

# RESEARCH REPORT

# 2016



**Barwon  
Health**



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# FOREWORD

*Welcome to the second edition of Barwon Health's annual Research Report. We are excited to deliver this report to you in a new format for better distribution and storage in this digital age. We set a lofty target for ourselves when we developed our Strategic Plan 2015-2020, and this past year we have achieved the target of 10% increase in peer-reviewed journal publications over the previous year. This equates to over 440 peer-reviewed journal articles that we have contributed to the larger health academia. Our researchers must be congratulated on their effort.*

The Geelong Centre for Emerging and Infectious Diseases (GCEID), through the leadership of Professor Soren Alexandersen, also did well to become a partner institution for The Australian Partnership for Preparedness Research on Infectious Diseases Emergencies (APPRISE) in its first year of inception. This partnership is a National Health and Medical Research Council's (NHMRC) funded Centre of Research Excellence with a focus on improving Australia's emergency response to infectious diseases. One of the outcomes of this funding success will be support for two PhD students and a Post-Doctoral Fellowship to support this work going forward.

Several individuals have also received significant recognition or funding success, including Professor Richard Page in his multi-trauma surgical research, as well as Associate Professor Felice Jacka's NHMRC Career Development Fellowship. Professor Trisha Dunning created waves at her Diabetes Symposium by inviting celebrity chef Maggie Beer to discuss with participants the importance of nutrition and enjoying healthy food in the older population.

This is also a year to remember for the Oncology and Haematology Clinical trials team who have ventured into

Early Phase clinical trials and will be aiming to expand this scope going forwards. We anticipate that our involvement in clinical trials across different therapeutic areas will continue to increase, and through the assistance of the Research Ethics Governance and Integrity (REGI) unit this will be approached in a considered manner, adhering to research governance best practice principles.

Barwon Health has also been actively contributing externally. We provided submissions to consultations on the Victorian Health and Medical Research Sector Plan, the Medical Technologies and Pharmaceuticals Sector Plan, as well as the Genomic Health Care for Victoria discussion paper. We believe it is important for regional academic health institutions to be heard when strategies are developed on a State or National level.

Finally I would like to take this opportunity to congratulate a few individuals on their respective appointments. Professor David Watters has been appointed the inaugural Alfred Deakin Chair of Surgery at Barwon Health. Professor Peter Hodgson has been appointed the Deputy Vice Chancellor -Research at Deakin University, our strategic partner.

Last but not least Professor Belinda Moyes, Barwon Health's new Chief Executive Officer. Prof Moyes' appointment is timely as we bring to a close Barwon Health's Research Strategy 2013 – 2015, and we embark on a new Academic Strategy 2016 – 2020, bringing together research, clinical education and training, and our library services.

I trust this report brings you along our journey with us.



**Associate Professor Alastair Mah**  
Chief Medical Officer  
Barwon Health

# SECTION 1

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*Overview*



# RESEARCH STRATEGIC PLAN

*Barwon Health's health and medical research takes a whole-of-life span, whole-of-health-system approach to transforming healthcare and health-service delivery; addressing the leading health challenges of the region. With a clear focus on population health and chronic disease, Barwon Health's health and medical research changes lives, translates knowledge into practice and policy and focuses on research excellence to deliver sustainable healthcare that benefits the Barwon Region and beyond.*

## *Research vision*

Enabling world class integrated healthcare for the Barwon South West Region

## *Research mission*

To support and conduct health and medical research that transforms lives, healthcare delivery and health systems to benefit the communities of the Barwon Region

## *Research values*

Integrity, Innovation, Collaboration, Connected, Sustainability

## *Research strengths*

Expertise, Engagement, Environment

## *Research Strategic Objectives*

1. Leverage embedded expertise and capability
2. Improve research support to build capability and capacity
3. Promote research culture , research engagement and research outputs
4. Lead a regional approach to healthcare innovation and solutions to health challenges

Objective	Initiatives				
1. <i>Leverage embedded expertise and capability</i>	Research Advisory Committees	Project Design Initial Assessment for risk mitigation, alignment with priorities	Postgraduate Medical Education Research Program	Co-ordinated Clinical Trials Activity	Survey research literacy and research aspirations
2. <i>Improve research support to build capacity</i>	Professorial appointments in relevant disciplines	Research leadership framework for the McKellar Centre	Health Professional PhD cohort program	Early Graduate Research Program	Research funding stream through the Barwon Health Foundation
3. <i>Promote research culture, engagement, outputs</i>	Research questions and knowledge transfer in Barwon Health Strategic themes and planning cycle	Central support for writing ethics applications and journal articles and engaging in research promotion	Internal promotion of research activity, success and opportunities (website, newsletter)	Publication and research outputs digital repository (collaborate with regional health library)	Consumer engagement (citizen scientist) in research lifecycle
4. <i>Lead a regional approach to healthcare innovation and solutions</i>	Partner with Higher Education and Research Institutes to solve emerging health challenges (GCEID)	Partner with Government and Non-Government Agencies in solution focused initiatives and knowledge transfer	Partner and health service research leader in Regional Integrated Health Science Centre	Partner and research mentor in Ambulatory Care Regional Research Network	Lead Post Graduate Medical Education research and evaluation Program

# THE BARWON HEALTH FOUNDATION AND FUTURE FUND

## *The Barwon Health Foundation and Volunteer Services*

The community of Geelong and the surrounding region has a long history of looking after its own. In 1848 community leaders, understanding the value of investing in the health of the population of Geelong and the surrounding region, launched the first Hospital Appeal. The Geelong Infirmary and Benevolent Society (now University Hospital Geelong) first opened its doors in Ryrie Street in 1852, due to the generous support of the community. For almost 170 years community support has played a key role in the building of the quality health service we have today.

Today, the Barwon Health Foundation and Volunteer Services provide opportunities for the community to support their local health service through philanthropy and volunteerism. Creating and nurturing our partnerships enable us to provide the region with excellence in medical services and facilities, ensuring they remain accessible to all.

The Foundation and Volunteer has tremendous community connections through our 1000 wonderful volunteers, numerous supporter groups, events, corporate partnerships and appeals. The Foundation and Volunteer Services is also supported by an inspiring team of selfless board committee members and enthusiastic volunteers.

One of the major projects currently being supported by the Foundation is the refurbishment of the Andrew Love Cancer Centre and Oncology Pharmacy through the fundraising campaign 'Project Love'.

To support and safeguard the future of our health systems and services in our region the Barwon Health Foundation Future Fund has been established with the key purpose of building an endowment fund for the next generations with an immediate focus on supporting clinical education and research.

The extraordinary work of our research teams is largely a new story to the people of Geelong and the Foundation is pleased to provide itself as a conduit to potential financial supporters.

Whilst our intention is to build a corpus of funds that will allow our clinical education and research to flourish culturally and financially, we are also mindful to discuss support of more immediacy.

A philanthropic gift to the Barwon Health Foundation Future Fund will leave a legacy that will improve the health and wellbeing of the people in our community for years to come.

### **Contact details**

Barwon Health Foundation 283 Ryrie Street  
Geelong Victoria 3220  
Tel: 03 4215 8900

# NEW LIBRARY, RESEARCH AND CONSUMER ENGAGEMENT ACTIVITIES

*at St Mary's Hall*

## **Ann Ritchie**

Director Library and Literacy

In March 2016 the Library was relocated to our new facilities in St Mary's building, on Myers St. The glass-encased, floating mezzanine floor of the nineteenth century heritage building has been completely redesigned and refurbished as a modern, vibrant library. Double-screened computers comfortably spaced around the perimeter benches allow researchers to work efficiently, with easy access to library staff and collections. A mixture of spaces is available for research and teaching activities; there are facilities for videoconferencing and meetings, low chairs for quiet reading with lap-top tables; and group study and peer teaching booths.

The ground floor accommodates the boardroom, Research Support and Consumer Engagement offices, and a versatile conference area. In November 2016 almost all of the Research Week activities will be held in the Conference and Exhibition spaces and from 2017, the St Mary's building will be the site of the Academic Skills Program to support health service staff to develop research literacy and capability. Consumer representatives are becoming more involved with library and research activities: they are eligible to become library members, and have received training in how to access evidence-based information resources; there are now three consumers on the Human Research Ethics Committee.

The integrated Library, Consumer and Research Support services are critical components of bringing to life our strategic goals of encouraging the professional development and research skills of early-career and more experienced

clinical, education and research staff; partnering with and empowering consumers; and improving health literacy in our service and in community.

## *Research Data Management*

Following on from the initial research data management project which received funding through the 2015 Education, Training and Research Profile Fund, the Research librarian has worked on a data inventory project with the Orthopaedics research group. The aim of the project is to investigate research data management practices, with a view to creating a catalogue or registry of all their research projects, using a standard set of metadata to enable search and retrieval. This will assist researchers to manage, track and reuse the research data sets created by the research projects.

## *Research Publications Repository<sup>1</sup>*

Barwon Health's Publications Repository was set up in 2015 to archive and make accessible all official Barwon Health electronic publications. In addition to annual reports, oral histories, and sabbatical reports, the Repository hosts research publications written by Barwon Health researchers. The growing research and publishing activity of Barwon staff is reflected in the increase in scholarly, peer reviewed journal articles for the current year: while there were 288 items in the research collection at the end of 2015, we are set to add more than 440 items by November 2016.

<sup>1</sup> <http://cdm20038.contentdm.oclc.org/>



# CAREER SPOTLIGHT

**Professor Julie Pasco**  
Professor of Epidemiology

## *Early Interest in Research*

It was a keen interest in health and science that led Julie to Monash University to study Science, with majors in Biochemistry and Physiology, followed by a stint of teaching science and chemistry. Driven by curiosity and searching for a challenge in research, Julie pursued a PhD opportunity in the Department of Human Nutrition at Deakin University, and never looked back. An early research focus on human body composition involved exploring emerging technologies for measuring muscle, fat and bone in situ, and this revealed possibilities for examining why some people develop metabolic disorders and how the progression of such disorders might be prevented or slowed. Inspired by this line of enquiry, Julie undertook a Master of Epidemiology at The University of Melbourne and this clarified the way forward on the pathway of conducting research into ways of improving human health.

## *Research Motivation and Success*

Julie is a highly respected international researcher with more than 250 publications and a list of successful grants and awards. Julie is motivated by the rewards of research such as using data to improve the community's health, and by the challenges of research such as being patient for many years while data are collected. Persistence is needed to overcome the many roadblocks and obstacles that appear in a research career, but Julie also acknowledges the support of a dedicated team of hard-working researchers and vivacious students as critical for success.

## *Career Highlights*

Julie is always amazed by the generosity of study participants from the local community in giving their time and providing questionnaire data and clinical measures as research participants, with several thousand local residents involved in the large, ongoing cohort study known as the Geelong Osteoporosis Study (GOS) and several hundred mother-child pairs involved in the Vitamin D in Pregnancy cohort study. Julie believes it is particularly important to update participants of study outcomes and conducts regular public information sessions on the major studies

she is responsible for. Julie has also initiated the Ageing, Chronic Disease and Injury study (ACDI) which is characterising the pattern of disease, injury and health service utilisation across western Victoria. Through these research activities, Julie and colleagues are building important contemporary data resources that are vital for monitoring disease, evaluating personal risk, identifying mechanisms of disease and pinpointing potential targets for lifestyle and medical intervention. This program of research is shaping evidence-based practice and informing policy decisions that play key roles in improving people's health and wellbeing. Julie's research activity now includes collaborations with researchers from around the world and across a variety of disciplines including immunology, infectious diseases and psychiatry.

## *What does the Future Look Like?*

Julie now leads the Epi-Centre for Healthy Ageing and is Deputy Director of the IMPACT Strategic Research Centre located at the University Hospital Geelong. The future of research looks promising in terms of enthusiasm, talent, infrastructure and data integrity, but continued success of these population-based studies hinges on ongoing funding and this is a great challenge under current economic conditions. As the population ages, chronic disease will affect more and more people. Chronic diseases including osteoporosis and loss of muscle mass and function, are key components of loss of independence and morbidity associated with ageing, so there is a demand for our research so that appropriate action can be taken to ensure healthy ageing.

## *Advice to Those Thinking of Starting out in Research*

A positive outlook, an open mind, integrity and a willingness to learn are really important. These attributes will bolster the more formal requirements of sound research skills and expertise in your discipline. Julie recommends finding an effective mentor and a supportive environment. Be prepared to pay attention to detail and be patient as research is meticulous and takes time to do properly. Some researchers are lucky to have a 'eureka' moment and make a single profound discovery, although many research careers are built upon making a series of small discoveries that fit together to inform the bigger picture.

# CAREER SPOTLIGHT

**Professor Soren Alexandersen**  
Director, Geelong Centre for Emerging  
Infectious Diseases

## *Early Interest in Research*

As a child, Soren loved animals. His family's small apartment in Denmark was home to an assortment of reptiles, ants, and mice, just to name a few of the animals he kept. Instead of playing with Lego, Soren reconstructed mice skeletons from dead mice after he had carefully removed their skin, muscles and organs. Inevitably, Soren studied veterinary medicine and immediately after graduating was drafted into compulsory military service. While in the military, he also started his own veterinary practice. Innate curiosity led to the scientific method as a means of answering his questions and Soren completed his PhD in Veterinary Pathology investigating disease in mink. He discovered that a well-known virus causing chronic disease in older mink could also cause young mink to die acutely from pneumonia. The discovery led to management plans and work on antibody treatment and vaccines that helped control the virus and spared the lives of many young mink.

## *Research Motivation and Success*

The excitement of new discoveries like this, together with work in the laboratory, for example an early discovery of non-degraded virus proteins in the lungs of young mink dying from pneumonia, has been a driving force behind Soren's research interests and motivations ever since. As he mentions, you do detailed work in the laboratory and the field, and if successful you can eventually see the direct impact in the field.

## *Career Highlights*

When working in England between 1999 and 2004, Soren investigated the major 2001 UK foot-and-mouth disease outbreak that required 10 million sheep and cattle to be slaughtered and cost the UK an estimated £8-10 billion. The investigation was far reaching including fieldwork, diagnostics and research that informed government and policy to help control the outbreak and prevent future outbreaks. Similarly in 2014-5 while working in Canada, Soren helped in the early diagnosis and characterisation of a novel highly pathogenic bird flu virus which effectively limited the outbreak in Canada to only 12 farms while in the US the same virus was not contained early on and led to 50 million turkeys and chickens dying from the virus infection or being culled to control the disease. Other career highlights include working in premier research facilities in the US, Canada and the UK that involved both animal and human disease research and diagnostics. Five years as Director of Lindholm, a virus research facility located on a small isolated island in Denmark was particularly memorable. With these and many other contributions in mind, Soren feels that his research has been particularly rewarding because it developed practical solutions to real-world problems.

## *What does the Future Look Like?*

The future appears bright for Soren and the Geelong Centre for Emerging Infectious Diseases (GCEID). 'One health' is Soren's and GCEID's focus which combines animal, human and environmental health. Three-quarters of new human infections begin in animals, so according to Soren, we need to proactively investigate animal diseases and consider if and how they might adapt and infect humans. Collaborations with Geelong's CSIRO Animal Health Laboratory, Deakin University and Barwon Health are central to a multidisciplinary approach in managing infectious diseases, new and old. For Soren, helping to build GCEID from the ground-up is an exciting and challenging career move. The centre is new and small which gives it flexibility to chart its own course and be at the forefront of discovering new diseases and improve our understanding of already known infectious diseases all the way from the environment, to animals and to people.

## *Advice to Those Thinking of Starting out in Research*

For Soren, the best researchers are actually 'two persons'. One person is logical and structured, who methodically goes through the research process to test hypotheses and answer questions. The other person is disorganised and a little crazy, and thinks outside the square to generate new ideas and connect concepts that don't obviously go together. Many good researchers are usually the 'first person' while many of the best researchers are both. Soren's advice to people thinking of a research career is to make sure your field of inquiry really excites you. Research is a challenging career pathway so you must be deeply interested in your research topics and see their practical importance, even if out far on the horizon, to persist through the tough times. One of the biggest challenges in a research career is working with and leading people, which can be more difficult than the scientific process. Soren thinks people are more complex and unpredictable than any pathogen or disease he's studied! Soren also says you have to be willing to relocate to different parts of the world to learn new methods, see the pros and cons of doing things in a certain way, and to build relationships and learn from other researchers. Soren's career started in Denmark before taking him to the US, then back to Denmark, then to the US again, then back to Denmark, then to the UK, then back to Denmark, then to Canada and finally Australia!



# RESEARCH WEEK 2015

## *Summary and Outcomes*

### *Research Week Poster Competition Winners 2015*

In 2015, the REGI Unit received 83 high quality entries into the Poster Competition.

