted by A/Prof Neil Orford).



**Cohort/ Population Studies: Jacob Harland, IMPACT, Deakin University:** Bone mineral density and trabecular bone score values in novel subgroups of adult-onset Diabetes.

**Qualitative Research: Erin Parker, Social Work, Barwon Health & Maryam Esghaei:** Healthcare gaps and barriers to service utilisation within Geelong refugee communities: a co-designed research and service improvement project.



**Translational Research: Dr Samantha Dawson, Food and Mood Centre, Deakin University:** The Pregnancy Research and Translation Ecosystem: Improving the proportion of women meeting the dietary guidelines in pregnancy.



## RESEARCHER PROFILE

### NICOLA LLOYD, ALLIED HEALTH



Clinical Lead Physiotherapist, Gerontology  
and PhD Candidate, La Trobe University

#### **What is your background?**

I am a physiotherapist with experience in clinical practice and project management. I am interested in research and want to learn more, so I decided to pursue a PhD at La Trobe University.

#### **What is your research focus?**

While my studies are separate to my position at Barwon Health, I am excited that the study I am currently completing (the last for my PhD), is based at Barwon Health working with a group of staff and consumer advisors. We are working together to develop a guide for planning evaluations of consumer engagement in health service design.

#### **What have been your research highlights at Barwon Health?**

A key research highlight of my research journey has been achieving several first-author publications. I had very little knowledge or experience in qualitative research when I began, so I was pleased to have one of my studies published in a qualitative health research journal.

#### **Why should clinicians conduct research?**

Clinicians are well placed to generate ideas for research that will end up improving patient care. Clinicians are often good problem solvers and like new challenges, so research can be a good fit for many of us.

#### **What is your advice for clinicians considering starting or leading research?**

Consider supported programs like Stepping into Research or STaRR. You may be able to assist research investigators with recruitment or data collection for trials, to get a taste of research before embarking on a project of your own.



## RESEARCH NEWS

### RESEARCH IN GEELONG LEADS TO A WORLDWIDE ADVANCE IN DIAGNOSING WHIPPLE'S DISEASE

**June 2024**

An innovative research project by the Australian Rickettsial Reference Laboratory at Barwon Health has uncovered a new and simpler method to diagnose Whipple's Disease without the standard invasive, expensive and painful biopsy procedure that patients have previously endured.

Whipple's disease is a rare disease caused by *Tropheryma whippeli* bacteria that can have a devastating effects on those affected, from chronic diarrhoea, severe joint pain, endocarditis and neurological abnormalities and even death.

All of us are exposed to *T.whippeli* bacteria throughout our lives, however exposure only leads to Whipple's Disease in people with a genetic mutation that blocks their immune defence from producing antibodies against the bacteria.

This inspired Prof Stephen Graves (pictured), Medical Director of the Australian Rickettsial Reference Laboratory (ARRL) located at Barwon Health, to flip conventional diagnostic methods and test whether the lack of antibodies in a susceptible person's blood, rather than the presence of the antibodies, could help diagnose this disease.

Prof Graves and his colleague Dr Kwee Chin Liew put together a research team at ARRL and over the next three years compared blood samples from Whipple's Disease patients in Australia with blood samples from healthy people. The results were striking. Blood taken from people with Whipple's Disease had significantly lower IgG antibody levels than blood taken from people without Whipple's Disease.

Prof Graves explained, "This novel finding, published in the peer-reviewed journal *Pathology* means that if someone has symptoms that suggest possible Whipple's Disease, a simple blood test may now be used to exclude the disease, instead of a biopsy, and could be used as the first step towards the diagnosis."





# NOTES

Lined area for notes.





Adrian Costa  
CLINICAL TRIALS CENTRE