Congratulations to the following researchers on their awards:

Pam Pratumswan – Most Outstanding ‘Health Outcomes/  
Clinical Practice’ Research Poster

Iron Deficiency in Colorectal Cancer, its Contribution to  
Anaemia, and its Potential Peri-operative Management for  
Patients Undergoing Major Colorectal Surgery

Michael Muleme – Most Outstanding ‘Basic Science’ Research  
Poster

Adaption and Bayesian Validation of a Human  
Immunofluorescence Assay for Detecting Antibodies To  
Coxiella Burnetii In Small Ruminants

Claire Stevens – Most Outstanding ‘Clinical Research’  
Research Poster

The value of prophylactic cholecystectomy in idiopathic  
acute pancreatitis

Alexandra Wright – Most Outstanding ‘Early Career’ Research  
Poster (Joint Winner)

The current epidemiology of injecting drug use associated  
infective endocarditis in Victoria

Shalika Bohingamuwa – Most Outstanding ‘Early Career’  
Research Poster (Joint Winner)

Economic Evaluation of the Personalized Health Care Proof  
of Concept Pilot Study

Alexandra Wright – Most Outstanding ‘Population Health’  
Research Poster

The current epidemiology of injecting drug use associated  
infective endocarditis in Victoria

Shalika Bohingamuwa – Most Outstanding ‘Service Delivery/  
Health Systems’ Research Poster

Economic Evaluation of the Personalized Health Care Proof  
of Concept Pilot Study

Sharmilla Perinpanathan & Jessica Rhodes – Most  
Outstanding ‘Audience Choice’ Research Presentation

Appropriateness of Oral Antimicrobial Prescribing upon  
Discharge from a Tertiary Australian Hospital

# EDUCATION, TRAINING AND RESEARCH PROFILE FUND (ETRPF)

## *Selected Project Summaries*

### *Category A – clinical education and training and/or research buy-out time for health professionals*

#### **Associate Professor Daniel O'Brien**

*Deputy Director, Department of Infectious Diseases*

ETRPF Grant application title - 'Improving the safety and effectiveness of Mycobacterium Ulcerans treatment on the Bellarine Peninsula'.

Associate Professor Daniel O'Brien is an infectious diseases specialist and leading researcher working on the bacterial infection, Mycobacterium ulcerans (commonly known as the Bairnsdale ulcer). This is a serious infection causing significant morbidity that affects people of all ages in communities on the Bellarine Peninsula, Victoria, and its incidence is increasing by 40-60 cases per annum.

Through the experience and research of clinicians in Barwon Health, treatment of M. ulcerans has evolved from a surgically to a medically treated disease with high cure rates. However, despite antibiotic treatments, healing times can be prolonged leading to significant inconvenience. Antibiotics for M. ulcerans have high toxicity rates and toxicity can be severe and life-threatening.

A/Prof O'Brien and his team's research focuses on improving the effectiveness, safety and acceptability of treatments for older patients. Unlike other endemic areas where children are mainly affected, patients in the Bellarine Peninsula are often older with 20% in the Barwon Health cohort aged > 75 years. Older patients may have different clinical manifestations including the number and severity of M. ulcerans lesions, increased rates of drug toxicity and more prolonged wound healing times on treatment, increased requirements for reconstructive surgery, and increased mortality rates. A/Prof O'Brien's research aim was

to investigate the treatment of elderly patients, to monitor the effectiveness and improve the safety of treatment for this group. The toxicity rate amongst this cohort can be as high as 40%, requiring 4 out of 10 people to stop treatment due to adverse drug reasons, and sometimes requiring hospitalisation. Lesion healing can be long and complicated, requiring the changing of dressing which is onerous, costly, and burdensome for patients and carers, while also posing an increased risk of infection.

A/Professor O'Brien's work has been widely published and will be presented in early 2017 to the Scientific Committee of the World Health Organisation (WHO) of which A/Prof O'Brien is a member, and the conference on Tropical Medicine in Brisbane. A/Prof O'Brien hopes Barwon Health's approach to improving the quality of treatment via the use of oral antibiotics combinations (versus injectables), will lead to their use internationally, and recognition as the Standard Of Care treatment within the revised WHO treatment guidelines for the Mycobacterium Ulcerans infection.

#### **Ms Donna Lever**

*Nurse Cancer Care Coordinator and Survivorship Nurse Consultant Barwon Health*

ETRPF Grant application title - 'Surviving Cancer – what is the experience for the younger adult living in regional or rural Australia?'

When clinical success creates novel research outcomes.

Global cancer survival rates are increasing due to earlier detection and improved treatment options and with these developments a relatively new concept - survivorship' and a novel area of clinical care and research. Donna Lever is a nurse and researcher with many years' experience in developing survivorship clinics, which aim to improve outcomes for people affected by cancer.

The focus of survivorship is on recovery, health and wellbeing and recognising that these are affected by the broader psychosocial context in which the person exists during and post cancer recovery. Donna's professional experience led her to identify a gap between available treatment options and the support services required to help patients in recovery and beyond.

Donna's research explores the survivorship experience of younger adults aged 18 to 40, living in regional and rural Australia at the time of transition following the completion of curative cancer treatment. The aim of Donna's project is to identify the priorities and needs of this group and the extent to which these are met as the younger adults resume their personal, social and societal roles.

By comparison with their older counterparts, young adults experience unique challenges when faced with a potentially life-threatening illness, in particular poorer health outcomes due to limited peer support, an under-representation in clinical trials and a greater psychosocial burden, and less well established clinical networks. This group is also less likely to have developed long term relationships, or have existing social or financial plans to negotiate their health and life challenges.

Donna's project is ongoing and will inform the development of the survivorship model of care at Barwon Health to optimise the long term health outcomes for cancer survivors. It may also enable translation to models of care for other chronic disease survivors such as young adults with diabetes.

## *Category B – support or seed funding for clinical education and training and/or research projects*

### **Dr Amanda Wade**

*Department of Infectious Diseases and Infection Prevention*

ETRPF Grant application title -Models of care for hepatitis C treatment: comparing hepatitis C care and treatment in a primary health care service compared with a tertiary hospital, The Prime Study'.

There are over 200,000 people in Australia infected with hepatitis C, however, less than 2% of Australians infected with hepatitis C are treated annually. The consequence of untreated infection can be liver failure and liver cancer, the fastest increasing cause of cancer death in Australians.

Dr Amanda Wade is an experienced Infectious Disease physician and researcher, whose goal is to increase hepatitis C service provision for those in regional and rural areas. The current barriers to accessing hepatitis C therapy are multiple and include; long, toxic treatment regimens and inflexible treatment services delivered by specialists in tertiary hospitals.

ETRPF funding allowed Dr Wade and her team to collaborate in a study investigating the effectiveness of a new class of drug called direct acting antiviral (DAA) therapy which has radically altered the treatment for those infected with hepatitis C virus (HCV), DAA therapy offers a well-tolerated all oral, treatment regimen, with high cure rates and therefore an opportunity to increase the number of people accessing hepatitis C treatment. Importantly it is likely that DAA therapy could be administered in the primary health care setting improving treatment capacity and access, and potentially reducing treatment costs.

Dr Wade is coordinating 'a randomised controlled trial with the new DAA treatment investigating the effect of providing treatment in the community, on treatment uptake; the 'Prime Study'. The Prime Study is being conducted by the Burnet Institute, Melbourne, Victoria. Three hundred participants will be recruited from nine designated Primary Health Care Services (PHCS) throughout Melbourne and Geelong. This randomised trial will compare treatment uptake and cure rates of DAA therapy for genotype 1 hepatitis C delivered in the community setting, compared to the standard of care tertiary setting.

In the City of Greater Geelong there are approximately 5,000 people with HCV infection, however since 1 March 2016, only 150 patients have started treatment at Barwon Health liver clinic. The new DAA drugs provide an opportunity to increase the treatment uptake rates and decrease the morbidity and mortality of HCV. A key to eliminating HCV now is access to treatment; proving the efficacy of community treatment via the Prime Study is critical.

### **Associate Professor Mark Kotowicz**

*Department of Endocrinology and Diabetes,*

*Department of Medicine*

ETRPF Grant application title -'Features of the Metabolic Syndrome and risk of subsequent Gestational Diabetes Mellitus'.

A/Professor Mark Kotowicz is an experienced endocrinologist with an interest gestational diabetes. His team applied for support through the ETRPF to investigate the possibility of identifying predictors of the development of gestational diabetes (diabetes that has its onset during pregnancy) that might allow earlier detection of the condition.

Gestational diabetes (GD) affects up to 10% of women in pregnancy and can lead to 'large for date' babies, often requiring caesarean section for safe delivery. Antenatal outcomes for babies born to women with GD include hypoglycaemia and jaundice. Controlling GD during the pregnancy is important and early detection can create the opportunity for early intervention to control blood glucose abnormalities.

A/Prof Kotowitz and his team have interrogated data sets to understand the transition of women from normal to impaired glucose metabolism and factors that lead onto the

development of diabetes. The team found that they could predict, from the baseline biochemistry, those women who were likely to develop impaired glucose metabolism and diabetes.

This finding prompted an investigation into the possibility of predictors of GD risks, by reviewing the obstetric history of female participants enrolled in Geelong Osteoporosis Study in the early 1990s who subsequently had children. Amongst the baseline measures reviewed were measures of fasting plasma glucose, serum lipids, and other measures that could be useful to predict whether there an underlying abnormality in glucose homeostasis existed which might have predisposed the person to develop GD. The teams suggests that if identification of glucose homeostasis abnormalities is a useful predictor of GD, then testing for these factors earlier in the pregnancy would enable earlier intervention, and possibly preventing the onset of GD during pregnancy, or improving the management and outcomes of GD.

Data collection continues and data analysis is scheduled for the end of this year. If predictors of GD are identified, further research will be commissioned in conjunction with local Obstetricians to review and test from first antenatal visits. The confirmation of reliable predictors of GD could lead to the development and implementation of early screening and better health outcomes for women with identified risk factors and their babies.

#### **Ms Nicky Robson**

*Manager, Speech Pathology Barwon Health*

ETRPF Grant application title- 'Development of communication resources to assist members of acute health-care teams to communicate with their communication impaired consumers'.

A fortuitous convergence of need, strategic alignment, and professional development

Working with people who have communication difficulties is core business for speech pathologists. However, interactions between healthcare staff and people with communication impediments can sometimes be challenging. Nicky Robson is a speech pathologist with over 20 years' experience, who implemented an ETRPF supported research project focusing on improving the access to information in the health care system for people with impaired communication.

Nicky and her team sought feedback from patients in the acute stroke ward, with communication difficulties. The research team's goal was to use the patients' experiences and feedback to help inform strategies and resources to improve interactions between staff and communication impaired patients. By conducting focus groups with the nursing staff and one on one interview with consumers, the research team initial have identified some communication aids that might assist staff and consumers. The research

has also shown that sometimes consumers and providers have different expectations about each other's needs.

As Nicky describes: "Nursing staff have told us they want to know about their patients' care needs and preferences, as well as their personal history and story, and the pertinent issues relating to the patient as a person. While consumers want to know about their care, and their discharge plans. They also want hope and reassurance...Often we, as clinicians, think people will simply want information about practical things,...but what we found is that the personal, more holistic aspects were equally if not more important to the consumers."

An important secondary outcome of the project was the opportunity for the team to contribute to the education and training of clinical staff regarding consumer centred care, and the opportunity to engage the Speech Pathology Unit in research.

"We always had dual aims for our project. As well as conducting the research project, we also wanted to learn how to conduct research so that we would know in advance what sorts of processes and timelines to factor in if we want to conduct research in future. This is the first piece of research we have conducted in the unit. So it was really important to do this," Nicky said.

Nicky is hopeful future resources will enable their team to develop and promote communication tools and resources for all clinical units across Barwon Health.

### *Category C – the visiting scholars grant: funding for a one-month to three-month residency for a clinical education and training and/or research visiting scholar*

#### **Professor Trisha Dunning**

*Director, Centre Nursing and Allied Health Research*

ETRPF Grant application title - 'Professorial visit to foster clinical knowledge exchange and research collaboration in managing older people with diabetes within Barwon Health'.

"The best laid plans of mice and men go oft awry" - Robert Burns

As an experienced researcher, Professor Dunning knows that the research endeavour is not always a straight line, but something that you adapt as you go. It will come as no surprise then that she achieved her key outcomes for the ETRPF grant – inter-professional learning and collaborative practice, despite a fairly major hiccup with the last minute absence of her colleague, peer and long standing collaborator, Professor Alan Sinclair, Director, Foundation for Diabetes Research in Older People at Diabetes Frail Ltd, Worcestershire.

Professor Dunning reports that the project attained 90% of the planned outcomes. A key outcome being the delivery of a professional symposium in March 2016 titled 'Managing Older People with Diabetes: Sharing Wisdom' co-hosted by Barwon Health and Deakin University. While not physically present Prof Sinclair, as one of two keynote speakers was able to deliver a plenary session via video recording for the Symposium. While Maggie Beer, AM, cook and founder of The Maggie Beer Foundation, and one of Australia's foremost culinary figures and spokespeople presented alongside Prof Dunning and her peers.

Leveraging on Professor Sinclair's intended visit, Professor Dunning pursued opportunities to meet with the Barwon Health geriatricians with a shared interest in sarcopaenia and frailty, and to continue work with Prof Julie Pascoe's research group the Geelong Osteoporosis Study (GOS), to develop the collaborative research group known as the Geelong Frailty Study, coordinated and initiated by Prof Dunning. Such meetings have borne fruit, helping the group, primarily comprised of early career researchers, to identify their research focus with the intention to utilise GOS data to develop a pilot study on frailty in the Barwon region.

Additional work also progressed with a joint writing group on development of guidelines for adults and older people living with Type 1 diabetes, an area which is under-represented in the literature. Follow-up work will be conducted by Professor Dunning and Professor Sinclair in Copenhagen later in 2016. The guideline will be launched next year at the Biennial IDF World Congress.

The ETRPF category supporting visiting scholars in which Trisha was successful shows the foresight of the organisation and Research Directorate in embedding research and building capacity within the workforce.

"Research isn't only about doing research, particularly in an organisation like Barwon Health where a lot of staff are never going to do research themselves. But they are all engaged in research in one way or another," Trisha said.

"The reality is that most people will read research and use research, they won't do research. But that's as important for clinical outcomes and patient safety and personalised care. It's about generating the research to enable those things to happen, which is where all staff contribute to research."





# SECTION 2

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*Barwon Health/Deakin  
Collaborative Research Groups*

*Barwon Health  
Research Roundups*



# EPIDEMIOLOGY

## PROFESSOR

## JULIE PASCO

### *Research Focus*

The Epi-Centre for Healthy Ageing (ECHA) conducts population-based research focused on understanding the progression of chronic metabolic and musculoskeletal disorders including obesity, diabetes, osteoporosis and sarcopenia, and the nexus between physical and mental health. Of particular interest is the identification of modifiable risk factors that could be targeted in order to delay physical and mental decline observed with ageing. An important component of this program of epidemiological research is to facilitate knowledge transfer from research into clinical practice and into the community.

#### Major research projects include:

- The Geelong Osteoporosis Study (GOS), a prospective, population-based cohort study of men and women, originally designed to describe the epidemiology of osteoporosis and identify risk factors for fracture, then evolved over time to study a broad range of chronic metabolic conditions, infectious diseases and psychiatric disorders.
- The Fracture grid (GOS-FracGrid), a comprehensive catalogue of radiologically-confirmed incident fractures in the Barwon Statistical Division.
- The Vitamin D in Pregnancy (VIP) study, a prospective study of mother-child pairs, designed to investigate maternal vitamin D status during pregnancy and offspring growth and development.
- The Ageing, Chronic Disease and Injury (ACDI) study, designed to establish the extent and influence of ageing on chronic disease and injury across western Victoria.

### *Major Achievements - Highlights from the last 12 months*

- Natalie Hyde was awarded an oral presentation in the 'five best abstracts' section at the Australian and New Zealand Bone and Mineral (ANZBMS) Conference at the Gold Coast in August.

- Sarah Hosking was honoured with the Young Investigator Award at the International Osteoporosis Foundation (IOF) Regionals conference in Singapore in November.
- Kara Holloway, Pamela Rufus, Sarah Hosking, Natalie Hyde, Darci Green, Claire Clissold, and Elizabeth Degabriele were awarded the ANZBMS Travel Awards 2016.
- Dr Sharon Brennan-Olsen was awarded a Career Development Fellowship from the NHMRC.
- Dr Kara Holloway was awarded an Alfred Deakin Research Fellowship from Deakin University.
- Dr Amie Haylie and Dr Shae Quirk graduated from Deakin University with PhD degrees.
- Dina Yousif was awarded an Honours publication scholarship from Deakin University.
- Natalie Hyde was awarded a PhD publication scholarship from Deakin University.

### *Looking Forward - Anticipated Highlights in the next 12 months*

- Assess male participants of the Geelong Osteoporosis Study (GOS) as part of the 15-year follow-up phase of the ongoing prospective cohort study.
- Use bone indentation as a novel method for measuring structural properties of bone in situ for men enrolled in the GOS – we will be the first research group in Australia to use the new hand-held device known as an OsteoProbe to measure the ability of bone to resist the initiation and propagation of micro-cracks.
- Use the new peripheral quantitative computed (pQCT) scanner to measure bone and muscle mass for participants in several studies.
- Continue to monitor fracture rates in the region by ascertaining incident fractures from radiology reports and appending these new fractures to the GOS-FracGrid.



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Deteriorating bones could be a signal that loading forces from muscles are weakening - this is a key driver of frailty that occurs when we age. The Geelong Osteoporosis Study is searching for ways to slow such deterioration and empower older people to remain independent.

*Professor Julie Pasco*

- Analyse and publish data from the prospective study known as the Vitamin D in Pregnancy (VIP) study to evaluate the impact of maternal vitamin D levels during pregnancy on the growth and development in offspring at age 11 years.
- Continue to describe the epidemiology of chronic disease and injury across western Victoria as part of the Ageing, Chronic Disease and Injury (ACDI) study.

## Staff

### Professor Julie Pasco

*BSc (Hons), DipEd, PhD, MEpi*

Julie is the Director of the Epi-Centre for Healthy Ageing (ECHA) and Deputy Director of the IMPACT Strategic Research Centre.

### Dr Sharon Brennan-Olsen

*BA (Hons), PhD, GCALL*

Sharon holds an NHMRC Career Development Award. She heads the Social Epidemiology unit in the ECHA. Sharon's work examines the role played by social and environmental determinants on health outcomes, including health service utilisation.

### Dr Lana Williams

*BPsych, Grad Dip App Psych, PhD, Assoc MAPS*

Lana is a clinical psychologist who holds an NHMRC Career Development Award. She heads the Psychiatric Epidemiology unit in the ECHA. Lana's program of research examines medical, lifestyle and social correlates associated with mood, anxiety and personality disorders. Cornerstone to this program is her work linking mental disorders and the agents used in the treatment of these disorders to endocrinology endpoints, such as bone density, fracture and body composition. Lana leads the ProFrac study which is identifying psychotropic agents as risk factors for fracture.

### Dr Kara Holloway

*BMedPharmTech, BSc (Nano & Biomaterials) (Hons), PhD*

Kara is an Alfred Deakin Research fellow who heads the Musculoskeletal Epidemiology unit in the ECHA. Kara's work investigates the epidemiology of osteoporosis and fractures, identifies risk factors for fractures and describes fracture-related morbidity.

### Dr Nick Fredman

*BSci, BA (Hons), PhD, MSci (Applied Statistics)*

Nick has been working with Sharon Brennan-Olsen to investigate the accumulation of social disadvantage across the life-course and the influence on bone health in later life.

### Kathy Bennett

*Div 1 Nurse, Mid-wife, GDIR*

Kathy is a qualified Division 1 Nurse and midwife, who has worked in the ECHA for over a decade. Kathy clinically assesses GOS and VIP study participants, makes home visits to elderly participants, administers questionnaires and follows up non-responders and missing data.

### Gosia Bucki-Smith

*BSc, MNutrDiet, Grad Dip Clin Trial Mgt*

Gosia is involved in collating fractures from the Barwon Statistical Division for the GOS-FracGrid, a fracture register that spans from 1997 to the present, using information provided from hospital patient information systems. Gosia also co-ordinates the Barwon Health-Deakin research seminar program.

### Amelia Betson (née Morse)

*BAppSci (Hons)*

Amelia operates the bone densitometer for GOS and is responsible for collecting clinical data from the study participants. Many hours are also spent identifying incident fracture cases from radiology reports. Amelia also uses this information to extend the GOS-Fracture Grid.

### Amanda Stuart

*BAppSci, BSc (Hons)*

Amanda is the Coordinator of the Geelong Bipolar Disorder Health and Lifestyle Study, for which she is responsible for recruitment, clinical assessments including bone mineral density (BMD) scans, questionnaire data and pathology collection and storage. Amanda also involved in data management for the ECHA studies and she analyses data and publishes manuscripts.

### Cathy Verecondi

*Cert II & IV Business Admin*

Cathy is the ECHA's key administrator, financial manager and PA to Professor Pasco. Cathy has spoken with all study participants, scheduling appointments, preparing documents, distributing reports and handling enquiries. Important roles include managing casual staff rosters and timesheets, ordering research materials and equipment and liaising with finance and HR at both Barwon Health and Deakin University. Cathy also identifies incident fracture cases from radiology reports and organises printing of annual newsletters and conference posters.

### Ashleigh Nicholson

Ashleigh works as an administrative assistant, preparing participant files and filing documents.

## *Visiting Academics*

**Associate Professor Dongzhen (Fisher) Yu**  
*BPedSci, PhD*

Fisher is visiting us from Shijiazhuang University, Hebei in China. She has a Bachelor of Pedagogical Science and a PhD in Pharmacology and has a placement with us for a year sharing her research skills in the areas of physical activity and bone health.

**Professor Jin Zhang**  
*MMedSci, BMedSci (Urology)*

Jin is an Urologist from Shijiazhuang No. 1 Hospital, Hebei in China. He has a three month placement with us to observe clinical practice in his field and pursue research investigating associations between nephrolithiasis (kidney stones) and bone health using clinical data from the Geelong Osteoporosis Study.

## *Students*

### **CURRENT PHD CANDIDATES**

**Vinoomika (Veena) Chandrasekaran - Deakin University**  
Bipolar disorder and bone health

**Jasmine Cleminson – Deakin University**  
Serotonin and bone health

**Stephanie Cowdery – Deakin University**  
The impact of mental health on cancer associated mortality

**Lelia De Abreu – Deakin University**  
Dysglycaemia in women

**Haslinda Gould – The University of Melbourne**  
Antecedents of home and aged care utilisation

**Joanna Dipnall – Deakin University**

The development of a clinical risk assessment tool for predicting depression

**Natalie Hyde – Deakin University**

Gestational vitamin D and development in offspring

**Sarah Hosking – Deakin University**

Understanding the role of health literacy in the prevention of osteoporosis

**M. Amber Sajjad – Deakin University**

Acute health service utilisation in diabetes mellitus: a project in Western Victoria

**Sophia Xin Sui – Deakin University**

Muscle power and brain power

**Monica Tembo – Deakin University**

Inflammation and body composition  
Current Honours Students

**Claire Clissold – Deakin University**

Risky Drinking and Bone Health: a Study in Men

**Elizabeth Degabriele – Deakin University**

The association between childhood asthma status and fracture risk

**Darci Green – Deakin University**

The fat and lean components of body composition in relation to cancer risk in women

### **COMPLETED PHD SINCE 2015**

**Shae Quirk – Deakin University**

Personality disorders, physical co-morbidities and health service utilization

## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. NHMRC Project APP1104438	Bone health in bipolar disorder.	Williams LJ, Pasco JA, Maes M, Hodge JM, Brennan-Olsen SL	2016-2018 \$329,033
2. NHMRC Project APP1081297	Obesity, pre-diabetes and future risk of diabetes: Maximising the evidence, minimising the cost.	Huxley R, Pandeya N, Mishra G, Magliano D, Colagiuri S, Veerman L, Pasco JA, Lee C.	2016-2018 \$470,136
3. Geelong Community Grants	Selenoprotein S (SEPS1): a novel gene for better muscle health and function?	Stupka N, Pasco JA, Bozaoglu K	2016 \$32,138
4. RESS grant (equipment) – Deakin University	Peripheral quantitative computed tomography (pQCT) scanner and Leonardo platform.	Pasco JA, Kotowicz MA, Orford, N, Dwyer K, Howlett K	2016 \$112,685
5. Amgen/GSK/OA/ANZBMS Clinical Grants Program	Clinical utility of reference point indentation.	Pasco JA, Kotowicz MA, Brennan-Olsen SL, Holloway KL.	2015-2016 \$40,000
6. Central Research Grants Scheme (Deakin University)	Understanding the social context of associations between inflammation and osteoporosis.	Brennan-Olsen SL	2015-2016 \$24,000
7. Central Research Grants Scheme (Deakin University)	Psychiatric disorders, psychotropic agents and bone health.	Williams LJ	2015-2016 \$10,000
8. *Western Alliance Academic Health Science Centre	Chronic disease, injury and ageing in Western Victoria: opportunities to improve health delivery.	Pasco JA, Kotowicz MA, Livingston T, Khasraw M, Hakkennes S, Dunning T  Brumby S, Page R, Pedler D, Sutherland A, Venkatesh S	2015-2016 \$100,000
9. *Barwon Health Education, Training and Research Profile Fund (ETRPF)	Features of the Metabolic Syndrome and risk of subsequent Gestational Diabetes Mellitus.	Kotowicz MA, Pasco JA, De Abreu, L	2015-2016 \$28,352
10. *NHMRC Career Development Fellowship (GNT1064272)	Psychiatric disorders, psychotropic agents and bone health: from benchtop to bedside	Williams LJ	2014-2017 ~\$26,000pa
11. *BUPA Foundation	Maternal vitamin D in pregnancy and childhood growth.	Pasco JA, Wark JD.	2012-2015 \$189,000

\*Noted in the 2015 Research Report

## *Miscellaneous/Scholarship/Esteem*

### **Community Engagement**

*Public forum, November 2016*

"Men's Health"

## *Key Collaborations*

The Department of Epidemiology are actively collaborating with the following researchers/research projects:

Australian and New Zealand Diabetes and Cancer Consortium, to explore the relationships of diabetes, hypertension, obesity, and the metabolic syndrome with overall and site-specific cancer.

International Consortium of Obesity and Diabetes (ICOD), to investigate indices of body size, markers of glucose homeostasis in the development of incident diabetes.

The randomised controlled trial, ASPirin in Reducing Events in the Elderly (ASPREE) fracture sub-study, to investigate a role of aspirin in the risk for falls and fractures among people aged 70 years and older.

Healthy Together Geelong (HTG), to profile patterns of unhealthy lifestyles, particularly sedentary behaviour, in the Geelong region.

International meta-analysis of trabecular bone score (TBS) in improving fracture risk prediction.

ActiveLife Scientific (USA) in testing bone microindentation as a technique for assessing bone health, in our common goal of promoting 'better bones, better tissues, better life'.

This collaboration has flourished and is now extended to include Prof Adolfo Diez Perez (Spain), an expert in the field.

Department of Epidemiology and Preventive Medicine, Monash University, with one group at the Alfred Hospital, to evaluate interactions between osteoarthritis, -bone, body composition and pain, and another group at Cabrini Hospital, to explore the role of health literacy in osteoporosis.

Melbourne Medical School-Western Campus and the Australian Institute for Musculoskeletal Science (AIMSS), The University of Melbourne, situated at the Western Hospital, on projects related to musculoskeletal disorders and social inequity.

The University of Melbourne and the Royal Melbourne Hospital, to investigate the role of maternal vitamin D levels during pregnancy and growth and development in offspring.

The Institute of Health and Ageing, Australian Catholic University in Melbourne, to investigate community intervention and prevention in indigenous communities.

Visiting Academic exchanges with the Hebei Province in China.



# GEELONG CENTRE FOR EMERGING INFECTIOUS DISEASES (GCEID) PROFESSOR SOREN ALEXANDERSEN

## *Research Focus*

The Geelong Centre for Emerging Infectious Diseases (GCEID) is a collaborative, multidisciplinary research partnership between Deakin University, Barwon Health and CSIRO's Australian Animal Health Laboratory (AAHL). GCEID is focused on a "One Health" approach to understanding and mitigating the risks and reducing the impact caused by emerging infectious diseases on human, livestock, pet and wildlife health in Australia and globally. GCEID started as a virtual partnership almost four years ago and has evolved since late 2015 into a fully established partnership with core laboratory and office space at Barwon Health's Health, Education and Research Building (HERB). GCEID is an incubator for the partners and a hub for facilitating collaboration on and coordination of swift research responses including diagnostics, vaccines, therapeutics, infection control, policy advice and clinical trials.

## *Major Research Projects Include*

- Sequencing the genome of a human picornavirus causing meningitis in young infants in Geelong in late 2015. The research has focused on identifying the genomic sequence of this virus to provide greater understanding of the severe disease observed and the spread and epidemiology of this infection. The work is a collaborative project with Barwon Health clinicians and scientists at GCEID, Deakin University, CSIRO-AAHL and the Victorian Infectious Diseases Reference Laboratory (VIDRL) in Melbourne.
- Screening of wild birds for the presence of coronaviruses. Coronaviruses are responsible for the emergence of epidemics/outbreaks of the Severe Acute Respiratory Syndrome (SARS) and Middle East Respiratory Syndrome (MERS) more recently resulting in significant human disease and mortalities. In both cases an intermediate mammal, such as bats and civets ("civet cats") for SARS and for MERS likely dromedary camels, was/is responsible for the transfer of the virus into human hosts. Several types of coronavirus are specific to mammals and birds while some relatively closely related ones, in particular the newly discovered deltacoronaviruses, may infect both. There is limited understanding of their presence worldwide and as Australia is a regional hub for a diverse range of wild birds this project is investigating the potential presence of coronaviruses in wild birds. If such viruses are detected, they will be characterised in detail genetically. This project is a collaboration with Deakin University's Centre for Integrative Ecology and the WHO Collaborating Centre for Reference and Research on Influenza at VIDRL in Melbourne.

## *Major Achievements - Highlights from the last 12 months*

- The newly completed GCEID laboratory on level 3 of HERB underwent final commissioning and was formally opened by Sarah Henderson MP, Federal Member for Corangamite in November 2015. This PC2/QC2 facility was specifically designed to enable study of infectious disease causing organisms in a collaborative undertaking by the GCEID partners Barwon Health, Deakin University and CSIRO together with the City of Greater Geelong and funding from the Commonwealth of Australia.
  - Funding provided by Deakin University enabled the purchase of state of the art genetic sequencing equipment that will provide in depth analysis of microorganisms capable of causing human disease.
  - Professor Soren Alexandersen is a Chief Investigator representing GCEID on a funded NHMRC Centre of Research Excellence (CRE)- Australian Partnership for Preparedness Research on Infectious Disease Emergencies (APPRISE)
  - International Conference Presentation: Professor Soren Alexandersen was invited to Japan to give a keynote presentation "Keeping an eye on animal viruses – global spread, evolution and zoonotic potential" at the International Symposium "Intracellular Pathogens" at Yamaguchi University.
  - Australian Conference Presentation: Professor Soren Alexandersen gave an invited presentation "Keeping an eye on animal viruses – global spread, evolution and zoonotic potential" at the CSIRO-AAHL Mini-symposium on New and Emerging Infectious Zoonotic Diseases.
- Develop a 'One Health' training centre in conjunction with GCEID partners Deakin University and CSIRO-AAHL.
  - Participate in the 2016 International One Health EcoHealth Congress in Melbourne, with presentations from each of the GCEID partners.
  - Promote and participate in International One Health Day - 3 November, 2016.
  - Initiate further projects within GCEID as well as with external collaborators.

## *Staff*

### **Professor Soren Alexandersen**

*DVM, PhD, DVSc, FRCPath, MRCVS. GCEID Director*

Expertise in virology, pathology, epidemiology and so-called One Health including studies of the health of humans, animals and the environment.

### **Dr Tiffanie Nelson**

*PhD, Associate Research Fellow*

Interest and expertise in molecular biology and community ecology. Research focus on microbiome, genomics and infectious disease.

### **Dr Jason Hodge**

*PhD, Laboratory Manager/Senior Scientist*

Expertise in cell biology (specifically bone), intracellular signalling and molecular biology

### **Katrina Bellett**

*GCEID Administrative Officer*

## *Students*

### **CURRENT PHD CANDIDATES**

#### **Michael Selorm Avumegah**

*Primary Supervisor: Professor. Soren Alexandersen*

One Health approach to investigate Mycobacterium Ulcerans disease

#### **Darcie Paige Cooper**

*Associate Supervisor: Professor Soren Alexandersen*

Prosthetic Joint Infections and Superbug Biofilms

#### **Vinoomika Chandrasekaran**

*Co-supervisor: Dr Jason Hodge*

Investigating the impact of psychotropic medications on bone health in bipolar disorder

## *Looking Forward - Anticipated Highlights in the next 12 months*

- Publication of results for the project on a human picornavirus causing meningitis in infants.
- Further work on the above project in collaboration with the GCEID partners.
- Through continued collaboration with the Centre for Integrative Ecology (CIE) broadening the screening and genomic analyses of wild bird samples related to the project on coronaviruses.
- Begin work on the NHMRC CRE APPRISE mentioned above.
- Commence a Zika virus pilot study in collaboration with CSIRO-AAHL.

## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. NHMRC CRE	Australian Partnership for Preparedness Research on Infectious Disease Emergencies (APPRISE)	CI – Professor Soren Alexandersen	2016-2020 \$5,000,000
2. CSIRO One Health Training Centre	One Health Training Centre	CI- Professor Soren Alexandersen	2016-2019 \$150,000
3. Deakin GCEID contribution - internal	GCEID startup funds	CI- Professor Soren Alexandersen	2016-2017 \$250,000
4. Barwon Health	Human Pircornavirus	CI- Professor Soren Alexandersen	2016 \$5,000
5. Deakin University	Zika Virus pilot study	CI- Professor Soren Alexandersen	2016 \$25,000
6. Deakin University	One Health EcoHealth 2016 Congress, GCEID Symposium	CI- Professor Soren Alexandersen	2016 \$10,000

## Miscellaneous/Scholarship/Esteem

### Dr Tiffanie Nelson

School of Medicine Early Career Research Committee member

### Dr Jason Hodge

Participant in Newcomb Secondary College P-Tech Mentor Training Program

### Professor Soren Alexandersen

Member of the Organising Committee for the 2016 International One Health/Ecohealth Congress and Co-Chair of the Scientific Program Committee (SPC)

### Professor Soren Alexandersen

Member of Australia's National Avian Influenza Wild Bird (NAIWB) Steering Group

### Professor Soren Alexandersen

Member of the EPICORE international team

# NURSING PROFESSOR TRISHA DUNNING

## *Research Focus*

The key focus of the Centre for Nursing and Allied Health Research (CNAHR) research program is improving the personalised care of older people with diabetes and diabetes palliative and end of life care. Key projects include:

- The McKellar Guidelines for Managing Older People with Diabetes in Residential and Other Care Settings
- The McKellar Guidelines became the official policy for managing older people with diabetes in residential aged care in Barwon Health in August 2014 and are also available on the Australian Disease Management Association (ADMA) Integrated Chronic Disease Management Online Clearinghouse:
  - [http://www.adma.org.au/clearinghouse/cat\\_view/4-guidelines.html](http://www.adma.org.au/clearinghouse/cat_view/4-guidelines.html)
- We are currently monitoring the impact of the guidelines on care planning for people with diabetes.
- Quality Use of Glucose Lowering Medicines: The Q-Med Study
- Development of a suite of information about glucose lowering medicines for use by older people with diabetes, their family/carers and health care staff.
- Pain in Older People with Diabetes -The POP-D study.
- Personalised diabetes-specific discharge care planning for older people with diabetes.
- Development of diabetes – specific discharge planning information for older people with diabetes and their family/carers to support management of diabetes after a hospital admission.
- Revision of the Guidelines for Managing Diabetes at the End of Life.

## *Major Achievements - Highlights from the last 12 months*

### Key highlights were:

- Hosted a successful symposium, Managing Older People with Diabetes: Sharing Wisdom, March 4, 2016, attended by 150 people. The symposium was funded by the Barwon Health Education, Training and Research Profile Fund (ETRPF) to support an International Professorial Visit by Professor Alan Sinclair.
- Impact of the McKellar Guidelines for Managing Older People with Diabetes in Residential and Other Care Settings:
  - Presented the Guidelines at the National Association for Diabetes Centres (NADC) Best Practice Meeting October 2015, Sydney. The Guidelines were cited in the Australian National Diabetes Strategy 2016-2020.
  - Participated in the International Federation of Ageing Dane Age Global Think Tank (2015), Copenhagen.
  - Published 15 peer-reviewed papers, four book chapters, six other publications, delivered six peer-reviewed conference oral presentations and ten invited presentations.
  - Delivered four research and writing professional development workshops which are open to Barwon Health and Deakin University staff and students within nursing, allied health and medicine.
  - Delivered the Annual World Diabetes Day Professorial Address (2015), Ah Language-Today a Person Tomorrow a Diabetic, during Smart Geelong Research Week at Barwon Health.
- Quality Use of Glucose Lowering Medicines: Q-Med Study: completed data collection, finalised the suite of information and writing the final report.
- Personalised diabetes-specific discharge care planning for older people with diabetes study: developed, trialled and evaluated discharge planning information for older people with diabetes after a hospital admission.

## Looking Forward - Anticipated Highlights in the next 12 months

- Launching and disseminating the Q-Med suite of information.
- In 2016-2017 we will complete Q-Med Study and report and launch the suite of information developed for: people with diabetes and their family/carers, registered and enrolled nurses and personal care workers. Once the information is officially launched we will commence the dissemination process.
- Completing the personalised diabetes –specific discharge planning for older people with diabetes project.
- Presenting a workshop at the ADS/ADEA Annual Scientific Meeting (August 2016) about personalised diabetes –specific discharge planning for older people with diabetes.
- Submitting the final report to the Nurses Board of Victoria Legacy Limited in October 2016 and preparing a grant application to validate the study.
- Revising, launching and disseminating the Guidelines for Managing Diabetes at the End of Life
- The expert writing group are currently revising the Guidelines. The revised Guidelines will provide new information about diabetes palliative and end of life care with a particular focus on the importance of communicating people's preference for management of diabetes at the end of life.
- Writing a book about personalised care with older people with diabetes which will be published by Springer Verlag.
- Commence revising the McKellar Guidelines for Managing Older People with Diabetes in Residential and Other Care Settings.

## Staff

### Professor Trisha Dunning

*AM, RN, Credentialed Diabetes Educator, MEd, PhD.*

Chair in Nursing Barwon Health and Deakin University, Director of the Centre for Nursing and Allied Health Research. Principal Investigator for the Q-Med Study, McKellar Guidelines Project and POP-D Study. Professor Dunning is an internationally recognised expert in diabetes care, author of numerous books, papers and chapters, and member of key national and international bodies including being Vice President, International Diabetes Federation (IDF) Board of Management since 2009.

### Dr Sally Savage

*BA (Hons), DipEd, PhD. Research Fellow*

Investigator, Q-Med Study, POP-D Study and Discharge Planning Project

### Ms Susan Streat

*RN, BA*

Research Assistant – Involved in many aspects of CNAHR research projects and other activities, particularly the Research and Writing Workshops.

### Ms Nicole Duggan

*RN, Grad Cert Diabetes Ed, M Nursing Practice*

Chief Investigator for the Diabetes-Specific Discharge Planning for Older People with diabetes project and Project Leader (VIC) for the Q-Med Study

### Clare Bennett

*RN*

Volunteer Research Assistant

### Jo-Ann Stafford

*RN*

Casual Research Assistant

### Maura Colfer

*RN*

Casual Research Assistant

### Madhu Subramaniam

*BA Psychology; MA Organisational Psychology*

Casual Research Assistant

## Students

### PHD

#### Roslyn Gillies

Supervised by Professor S Groves and Professor Trisha Dunning, will submit her thesis in September, 2016. Roslyn's project is entitled, Nurses and medicine dose calculations.

#### Lisa-Jane Moody

Supervised by Professor Trisha Dunning and Dr Sally Savage, will submit her thesis in 2016. Lisa-Jane's project is entitled, The Impact of Hearing Loss on Quality and Safety in Hospital.

#### Trish Mant

Supervised by Professor Trisha Dunning and Professor Lucy Cuddihy, commenced her candidature in 2015. Trish's project is entitled, Implementing a falls prevention strategy using the knowledge to action framework—an evaluation.

### Sharyn Milnes

Supervised by Professor Trisha Dunning and Professor Jon Watson, commenced her candidature in 2015. Sharyn's project is entitled, How health professionals consider and practice patient-centred care.

### Giuliana Murfett

Supervised by Professor Trisha Dunning and Rhonda Brown commenced her candidature in August 2016. Giuliana's project is entitled, a competency based approach to Expanding the Diabetes Care Workforce.

### Anne Morrow

Supervised by Professor Trisha Dunning and Helen Forbes commenced her candidature in 2016. Anne's project is

entitled, a model on the experiences of transition of new graduate nurses in a Saudi Arabian academic hospital.

### Ashlyn Sahay

Supervised by Leah East and Professor Trisha Dunning, commenced her candidature in 2016. Ashlyn's project is entitled, Nurse Citizen Behaviour and patient safety.

## MASTER'S CANDIDATES

### Claire Gatto

Co-supervised by Professor Trisha Dunning with principal supervisor, Professor Bodil Rasmussen. Claire submitted her minor research thesis as part of her Master Degree in June 2016.

## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. *Commonwealth Department of Health and Ageing (now the Department of Social Services) Aged Care Services Improvement Healthy Ageing Grant (ACSIHAG)	The Quality Use of Medicines (QUM) and Glucose Lowering Medicines (GLM) in Aged Care (the Q-Med study)	CI: Professor Trisha Dunning, Dr Sally Savage, Ms Anne Hague	2013-2016 \$600,000
2. *Nurses Board of Victoria Legacy Limited Major Grant	Personalised diabetes-specific discharge care planning for older people with diabetes	CI: Ms Nicole Duggan, Professor Trisha Dunning, Dr Sally Savage	2015-2016 \$20,000
3. *Barwon Health Education, Training and Research Profile Fund (ETRPF)	Professorial visit to foster clinical knowledge exchange and research collaboration in managing older people with diabetes within Barwon Health.	CI: Professor Trisha Dunning	2016 \$15,307

\*Noted in the 2015 Research Report

## Miscellaneous/Scholarship/Esteem

### Local Affiliates

- Deakin University
- University of Melbourne
- GP Practitioners
- Barwon Health Clinicians

### International Affiliates

- Professor Alan Sinclair, Director, Diabetes Frail, UK
- Professor Marit Graue, Bergen University College, Norway

- Professor Vibeke Kaufmann, Viborg University, Denmark

- Dr. Tan Ming Yeong, International Medical University, Malaysia.

### Reference/Consultant and Advisory Groups (Prof Dunning)

- Department of Health and Ageing (DoHA) Pharmaceutical Policy Branch
- Australian Commission for Quality and Safety in Health Care, National insulin Inpatient chart pilot test advisory group 2013-
- Australian College of Nursing Aged Care Expert Advisory Group

- Bergen University College, International Expert on Diabetes Research Strategy: DiaBest Group, 2011-2016
- Steno Diabetes Centre, Expert Advisory Group to Steno-REACH project established to develop diabetes training programs for health professionals in Malaysia 2014-
- International Medical University – Expert Advisory Group on Diabetes Education
- Sanofi Advisory Group on safe informed use of Complementary and Alternative Medicines

#### International Committees

- Member IDF Organising Committee Abstract Selection Committee, Western Pacific Region 2014-2016
- Member, IDF Nominating Committee 2015-2017
- International Federation of Ageing – Expert Advisory Group 2016

#### Barwon Health

- Member, Research Review Committee (Professor Dunning 2007–, Susan Streat 2012–)
- Member, Barwon Health Human Research Ethics Committee, 2016
- Member, Teaching, Training and Research Governance Committee, 2016
- Member, Research Professoriate Committee 2012
- Member, Deakin University and Barwon Health Research Committee 2013
- Member, Teaching, Training and Research Governance Committee 2014

#### Deakin University

- Member, School of Nursing and Midwifery, Professoriate 2007
- Member, University Human Research Ethics Committee Geelong (DUHREC) 2007
- Chair, Faculty of Health Human Ethics Advisory Group (HEAG) 2012
- Member, Executive and General Committees, Centre for Quality and Patient Safety Research (QPS) 2009
- Member, Student Supervision, Research and Teaching Committee, 2014
- Member, Advisory Committee for the Graduate Certificate of Diabetes Education, 2008
- Australian Diabetes Educators Association (ADEA)

- ADEA representative on the Deakin University Advisory Committee for the Graduate Certificate in Diabetes Education 2008
- Member, Graduate Certificate in Diabetes Education Curriculum Advisory Committee (CASP) 2007
- ADEA member, Research Advisory Group 2014
- Inaugural Chair, ADEA Research Foundation, 2016
- Chair, ADEA Research Council, 2016
- Member, ADEA Endorsement Committee 2016

#### National and State Committees

- Member, Diabetes Australia International Affairs Committee 2009
- Member, Board of Management Diabetes Victoria 2011
- Member, Diabetes Australia – Vic Clinical Advisory Committee 2014
- Member, Diabetes Australia Policies and Programs Committee 2014
- Grant and Conference Abstract Assessment Panel

#### Grant and Conference Abstract Assessment Panel

##### *Grants*

- Australian Diabetes Educators Association
- Barwon Health Sydney Parker Smith Grant Application Reviews
- Barwon Health Education Training and Research Profile Fund
- Deakin University Grant Application Reviews
- Deakin University School of Nursing and Midwifery Centre for Quality and Patient Safety Research
- Diabetes Australia Research Trust Grants (DART) Coordinate review of the education and behavioural research grant applications 2011–
- Sigma Theta Tau International.

\* Professor Dunning unless otherwise stated

# ORTHOPAEDICS

## PROFESSOR

## RICHARD PAGE

### *Research Focus*

Adhesive Capsulitis Biopsy study - Ad-Cab Study is to investigate the pathophysiology and identify biomarkers that are active in frozen shoulder that may be used to track disease severity and give an indication to the extent and potential natural history of the condition in a given patient.

Barwon Joint Registry – a register of over 6000 total joint replacement patients which includes Patient Rated Outcomes Measures at pre-determined intervals to determine the patient focused outcomes of total joint replacements.

The Socrates database is now used to follow up patients in the community rather than bringing patients back to the Outpatients Department for follow up.

- Biokin Study - Collaborative study with Deakin biomechanics to assess normal shoulder function and range of motion post-surgery
- Prosthetic Joint Infections – Clinical Biofilm and Patient Factor Analysis
- Joint Review Clinic project – Establishing a remote model of care to enhance outpatient capacity
- Health Pathways – Orthopaedic Simple Fractures in Practice Project (OrSIP)
- AFL Shoulder Study – outcomes following shoulder instability in elite players

### *Major Achievements - Highlights from the last 12 months*

- **May 2015**  
ISAR Manchester - Modularity in the shoulder. Good or Bad. Geographic Locality, Socioeconomic Position and Primary Total Shoulder Arthroplasty: A Multi-level Study of the Australian Orthopaedic Association National Joint Replacement Registry Data.
- **March 2016**  
APOA (Melbourne) – Arthroscopic shoulder stabilisation – current and novel pathology and outcomes.
- **April 2016**  
COMOC (South Africa) - Outcomes of total shoulder replacement – AOA NJRR Analysis
- **May 2016**  
ICSES (Korea) - Factors associated with Glenoid Revision in Conventional TSR: A National Registry Analysis; The "Down-Under" Lesion: A subtype of labral lesion in shoulder instability; Epidemiology and 2 year follow-up MRI Coracoid morphology and its associations with Subscapularis tears. Clinical and MRI Outcomes Following Microfracture of the Glenohumeral Joint during Shoulder Arthroscopy . Risk Factors associated with revision of reverse total shoulder replacement: A National Registry analysis.
- **June 2016**  
European Federation of National Associations of Orthopaedics and Traumatology (EFFORT) – Geneva, Factors associated with Glenoid Revision in Conventional TSR: A National Registry Analysis
- **July 2016**  
Canadian Institutes of Health Research (CIHR) Foundation Grant - \$6.9M July 1st 2016
- **August 2016**  
Shoulder and Elbow Society of Australia (SESA) – Darwin, MRI Coracoid morphology and its associations with Subscapularis tears. A new image based index
- Ad –Cab Study Grant - \$35,000

## *Looking Forward - Anticipated Highlights in the next 12 months*

- Formal establishment of the Barwon Centre for Orthopaedic Research and Education (CORE) site at Barwon Health and St John of God Hospital
- Grant success to develop host tissue investigation into prosthetic joint infections
- Developing the CuBB (Cuff Biopsy and Biology) Study
- Establishing a Research Fellow position within CORE
- Expanding the Remote Joint Review Clinic Model of Care

## *Staff*

### **Professor Richard Page**

Chair of Orthopaedic Surgery and Director of Orthopaedics, Orthopaedic Shoulder and Upper Limb Surgeon, BMedSci, MB, BS, FRACS (Orth), FAOrthA

### **Mr J Skelley**

Orthopaedic Surgeon

### **Mr B Miller**

Orthopaedic Lower Limb Surgeon

### **Mr D Bowyer**

Orthopaedic Lower Limb Surgeon

### **Mr S Williams**

Orthopaedic Lower Limb Surgeon

### **Mr R Angliss**

Paediatric Orthopaedic Surgeon

### **Mr Kevin Eng**

Orthopaedic Shoulder and Upper Limb Surgeon

### **Mr Graeme Brown**

Orthopaedic Surgeon

### **Mr Andrew Thomson**

Orthopaedic Lower Limb Surgeon

### **Mr Chatar Goyal**

Orthopaedic Lower Limb Surgeon

### **Bill Reynolds**

Senior Clinician Physiotherapist

### **Sally Beattie**

RN -Orthopaedic Research Co-ordinator

### **Amanda Cowland**

Data Entry Clerk

### **Ali Jordan**

PA to Professor Richard Page

### **Pam Kennedy**

Administration, University Hospital Geelong

### **Dr Sharon Brennan-Olsen, PhD (until September 2016)**

NHMRC Career Development Fellow  
Health Equity Epidemiology Division (HEED), School of Medicine, Deakin University

## *Students*

### **CURRENT PHD CANDIDATES**

### **Darcie Cooper**

Biofilms and Prosthetic Joint Infections

### **Dr Gil Stynes**

A Functional Skin-Material Interface

## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. CIHR Foundation	Advancing the Care of Patients with Musculoskeletal Injuries Worldwide through Multi-National Research Initiatives	Professor Richard Page (Program Expert) Professor Mohit Bhandari (PI - McMaster University)	2016-2024 CDN \$6,943,280
2. Industry: De Puy-Synthes	Suture Anchor Abrasion Analysis	Professor Richard Page Dr Chris Hurren Mr Adam Watson	2016-2017 \$122,500
3. *Barwon Health Education, Training and Research Profile Fund (ETRPF)	Adhesive Capsulitis Biopsy study - Ad-Cab Study	Professor Richard Page Associate Professor Sean McGee Mr Kevin Eng Mr Graeme Brown Dr Fiona Collier Sally Beattie	2015-2016 \$31,875
4. *Western Alliance Academic Health Science Centre	Chronic disease, injury and ageing in Western Victoria: opportunities to improve health delivery.	Pasco JA, Kotowicz MA, Livingston T, Khasraw M, Hakkennes S, Dunning T Brumby S, Page R, Pedler D, Sutherland A, Venkatesh S	2015-2016 \$100,000

\*Noted in the 2015 Research Report

## Miscellaneous/Scholarship/Esteem

- Co-Chair- International Shoulder Arthroplasty Consortium
- Associate Editor – International Journal of Shoulder Surgery
- Editor – AOA National Joint Replacement Registry Annual Shoulder Report - 2016
- Key Collaborations – McMaster University, Canada; Kaiser-Permanente, California; Ortopedkliniken-Danderyds sjukhus, Sweden; Whitlam Orthopaedic Research Institute, University of NSW.
- Poster Prize- Saber Pain Trial – EFORT, Geneva, 2016
- Australian Orthopaedic Association National Research Advisory Committee
- Co-Convener - Asia Pacific Orthopaedic Association (APOA) Meeting, Melbourne

# PAEDIATRICS

## ASSOCIATE PROFESSOR PETER VUILLERMIN

### *Research Focus*

- The Child Health Research Unit (CHRU) led by Associate Professor Peter Vuillermine is passionate about child health and is committed to the generation of new knowledge regarding the best way to provide babies and children with a healthy start to life. Two significant research projects are run through the CHRU: the Barwon Infant Study (BIS) and the Environmental Determinants of Islet Autoimmunity (ENDIA).
- BIS is a population derived birth cohort of 1,074 infants. BIS is an investigation into the early life origins of a range of non-communicable diseases in the modern environment. There is particular focus on the relationship between the mother and infants commensal gut organisms and early life immune development. BIS is a partnership between Barwon Health, Deakin University and the Murdoch Children's Research Institute and has been primarily funded by the National Health and Medical Research Council. More details are available at: [www.barwoninfantstudy.org.au](http://www.barwoninfantstudy.org.au)
- ENDIA is birth cohort study that will follow mothers/ children who have a first-degree relative with Type 1 Diabetes to investigate a number of environmental factors that are believed to contribute to the development of islet autoimmunity and Type 1 Diabetes. ENDIA is a national study hoping to recruit over 1400 pregnant mothers across the country. There are many parallels with BIS and synergies between the project. <http://www.endia.org.au/about/the-endia-study>

### *Major Achievements - Highlights from the last 12 months*

#### Research breakthroughs

- The first evidence that the early life microbiome may influence early markers of progression toward cardiovascular disease (McCloskey, Int J Epi, 2016)
- The first evidence that a hyper-responsive innate immune system at birth drives non-classic Th2 (allergy-associated) immune development among infants with subsequent food allergy (Zhang, Science TM, 2016)

### *Looking Forward - Anticipated Highlights in the next 12 months*

#### Publications regarding:

- The maternal and infant microbiome and food allergy
- The maternal and infant microbiome and cardiovascular risk
- Exposure to modern chemical and neurodevelopment

## *Staff*

### **CHRU Director - Associate Professor Peter Vuillermin**

Peter is a general Paediatrician and Researcher with a particular interest in the early life origins of immune dysregulation in the modern environment.

### **Catherine Lloyd-Johnsen**

Project Coordinator

### **Jasmin Foster**

Research Assistant

### **Nakita Clements**

Research Assistant

### **Heather Anderson**

### **Danielle Kennedy**

CHRU Laboratory Member

## *Students*

### **John Molloy**

PhD project titled "Modifiable early life risk factors for IgE mediated food allergy."

### **Kate McCloskey**

PhD project titled "The early life origins of cardiovascular disease"

### **Christos Symeonides**

PhD project titled "Environmental exposure to industrial chemicals and neurodevelopment in the first 2 years of life in the Barwon Infant Study".

### **Lisa Bell**

PhD project titled "The relationship between physical activity, adiposity, inflammation and progression toward cardiovascular disease"

### **Lawrence Gray**

PhD project entitled "The maternal microbiome and offspring respiratory Health"

### **Elizabeth Senn**

PhD project entitled "The infant microbiome and neurocognitive outcomes"



## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. NHMRC Project Grant 1099676	Extending the MIS BAIR randomised trial of BCG to prevent allergy and asthma	Professor Nigel Curtis, Professor Mike South, Associate Professor Peter Vuillermin, Professor Frank Shann, Professor Susan Donnath	2016-2020 \$936,504
2. GMHBA	Barwon Infant Study Project Coordination	Peter Vuillermin	2016 \$50,000
3. *NHMRC Project Grant (ref 1082307)	The relationship between maternal and infant dietary intake of fermentable fibre, gut microbiota, short chain fatty acids and allergic disease and asthma: a population-derived birth cohort study	Peter Vuillermin, Anne Louise Ponsonby, Katie Allen, Yuxia Zhang, Mimi Tang, Richard Saffery, Karen Nelson, David Topping, Michael Conlon	2015-2019 \$843,749.10
4. *NHMRC Project Grant (ref 1084017)	Methylation-sensitive T cell genes and childhood food allergy.	Richard Saffery, Katrina Allen, Peter Vuillermin, David Martino	2015-2016 \$450,879
5. *Education, Training and Research Profile Fund (ETRPF)	regnancy Sex Hormone Levels: Do they Influence Immune Cell Development in the Newborn and Modulate the Risk of Food Allergy?	Dr Fiona Collier	2015-2016 \$18,500.00
6. Deakin University Research Equipment Support Scheme (RESS)	Flow cytometer	Associate Professor Peter Vuillermin, Professor Ken Walder, Professor Alister Ward, Dr Fiona Collier	2015 \$92,625

\*Noted in the 2015 Research Report

## Miscellaneous/Scholarship/Esteem

### Community Engagement

- Peter Vuillermin has given more than twenty media interviews in the last twelve months, including ABC morning news (TV) and ABC radio national.
- We have hosted a series of webinars describing and discussing the findings of our research and the related public health messages.
- Peter Vuillermin has led multidisciplinary collaborations for BIS with researchers from MCRI, WEHI, CSIRO, and J. Craig Venter Institute in the US.
- Peter Vuillermin is a member of the World University Network INFLAME consortium with a lead role in establishing Standard Operating Procedures for clinical outcome measures in international birth cohort studies.
- CHRU is now a participating site for the collection of lung function data in the International Collaboration to Improve Respiratory Health in Children (INCIRCLE).

# PSYCHIATRY

## PROFESSOR

## MICHAEL BERK

### *Research Focus*

Deakin University's Centre for Innovation in Mental and Physical Health and Clinical Treatment Strategic Research Centre (IMPACT), is a multi-disciplinary SRC that integrates clinical, epidemiological and basic research. We foster collaborative research nationally and internationally and have a commitment to mentorship, sustainability and capacity generation for the next generation of researchers. Three major themes guide the research at IMPACT:

- Clinical Trials
- Epidemiological Studies
- Laboratory based studies

Using these integrated series of approaches, IMPACT research covers both mental and physical health. In the psychiatric arm of IMPACT, research targets alterations in oxidative biology, inflammation, neurogenesis and mitochondrial dysfunction as well as lifestyle risk factors such as diet. IMPACT's investigations into developing novel therapies for the treatment of major psychiatric disorders have had both national and international exposure.

Nested within IMPACT is the Epi-Centre for Healthy Ageing (ECHA), which investigates the patterns, risk factors and outcomes of health and disease. Through its landmark Geelong Osteoporosis Study (GOS), ECHA supports four population based studies that form evidence bases, to inform clinical practice, public policy and help shape public health messages.

### *Major Achievements - Highlights from the last 12 months*

IMPACT SRC has experienced another fruitful year, achieving significant grant successes, awards, and having a presence at several significant international conferences. Some major highlights are listed below:

- Doctor Lana Williams awarded a NHMRC project grant for "Bone health in bipolar disorder"
- Doctor Sharon Brennan-Olsen awarded a NHMRC Career Development Fellowship for "Multidisciplinary translational research to address social disparities in osteoporosis: Understanding the social context of biological mechanisms"
- A/Professor Felice Jacka awarded a NHMRC Career Development Fellowship for "Diet and mental health: translating new knowledge into innovative prevention and treatment strategies"
- Professor Michael Berk announced as one of Thomson Reuters most cited researchers in 2015
- Professor Michael Berk awarded International Colvin Prize for Outstanding Achievement in Mood Disorders Research, Brain & Behaviour Research Foundation
- Dr Olivia Dean awarded the 2015 Australian Society for Bipolar and Depressive Disorders (ASBDD) Servier Award
- Melanie Ashton received the 2015 ASBDD/Lundbeck Award to support her PhD investigating the adjunctive use of mangosteen pericarp for bipolar depression
- PhD student Emma Gliddon awarded the Past District Governor Geoff Betts 2015 Early Mental Health Researcher Award for her project in online interventions for bipolar disorder
- Dr Kara Holloway appointed Alfred Deakin Postdoctoral Research Fellow
- Dr Brisa Fernandes appointed Alfred Deakin Postdoctoral Research Fellows
- Completion of clinical trial "The efficacy of a mitochondrial cocktail for Bipolar Depression" (MITO NAC trial)
- Completion of clinical trial "The efficacy of Minocycline as an adjunctive treatment in Unipolar Depression" (Mino UD trial)
- Completion of clinical trial "The efficacy of diet as an adjunctive treatment in Unipolar Depression" (SMILES trial)

- Completion of clinical trial “A randomized controlled trial of quetiapine versus lithium in the maintenance phase following a first episode of mania”
- 2016 has seen the launch of the next phase of data collection for the male cohort for the 23 year longitudinal Geelong Osteoporosis Study
- 2016 launch of collaborative research centre “The Food and Mood Centre”

### *Looking Forward - Anticipated Highlights in the next 12 months*

- Recruitment for a new clinical trial to investigate the effectiveness and benefits of the mangosteen fruit extract for people with schizophrenia
- Analysis of results from Minocycline Unipolar Depression trial, the Mitochondrial Cocktail trial and biomarker assays.

### *Staff*

**Professor Michael Berk**  
Director

**Professor Julie Pasco**  
Deputy Director

**Associate Professor Seetal Dodd**  
*BSc DipEd MSc PhD*  
Clinical Associate Professor

Associate Professor Dodd has an interest in treatments for psychiatric disorders, drug safety, tobacco use disorders, illness staging in psychiatry, nocebo and placebo, and the investigation of variables associated with differences in clinical outcomes.

**Dr Olivia Dean**  
*BSc (Hons) PhD*

Director of the Clinical Trials Division of the Innovations in Mental and Physical Health and Clinical Treatments Strategic Research Centre (IMPACT SRC) and Research Fellow with the School of Medicine, Deakin University. Dr Dean is currently involved in several areas of research including oxidative biology and inflammation in depression, mitochondrial dysfunction in bipolar disorder, and investigations of molecular markers of psychiatric illness. Her research program includes collaborations with a multitude of research groups including groups in Australia, France, South Africa, Thailand, Brazil, Portugal and Denmark.

**Dr Lana Williams**

*BPsych, Grad Dip App Psych, MPsyCh (Clinical), PhD, MAPS*

Dr Williams is a NHMRC Career Development Fellow and Psychologist with demonstrated expertise in psychiatric epidemiology and a special interest in the co-occurrence of physical and mental disorders. She currently is the Head of the Division of Psychiatric Epidemiology, School of Medicine, IMPACT Strategic Research Centre, and Deakin University. Over the past ten years, Dr Williams has been developing an innovative program of research examining medical, lifestyle and social correlates of mood, anxiety and personality disorders within the community. Cornerstone is her work investigating the interplay between psychiatric disorders, the medications used to treat these disorders and bone health, which has attracted extensive project funding and personal awards.

**Associate Professor Felice Jacka**

*BA, Pgrad Dip Med Sci, PhD*

Associate Professor (Research)

Associate Professor Jacka's research focus is on the nexus between diet and mental health. She is President of the International Society for Nutritional Psychiatry Research (ISNPR)

**Dr Sharon Brennan-Olsen**

*PhD (Epidemiology), Monash University; Graduate Certificate of Advanced Learning and Leadership (Management), The University of Melbourne; BA(Hons) (Sociology), Deakin University - Alfred Deakin Postdoctoral Research Fellow, and Head of Social Epidemiology Division.*

Dr Brennan-Olsen's interest are in social determinants of health outcomes, and health service utilisation.

**Dr Ajeet B Singh**

*MD MBBS MPsyCh MD FRANZCP*

Dr Singh is an Academic Private Psychiatrist. He has received his medical degree, masters, and doctorate from The University of Melbourne. He's a Taskforce Member on 'Genetic Tests in Psychiatry' for The International Society of Psychiatric Genetics (ISPG), and Member of The Clinical Pharmacogenetics Implementation Consortium (CPIC) based at Stanford University. Dr Singh is a Senior Clinical Lecturer and Honorary Research Fellow at the School of Medicine, Deakin University.

**Dr Kara Holloway**

*BSc Biotech, BSc Hons, PhD*  
Postdoctoral Research Fellow

Dr Holloway is currently working on a number of projects assessing the epidemiology and risk factors associated with fracture in a representative sample of the Australian population by drawing information from the ongoing Geelong Osteoporosis Study (GOS). Her aims are to estimate the public health costs associated with morbidity and mortality of fractures during the entire life course and provide important and useful outcomes for fracture treatment and prevention.

**Dr Carolyn Coulson**

*BA, Grad dip psych, Mpsych (clinical), PhD*

Dr Coulson's interests are in clinical assessment and psychological treatment of mental health disorders.

**Dr Helen McKenzie**

*MBBS*

Research Assistant – Minocycline Trial.

Dr McKenzie works in adult mental health, particularly areas of mood and substance use disorders.

**Amanda Stuart**

*AppSci (Hons)*

Research Fellow.

Amanda Stuart is a psychology graduate with significant interest and experience in clinical epidemiology. She is currently working as a research fellow on collaborative projects between the Divisions of Psychiatry and Epidemiology and Biostatistics within the School of Medicine, Deakin University.

**Brianna Doolan**

*BA Media and Communication majoring in Literary Studies and Journalism*

Communications officer and Research Assistant

Brianna's interests revolve around communications and social media and their role in targeted interventions for specific populations.

**Penny O'Brien**

*BA/BSW (Honours)*

Research Assistant (YoDA A clinical trial).

Her practice experience is primarily based in working with involuntary clients in statutory programs, specifically child protection and youth justice. Areas of interest include; family violence, attachment (in the context of child development and parenting), child and youth mental health, trauma and neglect (specifically for children and young people), social determinants of health and social work practice with CALD and Aboriginal and Torres Strait Islander clients.

**Thais Martini**

*MSc, Journalist and PhD student of Psychiatry at UFRGS, Brazil*

Visiting Researcher

Thais Martini's interests are in social networking sites and internet, focused in mental health and social behaviour and functioning.

**Thais Mondin**

*MSc*

Thais Mondin's interests are in biological rhythms, lifestyle and mood disorders, sleep duration and dietary patterns.

**Gosia Bucki-Smith**

*BSc (Monash) MND (Deakin) GradCertCTMgt (UC)*

Research Fellow

She is currently involved in research that is focused on fracture incidence in the population. She also has an interest in nutrition and its impact on health and disease and a particular interest in autoimmune diseases.

## *Students*

### PHD STUDENTS

**Sue Lauder**

*Moodswings 2.0 Online Intervention*

The MoodSwings program is an online, self-help program. It offers adjunctive psychosocial tools and information to help manage bipolar disorder.

**Emma Gliddon**

*Evaluating Discussion Engagement in an On-Line Self Help Program for Bi-Polar Disorder (www.moodswings.net.au)*

This project evaluates the impact of discussion board engagement on psychosocial outcomes (such as social support, quality of life and stigma) as well as intervention adherence, and attempts to identify key differences between active and passive discussion board users.

**Dr Steven Moylan**

*Links Between Anxiety and Smoking*

This project will provide new insights into the development of normal and pathological anxiety throughout the developmental periods, and how cigarette smoking may interfere with this process. These insights could be utilised in anti-smoking campaigns, and also as a template for further understanding of what influences the development of anxiety disorders.

**Rothanthi Daglas**

*A Comparison of Neurocognitive Functioning in first Episode Mania Patients treated with Quetiapine Vs. Lithium: A 12 Month Follow Up.*

The notion of complete inter-episodic recovery in bipolar disorder has been challenged in recent years. Evidence has indicated that cognitive impairments exist during both the acute and euthymic episodes of illness. However, the cognitive functioning of individuals during the early stages of illness remains under investigated. The usual treatment for mania is a combination of lithium and antipsychotics. The purpose of this study is to increase our understanding of the effectiveness of lithium and the atypical antipsychotic quetiapine on cognitive changes caused by the early stages of the disease process.

**Shae Quirk**

*Personality Disorders in the Community: An Epidemiological Study of the Association with Mental and Physical Health Disorders and Health Service Utilisation*

From a public health perspective it is essential to plan for and anticipate the health care needs of the Australian population, and for bridging the gap between physical and psychiatric health systems. However the current mental and medical help-seeking behaviours of Australians living with personality disorder are largely unknown. The aim of this project is to investigate the prevalence of personality disorders in Australian women participating in the Geelong Osteoporosis Study (GOS) as well as the associations with physical health conditions and utilization of medical and mental health care.

**Amie Hayley**

*Clinical and Epidemiological Studies of Sleep*

Disruptions to the sleep/wake cycle are recognised to have a variety of negative effects to both physiological and psychological systems. Excessive Daytime Sleepiness (EDS) constitutes a common complaint among patients attending sleep clinics, and epidemiological research has suggested that 12-20% of the general population experience these symptoms. To date, however, there is a paucity of information available investigating the impact of EDS and associated lifestyle and health factors in a representative group of Australian adults. Our research progress within this area has been significant, resulting in five accepted original manuscript publications and several awaiting submission.

**Joanna Dipnall**

*The use of Machine Learning and Data Mining in the Development of a Clinical Risk Index for Depression*

In Australia, depressive and anxiety disorders are increasingly common, seemingly affecting people of younger and younger ages. The impact of these psychological disorders on both the individual and society is far-reaching; with a detrimental impact upon the psychological, social and economic elements of everyday life. The aim of this research study is to use machine learning and data mining techniques to identify risk factors for depression so as to develop a clinically useful tool for predicting depression.

**Kristi-Ann Villagonzalo**

*Redox Biology and Autism*

This study is investigating the efficacy of the antioxidant precursor, N-acetylcysteine (NAC) as a treatment for children with autism. Autism is a pervasive developmental disorder, comprising of impairments in communication and social interaction, as well as repetitive or stereotyped behaviours or interests. Recent evidence has shown children with autism to have imbalances in their antioxidant defences, resulting in oxidative stress and cellular damage. It has been shown that the primary antioxidant in the brain, glutathione, is decreased in these children. This study aims to investigate the effects of increasing the amount of available glutathione by administering NAC. The double blind, randomised trial was completed in early 2014, with a total of 103 children taking part, with half receiving the NAC treatment and the other half receiving a matched placebo.

**Sarah Dash**

*Biological Pathways that mediate the Link between Diet and mood*

The bacteria living on and within our bodies-termed "microbiota"- play a significant role in the maintenance of health and balance within many of the body's systems. Bacterial colonisation begins at birth and continues to be influenced across the lifespan by a range of factors including genetics, antibiotic use, geography and, most relevant to this project, diet. The role of microflora to health outcomes and disease risk has been relatively overlooked until recently, partly due to lack of appropriate technology, as well as to the challenges of identifying the type and function of innumerable bacteria. Recent research has linked poor gut health with inflammatory and autoimmune disease, asthma, gastrointestinal disorders and mood and behaviour.

**Haslinda Gould**

*Antecedents of Aged Care Service Utilisation in a Sample of Older Australians: Prospective Data Linkage Using Government Administrative Records*

The study method involves data linkage between information collected over a period of twenty years from participants enrolled in the Geelong Osteoporosis Study (GOS) and government administrative records. The burgeoning older population in Australia poses a significant challenge to the aged care system, and avoiding or delaying the use of aged care services is likely to have downstream social and economic benefits. This research will provide a sound evidence base that will inform public health messages about healthy ageing and maintaining independence.

**Natalie Hyde**

*Gestational Vitamin D and Development in Offspring*

The Vitamin D in Pregnancy (VIP) study's initial findings showed impaired growth and development in offspring born to vitamin D deficient mothers. The study is currently in its final stages of recruitment for its 10 year follow-up phase and aims to determine whether these observed effects are transient or maintained into childhood. Currently much conjecture exists with regards to optimal vitamin D levels during pregnancy for ideal offspring development and thus there is a vital need for new data that policy makers and practitioners can use to formulate an evidence-based healthcare approach to vitamin D nutrition and sunlight exposure during pregnancy.

**Lelia de Abreu**

*Dysglycaemia in Women*

Lelia was enrolled as a PhD candidate with the IMPACT SRC team in August 2014. She joins the team from Brazil after completing a Bachelor of Nursing and a Masters in Nursing, with a focus on diabetes. She has also worked in the public health sector as a registered nurse for a number of years.

**Sarah Hosking**

*Osteoporosis, Health Literacy and Health Service Utilisation: Informing the Evidence - Base to Improve Osteoporosis Prevention and Related Healthcare*

This project aims to investigate potential links between health literacy, knowledge of Osteoporosis prevention guidelines and utilisation of health services. This information will help to ensure that in the future we will be better placed to develop interventions to support the effective translation of osteoporosis prevention guidelines for the Australian public.

**Dr Frank Giorlando**

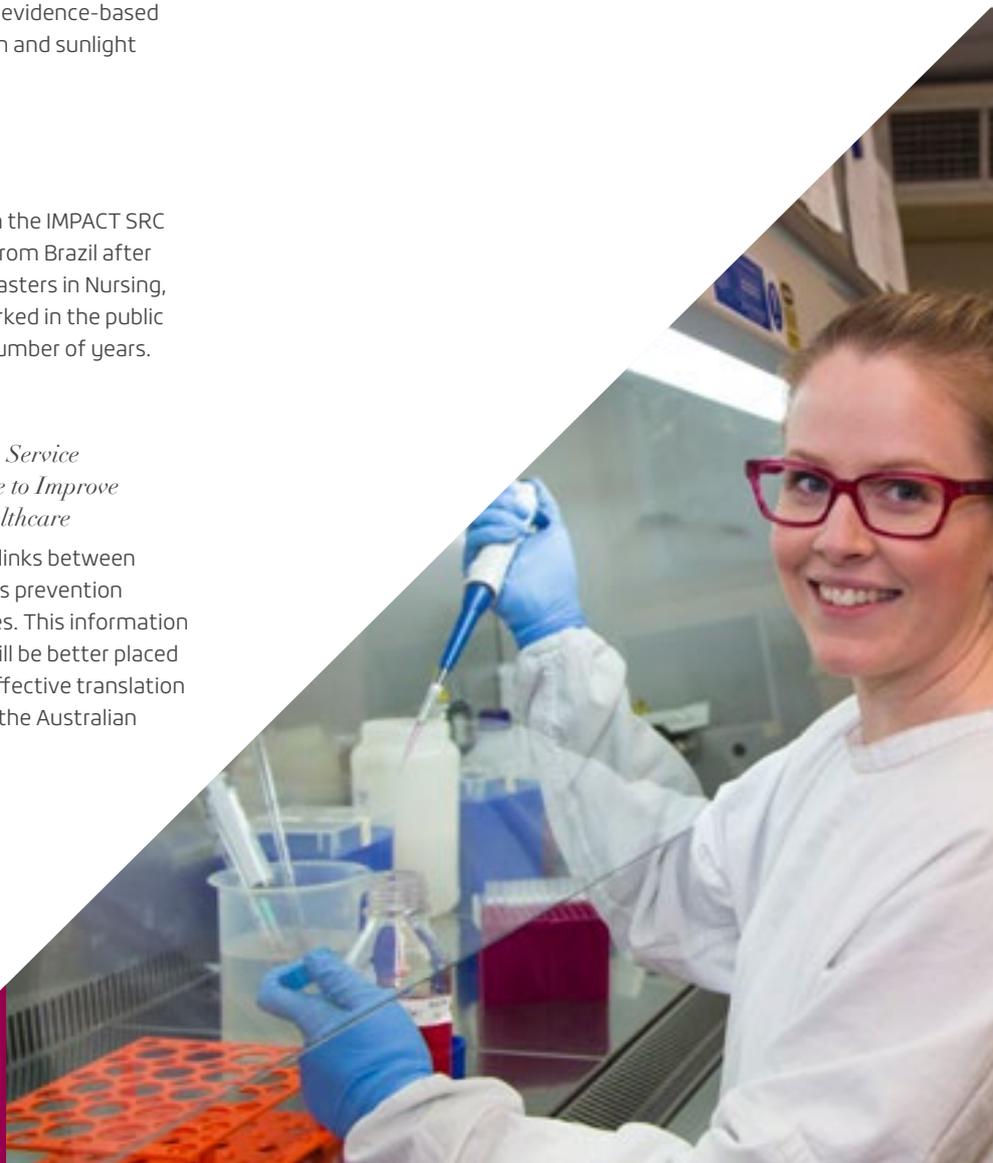
*Dissociation and Changes in the Perception of Time*

Our studies have shown that changes in time perception accompany mood changes in bipolar disorder and that we can measure the changes in brain activity that accompany specific time estimation measures. Importantly there is a strong linkage between time perception and dissociative symptoms which we hope to explore further in different populations with mental illness.

**Amber Sajjad**

*Describing the burden of chronic disease and injury in Western Victoria*

The project forms part of the Ageing, Chronic Disease and Injury (ACDI) study aiming at describing the burden of chronic disease and injury in western Victoria. Data will be obtained from chronic disease registers (Victorian Cancer Registry, National Diabetes Services Scheme etc.) and estimates of chronic disease burden will be reported by age, sex and location of residence. Associations between disease burden and variations in socioeconomic status, remoteness and accessibility to health services will be investigated.



## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. *NHMRC Project Grant (APP1081901).	ASPREE-D; Aspirin in the prevention of Depression in the elderly.	CIA: Berk M, McNeil J, Neilson M, Shah R, Woods R, Mohebbi M.	2015-2018. \$767,593
2. *NHMRC Career Development Fellowship (APP1064272).	Psychiatric disorders, Psychotropic agents and bone health: From bench top to bedside.	Williams L.	2014-2018. \$404,884.
3. *NHMRC Established Career Fellowship. APP1059660	Novel therapies, risk pathways and prevention of mood disorders.	Berk M. (GNT1064272).	2014-2018 \$822,925.
4. *NHMRC Project Grant (APP1027315)	Proof of principle of the inflammatory and Oxidative theory of depression: A treatment study.	CIs: Berk M, Chanen A, Harrigan S, Davey C, Hetrick S, Dean O, Dodd S.	2012-2016 \$1,475,510.00 over 5 years
5. *NHMRC Project Grant (APP 1021347).	Diet as a therapeutic target in depression: A Randomised controlled trial.	CIs: Berk M, Jacka F, Castle D, Brazens L, Itsiopoulos C.	3 years commencing 2012, extended to 2015 \$481,810
6. *NHMRC Postgraduate Scholarships Grant (APP1076347).	Personality disorders in the Community.	Quirk S	2013-2015 \$31,886.83
7. *Australian Rotary Health/Ian Parker Bipolar Research Fund PhD Scholarship.	Assessing an online psychotherapy program for bipolar disorder.	Gliddon E	2013-2015 \$87,000
8. *Meat & Livestock Australia.	Characterisation of dietary intakes and nutritional status of people with major depression and exploration of associated biological mechanisms	Jacka F, Itsiopoulos C, O'Neil A, Szymlek-Gay E, Castle D, Berk M.	2013-2016 \$250,000
9. *Stanley Medical Research Institute	D-fend – Vitamin D First Episode Neuroprotection Design. Randomised clinical trial. SMRI Grant Application 13TAF-1687	Gaughran F, McGrath J, Smith S, McGuire P, Berk M, Taylor D	2013-2015 \$1,443,293
10. *NIH R34 grant.	A randomized trial of Internet based interventions for bipolar disorder – Moodswings 2.0.	CIs: Berk M, Suppes T, Castle D, Cosgrove V. Lauder S, Berk L.	2013-2015 \$436,612 USD over 3 years
11. *BUPA Foundation	Maternal vitamin D in pregnancy and childhood growth	Pasco JA, Wark JD	2012-2015 \$189,000

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
12. *Australian Postgraduate Award	Gestational vitamin D and development in offspring.	Hyde N	2013-2015 \$76,175
13. Australian Rotary Health /Ian Parker Bipolar Research Fund PhD Scholarship	Assessing an online psychotherapy program for bipolar disorder	Gliddon E	2013-2015 \$87,000
14. NHMRC Project Grant (APP1078928).	Gene Expression Signature Technology to Repurpose Drugs for Bipolar Disorder.	Walder K, Berk M, Leboyer M	2015-2017 \$467,203
15. Alfred Deakin Postdoctoral Research Fellowship.	Investigation of the psychosocial and socioeconomic disparities in osteoporosis and the uptake of osteoporosis related healthcare using a multi-disciplinary approach.	Brennan-Olsen S.	2015-2016
16. *Stanley # 14T-007	The efficacy of adjunctive Garcinia mangostana Linn (mangosteen) pericarp for the treatment of Shizophrenia: A double blind randomised, placebo-controlled trial	Berk, McGrath, Dean, Dodd, Cotton	2012-2015 \$899,398
17. *Cooperative Research Centres CRC for Mental Health	Professor Ralph Martins – Edith Cowan University Professor Colin Masters – Mental Health Research Institute Professor Mal Horne – Florey Neurosciences Institute Professor Ian Everall – University of Melbourne Professor Brian Dean – Mental Health Institute Professor Assen Jablensky – University of Western Australia		Seven Years Commencing 2011 \$23 million

\*Noted in the 2015 Research Report

# SURGERY PROFESSOR DAVID WATTERS

## *Research Focus*

Professor Watters previous appointments include ten years as Professor of Surgery at the University of Melbourne, based in Geelong, eight years as Professor of Surgery at the University of Papua New Guinea in Port Moresby, a sabbatical year at the Chinese University of Hong Kong in 1991, six years as Senior Lecturer at the University of Zambia and senior registrar at the King Edward VIII and McCord Zulu hospitals in Durban, South Africa. He is an accomplished author and his publication record includes over 150 peer reviewed articles and book chapters covering a wide range of subjects including surgical training, surgical audit, outcomes and performance, trauma, peritonitis, critical care, gastrointestinal disorders, colorectal surgery, tropical diseases and HIV infection. Current areas of research include:

- Post Anaesthesia N-Acetyl-Cysteine Cognitive Evaluation (PANACEA) Trial
- Risk of conjunctival contamination from blood splashes during surgery
- Microbiome (Micro-'scope)
- Robotics / HAPTICS
- Global Surgery
- Surgical Audit (Outcomes and Performance indicators)

## *Major Achievements - Highlights from the last 12 months*

- Professor David Watters was awarded the title of Alfred Deakin Professor in 2016.
- Awards: Joint ASAP – Australian Chapter of International Society of Surgery – World Congress Travel
- Scholar (Bangkok Aug 2015) Roshan Ariyaratnam.
- Barwon Health: Clinical Education and Training Awards of Excellence 2015 – Professor Glenn Guest
- Joint Winner: Clinical Education and Training across the Region – SWRTH.

- Dr Eileen Moore was finalist for the prestigious Alzheimer's medal presented annually by the Journal Of Alzheimer's disease (JAD) in 2015.
- Associate Professor Douglas Stupart completed his PhD (by research) with the Department of Surgery, Deakin University in 2015.
- Thesis title: Natural history and cancer prevention in Lynch Syndrome
- Professor David Watters has over one hundred and twenty peer reviewed publications and six books including ANZAC Surgeons of Gallipoli published in 2015 (RACS).
- Professor Glenn Guest was appointed Chair in Surgery at the Epworth Hospital Geelong in 2016.
- Professor David Watters co-authored the Lancet Commissions Global Surgery 2030: evidence and solutions for achieving health, welfare, and economic development (The Lancet, 2015).
- Ms Anne Vandewater and Dr Eileen Moore in 2015 established the Online Research Repository for the Department of Surgery. This repository comprises department publications dating back to 1981, the electronic audit registry, the ethics and grants registry and research registry databases.
- Dr Suat Ng was successful in securing an NHMRC grant for Bowel Cancer Research in 2016.
- Dr Claire Stevens was the recipient of the Most Outstanding Clinical Research Poster during research week 2015.
- Associate Professor Glenn Guest was the recipient of the Barwon Health Clinical Education & Training Award of Excellence in 2015.

## *Looking Forward - Anticipated Highlights in the next 12 months*

The Department of Surgery, Deakin University has a strong research focus and productive publication output. Anticipated highlights over the next twelve months include: the completion of another Masters of Surgery, the outcomes of prospective studies, writing-up and publishing of research findings.

### **Microscope Project**

Highlights over the next twelve months include: the completion of another Master of Surgery degree, the completion of two Doctor of Philosophy (by research) degrees, outcomes of the Post Anaesthesia N-Acetyl-Cysteine Cognitive Evaluation (PANACEA) trial - a joint study between Department of Surgery and Department of Anaesthesia, Perioperative and Pain Medicine, the commencement of two clinical trials, the outcomes of prospective research studies and the publishing of research findings.

## *Staff*

### **Professor David Watters**

*OBE ChM FRCSEd FRACS*

Professor of Surgery at Deakin University and Chair in Surgery at University Hospital Geelong, Barwon Health. Professor David Watters is the immediate past President of the Royal Australasian College of Surgeons (May 2015- May 2016).

Interest/Speciality: Endocrine, Emergency, Colorectal Surgery, Tropical Medicine, Surgical Education, Surgical History.

### **Professor Glenn Guest (Previously Associate Professor)**

*MBBS FRACS BSc (Hons)*

Professor of Surgery with Deakin University and appointed Chair in Surgery at the Epworth Hospital Geelong in 2016.

General/Colorectal Surgeon with University Hospital Geelong, Barwon Health

Supervisor of General Surgical Trainees for University Hospital Geelong, Barwon Health

Director of the RACS AusAid Timor Leste Surgical Program

Interest/Speciality: Colorectal and Minimally invasive Surgery, Surgical Education, Health in Developing Countries.

### **Associate Professor Douglas Stupart (Previously Mr)**

Associate Professor and Senior Lecturer in Surgery with Deakin University

### **Senior Lecturer in Surgery with Deakin University**

Consultant Surgeon with University Hospital Geelong, Barwon Health

Interest/Speciality: Colorectal Surgeon, Laparoscopic Surgery, Surgical Education, Lynch Syndrome.

### **Dr Eileen Moore**

Research Fellow in Department of Surgery and Department of Anaesthesia, Perioperative and Pain Medicine. Dr Moore joined the Post Anaesthesia N-Acetyl-Cysteine Cognitive Evaluation (PANACEA) trial in 2016 and is the General Surgery Clinical Information Coordinator for Department of Surgery.

Interest/Speciality: Surgical Audit & Risk Management, Management of General & Colorectal Surgery Databases.

### **Ms Christine Campbell BNurs**

Clinical Information Co-ordinator

Interest/Speciality: Surgical Audit and Risk Management, General and Colorectal Surgery Databases.

### **Ms Stephanie Kempton**

*BBSc (Hons) M. Psych (Neuro) CCN MAPS*

Clinical Information Project Officer

Interest/Speciality: Trauma Audit

### **Ms Anne Vandewater**

*Adv Dip of Management, CPM AAPM, Dip of Business*

EA to the Director of Surgery

## *Students*

### **Dr Suat Chin Ng**

Master of Surgery (commenced 2015), University of Melbourne

Thesis title: Is there any role for surveillance in elderly colorectal cancer patients post curative resection

### **Dr Andrew Cheng**

PhD (by research, commenced 2015), Deakin University  
Deakin University

Thesis title: Postoperative Atrial Fibrillation after Cardiac Surgery

### **Dr Wendy Crebbin**

PhD (by research, commenced 2015), Deakin University  
Deakin University

Thesis title: Teaching Junior Doctors: How experts think: What impact does it have?

**Associate Professor Douglas Stupart**

PhD (by research, completed 2015), Deakin University

Deakin University

Thesis title: Natural history and cancer prevention in Lynch Syndrome

**Dr Patrick Mahar**

PhD (by research, completed 2015), Deakin University

Deakin University Thesis title: Toxic epidermal necrolysis: Factors associated with mortality in adult Victorian burns-centre treated patients

*Grants*

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. NHMRC	Bowel Cancer Research	Suat Ng, Professor David Watters, Associate Professor Douglas Stupart	3 years \$25,000

*Miscellaneous/Scholarship/Esteem*

- Professor David Watters
- President of the Royal Australasian College of Surgeons (RACS) May 2015 – May 2016
- Chairman RACS Professional Development and Standards Board (since 2012)
- Chairman RACS International Committee (June 2007-2012) ongoing member
- Australian Endocrine Surgeons
- Barwon Health Surgical Services Executive
- Department of Health (DHS) Ministerial Advisory Committee on Access to Surgery
- Cancer Australia Intercollegiate Advisory Group
- Professor Glenn Guest
- Chair in Surgery, Epworth Geelong 2016
- Director of the RACS AusAid Timor Leste Surgical Program Associate Professor Douglas Stupart
- Associate Professor in Surgery with Deakin University
- Micro-'scope Study
- Joint collaboration between Department of Surgery and Department of Psychiatry
- Post Anaesthesia N-Acetyl-Cysteine Cognitive Evaluation (PANACEA) trial
- Joint collaboration between Department of Surgery and Department of Anaesthesia, Perioperative and Pain Medicine

# BARWON HEALTH RESEARCH ROUNDUPS



# ANAESTHESIA

## *Research Focus*

The Research Unit of the Department of Anaesthesia, Perioperative and Pain Medicine is actively recruiting to a number of major international and national clinical trials. We collaborate with Deakin University, Monash University, the Florey institute and the Austin Hospital to lead local investigator-initiated interventional trials, along with prospective clinical outcome monitoring and audits of perioperative mortality and morbidity. Areas of research include post-operative cognitive decline, antiemetic therapy, regional anaesthesia and analgesia, and surgical outcomes for hepatobiliary, vascular and colorectal surgery. Our multicentre trial research encompasses diverse fields, including transfusion management in cardiac surgery, wound infections and diabetes management in bowel surgery, morbidity and mortality associated with depth of anaesthesia monitoring, and fluid therapy in major abdominal surgery.

The Anaesthetics team have an ongoing interest in performance monitoring, healthcare quality and safety and aspects of medical ethics to ensure patients receive the most appropriate care and have the best outcomes before, during and after surgery.

## *Major Achievements - Highlights from the last 12 months*

- Grand Round Presentations at multiple hospitals in Britain and Ireland
- The research unit continues to grow, attracting postdoctoral research fellows and increasing its supervisory capacity to include students pursuing their doctoral degrees.
- Recruitment into the BALANCED and RELIEF multicentre clinical trials are nearing completion, with a significant proportion of participants coming from Barwon Health.
- The PADDI and TRICS multicentre clinical trials have commenced recruitment.
- The locally led PANACEA trial, funded cooperatively by an NHMRC CRC grant, a Barwon Health scholarship grant, and Department of Anaesthesia research funds, has reached the half way point for participant recruitment, with preliminary results presented at international meetings.

- Clinical audit activity has revealed excellent local perioperative outcomes, specifically addressing areas such as post-operative delirium, nausea and pain management, along with major morbidity and mortality rates comparable to established centres of excellence. Results of audit activity continue to inform clinical practice and guidelines, with demonstrable improvements in transfusion practice and perioperative fluid management.
- Our senior research coordinator is to be awarded a Masters degree.
- We have made a record number of contributions to the Barwon Health Research Week activities.
- We organised our first clinical conference with excellent feedback from participants.

## *Looking Forward - Anticipated Highlights in the next 12 months*

- Invited presentations to Association of Paediatric Anaesthetists of Great Britain & Ireland, Irish Association of Anaesthetists and the Quality Symposium at Colchester & Ipswich Hospitals
- Commence recruitment for the multicentre ITACS cardiac surgery trial, along with two new investigator-initiated randomised clinical trials. This will bring the number of active trials being conducted by the unit to eight, with over 500 participants expected to be recruited in the 2016 and 2017 calendar years.
- We anticipate the graduation of our first PhD candidate, who is also due to represent both Deakin University and Barwon Health at the upcoming 2017 Nobel laureates meeting.
- We anticipate that a second research coordinator will complete her Masters degree.
- We will continue to contribute to research capacity generation at Barwon Health via collaborations with the Deakin IMPACT SRC and the formation of a Surgical and Critical Care Research Directorate.



“

The Anaesthetics team have an ongoing interest in performance monitoring, healthcare quality and safety and aspects of medical ethics to ensure patients receive the most appropriate care and have the best outcomes before, during and after surgery.

# CANCER SERVICES

## *Research Focus*

The Research endeavours of Cancer Services at Barwon Health aim to improve the health and wellbeing of western Victorian cancer patients through collaborative research across a broad range of disciplines. These include clinical research, health services research, population and data research and translational laboratory research.

## *Major Achievements - Highlights from the last 12 months*

### **Clinical Research**

- Seventeen haematology/oncology clinical trials were opened during the 2015/16 financial year
- Twenty-four haematology/oncology clinical trials remain open to accrual and are still looking for patients
- Two hundred and forty patients were recruited to haematology/oncology clinical trials during the 2015/2016 financial year
- Approximately 50 haematology/oncology feasibility studies for clinical trials were conducted during the 2015/2016 financial year

The Haematology Oncology Trials Team would like to highlight the following clinical trial departmental achievements which have taken place during the 2015/2016 financial year:

- Over the last 12 months we have successfully expanded the research portfolio to include Phase 1b studies. This successful growth and development has meant that our patients have access to cutting edge therapies and ensures Barwon Health remains comparable to the larger metropolitan sites. We currently have two active and open to accrual Phase 1 studies with several others in the pipeline. The most notable accomplishment in this Phase 1 portfolio has been demonstrated by a study led by Dr Hannah Rose looking into B-Cell Lymphoid Malignancies, where the haematology team managed to recruit an increase of almost 200% of its predicted patient numbers.
- The Australian Leukaemia and Lymphoma Group (ALLG) Janey Stone Perpetual Award 2016 – Recipient, Sonja Gauci

- Medical Oncology Group of Australia (MOGA) annual scientific meeting to present data and findings from “Neonab”, an investigator-initiated study led and coordinated through ALCC by Dr Mustafa Khasraw with sites at South West Healthcare, Warrnambool, Royal North Shore Hospital, Sydney and Bankstown-Lidcombe Hospital, Sydney – Poster Presentation, Rob Tobler
- The celebration of International Clinical Trials Day was a wonderful opportunity to engage the public on the importance of clinical trials within the centre with a fun mock trial involving cake! Clinical trial jargon can be very confronting so this event was a great way to break down some barriers and increase patient education – Organiser, Violet Mukaro

### **Health Services Research**

- Developed a suite of clinical indicators (Breast, Colorectal & Lung) to better understand treatment pathways for cancer patients across the Barwon South West region. Indicators were shortlisted based on data available in the Evaluation of Cancer Outcomes Barwon South West (ECOBSW) dataset, common presentations, evidence and importance for safety and quality.
- Clinical engagement across the region through establishing Quality Indicator Working Groups
- Developed a comprehensive Quality Report to disseminate to Health Services across the region describing our regions cancer activity
- Competed five years of region wide in the ECOBSW Registry.

### **Population and Data Research**

- Cancer Services has received a philanthropic grant for research from the Barwon Health Foundation in excess of \$600,000. In 2016 we continue ongoing work to “Digitalise the Cancer Service” meaning all patient data will be available for clinical and research purposes.
- A collaboration with the Prada group at Deakin University has focussed on using “Big data” to predict cancer outcomes and develop clinical platforms

- The Evaluation of Cancer Outcomes Barwon South West Registry (ECOBSW) is a clinical quality registry initiative through Barwon South West Region Integrated Cancer Services (BSWRICS). The registry collects and reports detailed information on treatments and subsequent outcomes for all newly diagnosed cancer patients in the region
- CANCER 2015 is a prospective, population-based Cancer Cohort that examines the feasibility of Genomics-guided precision medicine in the Clinic
- Barwon Health Cancer Services continues to contribute to the Victorian Lung Cancer Registry
- Australasian Bone Marrow Transplant Recipient Registry – Collects data and conducts analyses on marrow and stem cell transplants from centres throughout Australia and New Zealand.

#### Translational Laboratory Research

- Work on four projects continues in the laboratory
- Understanding the epigenetics of malignant glioma
- The Epigenetics of Atypical Teratoid Rhabdoid Tumors
- Integrating genomic and epigenomic predictive biomarkers in aza treated MDS Victorian Epigenetics Group (VEG)
- Examining the genomics of high risk breast cancer and resistance to therapy

#### Awards

- 2015 Project of the Year - Barwon Health Quality Awards

## *Looking Forward - Anticipated Highlights in the next Twelve Months*

#### Clinical Trials

Over the next twelve months we would like to further develop our clinical trial portfolio to include phase 1 studies. This move will guarantee that our unit will continue to attract interest and collaboration from large pharmaceutical sponsors which will secure access to novel treatments for our patients and secure ongoing funding. To ensure the successful growth and expansion of our unit into this area we will also need to increase our staffing levels and office space and look at the development of IT and current infrastructure in order that we could reach maximum productivity and potential, some key areas for us to work towards would be the setup of a robust clinical trial management system and implementing dedicated clinical space for phase 1 requirements.

#### Health Services Research

- The NHMRC partnership grant will continue to enrol patients this year.
- Dr Wong has completed her Masters

#### Population and Data Research

- We hope to have all patients' data in a digital format by the end of 2017 that will allow a large amount of analysis and reporting on outcomes both for quality and research.
- The ECO registry will be functioning as a true quality system monitoring and reporting region wide clinical performance.

#### Translational laboratory Research

- The first reports of the NHMRC Glioma study will be submitted for publication.
- We anticipate submitting two NHMRC project grants this year building on our glioma and ATRT work.
- A new project begins using the specimens from the Neo Nab study examining the genomics of high risk breast cancer and resistance to therapy. This will form the basis of a Master's degree for Dr Caitlin Murphy starting in February 2016.

## Staff

### CLINICAL

**Professor David Ashley**  
*MBBS FRACP PhD*  
Director of Cancer Services

**Dr Graham Pitson**  
*MBBS FRACR*  
Director of Radiation Oncology

**Associate Professor Philip Campbell**  
*MBChB MRCP MRCPath FRACP FRCPA*  
Director of Haematology

**Dr Adam Broad**  
*MBBS FRACP*  
Medical Oncology

**Dr Adam Friebe**  
*MBBS*  
Haematology

**Dr Andrew Hui**  
*MBBS M Med (ClinEpi)*  
Radiation Oncology

**Dr David Campbell**  
*MBBS FRACP*  
Medical Oncology

**Dr Madhu Singh**  
*MBBS FRACP*  
Medical Oncology

**Dr Maithum Mathlum**  
*MBChB FRANZCR*  
Radiation Oncology

**Dr David Kipp**  
*MBBS BMedSci FRACP, FRCPA*  
Haematology

**Dr Helen Fairweather**  
*FRACP FRCPA*  
Haematology

**Dr Karen White**  
*MBBS FRACP*  
Medical Oncology and Haematology

**Dr Michael Francis**  
*MBBS FRACR*  
Radiation Oncology

**Dr Mustafa Khasraw**  
*MD MBChB FRACP MRCP*  
Medical Oncology

**Dr Rod Lynch**  
*BMedSci MBBS FRACR MRACMA*  
Radiation Oncology

**Dr Shu Fen Wong**  
*MBBS FRACP*  
Medical Oncology

**Dr Sumita Ratnasingam**  
*MBBS*  
Haematology

**Dr Inger Olesen**  
*MBBS FRACP*  
Medical Oncology

**Dr Hannah Rose**  
*MBBS FRACP*  
Haematology  
Clinical Trials Manager

**Lea-Anne Harrison**  
*BSc (Hons), PhD*  
Clinical Trial Coordinators

**Elesha Parigi**  
*BSc (Hons)*

**Scott Betteridge**  
*BSc, MSc, PhD*

**Robert Tobler**  
*B AppSc*

**Sharon Jones**  
*BSc (Hons) MSc*

**Sonja Gauci**  
*BSc*

**Tina Smith**  
*BSc*  
Data Manager

**Amy Dang**  
*BSc (Hons), Postgraduate Diploma in Computer Science*  
Transitional Laboratory Research

**Andrea Muscat**  
*BSc (Hons)*

**Melissa Ferguson**  
*BSc (Hons)*

**Rasika Samarasinghe**  
*BSc(Hons), PhD*  
Project Officer

**Violet Mukaro**  
*B.LabMed (Hons), PhD*  
Clinical Trials Assistant

**Andrea Dozzi**  
*Grad Cert Clinical Trials Management*

## *Students*

**Dr Caitlin Murphy (Masters)**  
Examining the genomics of high risk breast cancer and resistance to therapy

**Rachel Marshall (Hon student)**  
Research project Cancer & Palliative Care

A retrospective electronic chart review of interventions during the last 90 days of life for a single-center regional cancer cohort.

## *Grants*

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. Cancer Council Grant	VERTU - Veliparib, Radiotherapy and Temozolomide trial in Unmethylated MGMT Glioblastoma	Dr Mustafa Khasraw, Professor John Simes, Professor Mark Rosenthal, A/Prof Kerrie McDonald, Dr Eng-Siew Koh, Professor David M. Ashley, A/Professor Michael Buckland, Ms Elizabeth Barnes, Dr Christine Goh, Dr Sonia Yip	2016-2018 \$359,000
2. *Victorian Cancer Agency - Victorian Epigenetics Group (VEG)	A collaboration for personalised epigenetic cancer therapy through pre-clinical evaluation, novel biomarker development and early phase clinical trials of new Drugs.	Miles Prince, Andrew Spencer, David M. Ashley	2014 – 2017 \$2,996, 569
3. *Victorian Cancer Agency	Cancer 2015	Joe Sambrook, David Thomas, Stephen Fox, John McNeil, Paula Lorgelly, Professor David M. Ashley, Lara Lipton, Melissa Southey, Paul Waring, Neil Watkins, Thomas John, Gary Richardson.	2014-2017 \$2,300,000.00
4. *Cure Brain Cancer Foundation	The VERTU Clinical Trial in Brain Tumours	Dr Mustafa Khasraw	2015 – 2017 \$500,000
5. *Specialised Therapeutics Australia	NABNEC Clinical Trial – Neuroendocrine Cancer	Dr Mustafa Khasraw	2015-2017 \$50,000

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
6. *UNICORN Foundation	NABNEC Clinical Trial – Neuroendocrine Cancer	Dr Mustafa Khasraw	Dr Mustafa Khasraw \$31,000
7. *NHMRC Partnership Grant	M-Health: Efficacy and Cost-effectiveness of a smartphone App to reduce unmet needs and distress in people with cancer (ACE): a randomized controlled trial APP1094831	David M. Ashley- CIB, Patricia Livingston CIA, Suzanne Chambers, Victoria White, Jacqueline Chirgwin, Meinir Krishnasamy, Catherine Mihalopoulos, John Reynolds, Mari Botti	2015-2018 \$376,398.00
Tom Wood sarcoma research Grant			2016 \$23,000
Barwon Health Education, Training, and Research Profile Fund Awards			2015-2016 \$20,450

\*Noted in the 2015 Research Report

## *Professional Affiliations*

### **Professor David M. Ashley**

- Executive Director Western Alliance
- NHMRC – Academy Member
- Victorian Cancer Agency- Council Member, Chair Clinical Trials Working Group
- Cancer Trials Australia - Board Member
- Cancer Council- Standing Research Sub-Committee
- AGILE Group Developing international adaptive trials for Glioblastoma (USA, EU, AUS, China) Member
- GLASS Consortium Examining the genomics of matched newly diagnosed and recurrent Glioblastoma – Member
- Cancer Research UK, ORTC review panel - Reviewer

### **Dr Lea Anne Harrison**

- Cancer Council Victoria, Cancer Trials Management Scheme (CTMS) Review Steering Committee
- Clinical Trial Advisory Committee (CTAC)
- NHMRC Good Process Practice Pilot Study Committee
- Cancer Services Information Technology Reference Group (ITRG) Committee

- Cancer Services Level 2 Operation Group (L2OG) Committee
- All Cancer Trials Australia Tumour Group Teleconferences

### **Dr Mustafa Khasraw**

- NHMRC Grant Review Panel Member 2016.
- Medicare MBS review taskforce Member 2016-2017
- Northern Sydney Local Area Health Human Research Ethics Committee Member 2015-
- Chair of the scientific program of the Asian Society of Neuro-Oncology Meeting - 2016
- Best Practice in Breast Cancer Project – Cancer Australia (2015)
- Member of the Barwon Health Research Review Committee (2012-2015)
- Member of the Breast Cancer Network Australia's Strategic Advisory Group
- Member of the therapeutic committee of ANZ Breast Cancer Trials Group (ANZBCTG)
- Member of the Scientific Advisory Committee of the Cure Brain Cancer Foundation
- Medical Co-director of Rotary Bowel Scan – Geelong District

#### **Associate Professor Philip Campbell**

- Member, Centre for Clinical Research in Cancer (CCRV), Victorian Cooperative Oncology Group (VCOG)
- Australasian Leukaemia and Lymphoma Group
- Barwon Health is a member of Cancer Trials Australia (CTA) enabling the Haematology Oncology Trials Team to use the services of CTA to streamline ethics and governance applications, financing and resource utilisation.
- The Haematology Oncology Trials Team has a close working relationship with all cancer care providers in the region, and also has a trials unit based in Warrnambool to improve patient access to clinical trials within the Greater Green triangle of South West Victoria.

#### **Members of the Haematology Oncology Trials Team are associated with a number of Professional Bodies Including:**

- ACRP (Association of Clinical Research Professionals)
- AGITG (Australasian Gastro-Intestinal Trials Group)
- ALLG (Australian Lymphoma and Leukaemia Group)
- ALTG (Australasian Lung Cancer Trials Group)
- ANF (Australian Nursing Federation)
- ANZBCTG (ANZ Breast Cancer Trials Group)
- ANZGOG (ANZ Gynaecological Oncology Group)
- ANZMTG
- ANZUP (ANZ Urogenital and Prostate Cancer) Trials Group
- ARCS (Association of Regulatory and Clinical Scientists)
- AYA (Adolescent and Young Adult) Program
- Cancer Council Victoria's Clinical Network - Clinical Research Professionals Committee
- CNSA (Clinical Nursing Society of Australia)
- COGNO
- COSA (Clinical Oncology Society of Australia)
- MOGA (Medical Oncology Group of Australia)
- Nurses Board of Victoria
- PC4 (Primary Care 4)
- PoCOG (Psycho-Oncology Co-operative Research Group)
- Society for Clinical Research Sites
- TROG (Trans-Tasman Radiation Oncology Group)

#### **Key Collaborations include investigators at:**

- Dana Faber Cancer Institute
- Deakin University
- Harvard University
- Melbourne University
- Monash Comprehensive Cancer Centre
- Monash University
- NSW Cancer Institute
- Peter McCallum Cancer centre
- Victorian Cancer Council
- Western Alliance AHSC and partners

# ENDOCRINOLOGY

## *Research Focus*

- Associate Professor Mark Kotowicz has been elected as Steering Committee Member of the National Fracture Alliance.
- An organisation that aims to mobilise health consumer organization's to ensure the identification of all fracture cases - implementing and ensuring wider uptake of best practice via Secondary Fracture Prevention Services at Health Services or within Primary Health Networks Chronic Disease Coordination Services.
- The Clinical Trial Unit has recruited the very first patient in the Southern Hemisphere to their Phase 1 Paediatric study here at Barwon Health.
- Dr. David Fuller is the Principal Investigator for this trial and the CTU are running the trial with the assistance of the Paediatric Team.
- ENDIA (Environmental Determinants of Islet Autoimmunity) Study – recruitment opportunities at DRC. The aim of the study is to determine how various environmental factors affect the development of type 1 diabetes.
- Diabetes Policy reviews (PROMPT)

## *Major Achievements - Highlights from the last Twelve Months*

### **Completed Studies**

De Jong KA, Sithara S, McEwen K, Appelbe A, Cukier K, Kotowicz MA, McGee SL Characterisation of heart structure and function in non-hypertensive obese type 2 diabetes patients

### **Presentations**

The Endocrinology Department hosted a series of Presentations over the year including:

- Helen Barraclough (Senior Clinical Research Scientist, Eli Lilly Australia), and Associate Professor Wendy Davis (Western Australia University).
- Helen is well regarded internationally for teaching biostatistics to non-statisticians having presented workshops in fifteen countries and has experience and expertise in the design, analysis and interpretation

of phase I-IV clinical trials, and in regulatory and reimbursement submissions globally.

- Wendy Davis is an Epidemiologist and Applied Biostatistician with expertise in Data Linkage and Health Economics. In diabetes, she is a chief investigator of the Fremantle Diabetes Study – a large scale prospective study of diabetes in a community-based cohort which has been in progress since 1993 and has produced ~ 90 published papers.
- Presentation 1 - Study Design - 23rd March 2016
- Presentation 2 - Subgroups - 1st June 2016
- Presentation 3 - Real World Evidence - 21st September 2016 (Presentation by Associate Professor Wendy Davis)
- Presentation 4 - Series Endpoints and Analysis Methods - 23rd November 2016

### **Professor Serge Ferrari**

*Treat to Target: An Emerging Concept in Osteoporosis - Monday 21st March 2016*

Professor Ferrari graduated from the Geneva Faculty of medicine in 1989, and has been research and clinical fellow, and Instructor in medicine at Harvard Medical School in 1997-2001. Professor Ferrari is the Vice-Chair of the council of Scientific Advisors of the International Osteoporosis Foundation (IOF), and past President of the Swiss Bone and Mineral Society.

### **Dr Strain**

*Clinical Inertia in Individualising Care for Type 2 Diabetes Diabetes in the Elderly April 7th 2016*

There has been an explosion in the number of treatment options in recent years. Dr Strain has written a chapter for the IDF World Atlas exploring why some of these have not been embraced in older patients. The breakfast presentation was well received and informative.

### Professor Tadej Battelino

*Continuous Glucose Monitoring (CGM) New Breakthroughs: What's next for CGM?*

Monday 18th July 2016

Professor Battelino is currently Consultant and Head of Department of Paediatric and Adolescent

Endocrinology, UMC Ljubljana, and holds the positions of Vice Dean for Research, Head Chair of Paediatrics and Professor of Paediatrics at Faculty of Medicine, University of Ljubljana.

### Australian National Diabetes Audit Data Collection

*Data collected on 104 DRC Clinic attendees for the Australian National Diabetes Audit – Australian Quality Self-Management Audit.*

DRC participates in this is an important biennial quality improvement activity as a member of the National Association of Diabetes Centre's (NADC). We will receive an individualized report of diabetes practice processes and

patient outcome data benchmarked with the outcome of other Centre's across the country. In addition, the pooled national report is an important source of cross-sectional data on the clinical status and outcomes of individuals attending specialist diabetes services across the country during the audit period.

### Invited Guest at the Australian and New Zealand Bone and Mineral Society Strategic Meeting

Associate Professor Kotowicz was an invited guest at the Australian and New Zealand Bone and Mineral Society Strategic Meeting May 24th, 2016.

### Advisory Board, Associate Professor Kotowicz is on the advisory Board of:

Eli Lilly – Forteo

Amgen – Prolia

## Grants Submitted

Submitted Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. NHMRC	Severity of disease activity and treatment adherence in rheumatoid arthritis: the effect size of low health literacy and social disadvantage	Brennan-Olsen SL, Kotowicz MA, Beauchamp A, Nicholson GC, Page RS, Leech M, Mohebi M	\$538,087
2. NHMRC	Clinical utility of bone microindentation	Pasco JA, Kotowicz MA, Dieaz-Perez A, Brennan Olsen SL	\$999,749
3. NHMRC	Antipsychotics and Osteoporosis: Mechanisms and Clinical Consequences	Williams LJ, Pasco JA, Hodge JM, Gilbert Y, Laudet V, Kotowicz MA, Dodd S.	\$605,498
4. Intensive Care Foundation Research Grant and Amgen ISS Program	A pilot phase II, randomised, double blinded, controlled trial comparing denosumab to placebo in critically ill patients at risk of accelerated bone loss	Orford N, Kotowicz MA, Bailey M, Maiden M, Pasco JA, Kaho N, Cooper J, Bellomo RA.	\$38,328
5. HCF	Outcomes using personalised hypoglycaemia care plans and decision aids	Dunning T, Malon R, Kotowicz MA, Speight J, Kennedy M, Duggan N, Savage S.	\$50,000

\*Noted in the 2015 Research Report

## *Staff*

### **Associate Professor Mark Kotowicz**

Associate Professor in Medicine, Director, Department of Endocrinology and Diabetes, Barwon Health

### **Dr Adam Roberts**

Visiting Medical Officer (VMO), Principle Investigator in Clinical Trials Unit

### **Dr Myra Yeo**

Visiting Medical Officer (VMO), Co-Investigator (Features of the metabolic syndrome and risk of subsequent gestational diabetes)

### **Dr Natalie Harrison**

Visiting Medical Officer (VMO)

### **Dr Kimberly Cukier**

Visiting Medical Officer (VMO), Co-Investigator: Characterisation of heart structure and function in non-hypertensive obese Type 2 Diabetes Patients

### **Dr Michael McNamara**

Visiting Medical Officer (VMO)

### **Dr Samantha Worboys**

Visiting Medical Officer (VMO)

### **Dr Chris Jung**

Visiting Medical Officer (VMO)

### **Ms Heather Hart**

Nurse Unit Manager, Department of Endocrinology

### **Kate McMaster**

Credentialed Diabetes Educator

### **Pauline Clancy**

Credentialed Diabetes Educator

### **Trish Streitberger**

Credentialed Diabetes Educator

### **Donna Killeen**

Personal Assistant

### **Alana Sarah**

Clinical Trial Manager

### **Bree Sarah**

Senior Clinical Trial Coordinator

### **Jo Chambers**

Clinical Trial Coordinator and Diabetes Educator

### **Susan Lamb**

Clinical Trial Coordinator

### **Kate Ellis**

Clinical Trial Coordinator

## **TRAINEES AND FELLOWS**

### **Dr. Amin Sharifi**

Advanced Trainee

### **Dr. Natalie Marijanovic**

Endocrine Fellow

### **Dr. Shamil Cooray**

Advanced Trainee (Endocrinology)

### **Dr Shannon McCarthy**

Visiting Medical Officer (VMO)

## *Students*

### **Pamela Rufus, Deakin University 2015**

*Supervisors: Professor Julie Pasco, Associate Professor Mark Kotowicz, Dr Kara Holloway; Dr Peter Burks*

## Grants Received

Received Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. Deakin University Research Equipment Support Scheme	Peripheral quantitative computed tomography (pQCT) scanner, Leonardo platform and hand dynamometer.	Brennan-Olsen SL, Kotowicz MA, Beauchamp A, Nicholson GC, Page RS, Leech M, Mohebi M	\$538,087
2. NHMRC	Clinical utility of bone microindentation	Pasco JA, Kotowicz MA, Dieaz-Perez A, Brennan Olsen SL	\$999,749
3. NHMRC	Antipsychotics and Osteoporosis: Mechanisms and Clinical Consequences	Williams LJ, Pasco JA, Hodge JM, Gilbert Y, Laudet V, Kotowicz MA, Dodd S.	\$605,498
4. Intensive Care Foundation Research Grant and Amgen ISS Program	A pilot phase II, randomised, double blinded, controlled trial comparing denosumab to placebo in critically ill patients at risk of accelerated bone loss	Orford N, Kotowicz MA, Bailey M, Maiden M, Pasco JA, Kaho N, Cooper J, Bellomo RA.	\$38,328

\*Noted in the 2015 Research Report

## Professional Affiliations

### External Professional Appointments - Associate Professor Mark Kotowicz

- Chair, Therapeutic Committee, ANZBMS 2014 -
- Constitutional review Committee of ANZBMS
- Epworth Geelong Council of Clinicians
- Royal Australasian College of Physicians Evolve Forum – Evaluating Evidence Enhancing Effectiveness: A peer review initiative

### Editorial Boards - Associate Professor Mark Kotowicz

- Clinical Drug Safety

### Reviewer - Associate Professor Mark Kotowicz

- External Reviewer for NHMRC

### Peer Reviewed Journal Contributions – Reviewer Associate Professor Mark Kotowicz

- Journal of Bone and Mineral Research
- Medical Journal of Australia
- Bone
- Internal Medicine Journal
- Osteoporosis International
- Clinical Drug Safety
- Clinical Endocrinology
- Nutrition & Metabolism
- Biomedical Central
- Future Medicine
- British Medical Journal Open
- Journal of Rheumatology

## *Key Collaborations*

- Australian Diabetes Educators Association
- Australian Diabetes Educators Association Victorian Branch
- Australian Paediatric Society
- National Fracture Alliance - An organisation that aims to mobilise health consumer organisation's to ensure the identification of all fracture cases - implementing and ensuring wider uptake of best practice via Secondary Fracture Prevention Services at Health Services or within Primary Health Networks Chronic Disease Coordination Services.
- 
- Center of Bone Diseases Lausanne University Hospital, Lausanne, Switzerland – Professor Didier Hans
- Active Life Sciences Inc., Santa Barbara, California, USA – Dr Peter Burks
- Australian Type 1 Diabetes Clinical Research Network, Juvenile Diabetes Research Foundation
- Diabetes Australia
- Monash University
- Flinders University
- Deakin University - Professor Julie Pasco, Professor Michael Berk, Professor David Ashley, Dr Sean McGee, Associate Professor Bodil Rasmussen
- University of Edinburgh – Professor Stuart Ralston
- Autonomous University of Barcelona, Department of Internal Medicine – Professor Adolfo Diez-Perez
- The University of Sydney – Associate Professor Rory Clifton-Bligh



# GENERAL MEDICINE

## *Research Focus*

The Department of General Medicine has formally commenced fortnightly research meetings to discuss and plan research projects for junior medical staff.

In 2016 the following projects have been completed and will be submitted for publication:

- Study of the epidemiology of common infections in Geelong
- Outpatient antimicrobial prescribing audit
- Study of indications for and results of CTPA studies ordered at BMI
- Audit of recording of patient weights in medical charts

There are additional studies listed below that are currently commencing:

- Study of hypernatremia causes and treatment
- Study of the epidemiology and management of overdose and alcohol withdrawal in general medicine
- Study of the cardiac complications of drug overdose
- 10 year review of rhabdomyolysis at Barwon Health

## *Major Achievements - Highlights from the last Twelve Months*

While this focus on research is in its infancy, we anticipate that all of the above projects will be presented as an abstract at a conference and be published.



# INFECTIOUS DISEASES

## *Research Focus*

Current Areas of research focus include;

- Health care associated infections
- Emerging infectious Diseases/One Health
- Mycobacteria ulcerans
- Device infections/Biofilms
- Clostridium difficile
- Hepatitis C
- Infective Endocarditis
- Refugee Health
- Antimicrobial Stewardship
- Cost effectiveness
- Population Health
- Antimicrobial resistance
- Clinical trials

## *Major Achievements - Highlights from the last Twelve Months*

- Professor Eugene Athan was co-recipient for Sir Richard Stawell prize 2015 for CVC project in ICU published last year for the MJA best paper for 2015. Effectiveness of a care bundle to reduce central line-associated bloodstream infections. Entesari-Tatafi D, Orford N, Bailey MJ, Chonghaile MN, Lamb-Jenkins J, Athan E. Med J Aust. 2015 Mar 16;202(5):247-50.
- Alex Wright Deakin Honours student project Injecting drug use associated infective endocarditis. Winner of Best public Health project and Young researcher of the year 2015 BH/Deakin Research Week.
- Zoster vaccine clinical trial published NEJM 2015 and 2016
- Professor Eugene Athan and Dr Deb Friedman were invited speakers at ASID 2016
- > 40 publications in peer reviewed journals

## Conference Presentations

- Completion of Doctorate degrees - Daniel O'Brien at the University of Melbourne, and Professor Eugene Athan at Monash University.
- External Funding
- ETRPF fund Daniel O'Brien
- Western Alliance Professor Eugene Athan
- Alicia Neels for AMS in GP
- NHMRC Fellowship Amanda Wade
- Sabbatical leave - Deb Friedman/Aaron Walton in Tel Aviv.
- Sarah Huffam Masters in BioEthics

## *Looking Forward - Anticipated Highlights in the next Twelve Months*

- Commencement of funded research projects
- Publications in Peer reviewed Journals > 40 per annum.

## *Staff*

### **Professor Eugene Athan**

Director Department ID - Health Care Infections, Endocarditis, Co-supervisor 3 PhD and 1 Honours Student. Deakin University, University of Melbourne.

### **Dr Daniel O'Brien**

Deputy Director - Mycobacteria ulcerans program, University of Melbourne.

### **Associate Professor Amanda Wade**

Head Hepatitis Program - Hepatitis C PI Prime Study Burnet Institute.

### **Dr Deborah Freidman**

Gram negative resistance in Aged care, Deakin University.

### **Dr James Pollard**

Lead HITH - cost effectiveness of HITH, Deakin University.

**Dr Sarah Huffam**

Antimicrobial treatment at end of life, BioEthics

**Dr Aaron Walton**

Microbiologist, antimicrobial stewardship, SJOG Microbiology.

**Dr Raquel Cowan**

Blood stream infections in Hematology/Oncology, Deakin University.

**Dr Babak Rad**

ID Research Fellow - Corticosteroids in Tuberculosis, PJI cohort study

**Dr Ohide Otome**

Infectious Diseases Research Fellow – Cost of Infective Endocarditis

**Dr Eleanor MacMorran**

Registrar – Staph Infections in Central Australia

**Penny Radlj**

CNC IPS - Hand Hygiene evaluation, Deakin University

**Alex Tai**

ID Research Fellow - Cost of Infective Endocarditis

**Eleanor MacMorran**

Registrar - Staph infections in Central Australia

**Alicia Neels**

Senior Pharmacist - antimicrobial stewardship

**Rochelle Hamilton**

CNC - Sexual Health - Sexual Health Behavioural study, Deakin University.

## *Students*

**Alicia Neels**

Masters Pharmacy AMS

**Amanda Wade**

PhD Hepatitis C

**Christine Roder**

PhD Clostridium difficile

**Darcie Cooper**

PhD Biofilm infections

**Michael Avumegah**

PhD Mycobacteria ulcerans

**Carly Botheras**

Honours student Staph. aureus virulence factors.

**Babak Rad**

ID Research Fellow

## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. *Barwon Health Education, Training, and Research Profile Fund Awards (ETRPF)	M ulcerans	Daniel O'Brien	2015-2016 \$60,000
2. *NHMRC	Hepatitis C	Fellow Amanda Wade	2015-2017 \$50,000
3. *Western Alliance	AMS in GP	Eugene Athan	2016-2017 \$30,000
4. Medtronic pacemaker infections project	Pacemaker infections project		\$50,000

\*Noted in the 2015 Research Report

## Professional Affiliations

- National affiliates /Committees: AQSHC HAI Advisory Group, ASHM, ASID HICSIG, HITH Society
- International affiliates: IDSA, HIVMA, MSF, and Cotton on Foundation.
- Key Collaborations with named Organisation: CSIRO, Deakin University, University of Melbourne, Burnet Institute, Monash University, Western Vic PHN, Vic Department of Health.



# INTENSIVE CARE

## *Research Focus*

Research is a vital part of the Intensive Care Environment. It promotes the introduction of therapies that aid our patients and are cost-effective, and encourages the abandonment of ineffective or harmful therapies. Current areas of research focus include;

- i-Validate – identifying values, listening and advising high-risk patients in acute care
- Bone mineral density in ICU patients
- Bone turnover and long term outcomes following ICU discharge
- Denosumab as a potential therapy to prevent bone loss in female ICU patients.
- Long term survival after critical illness
- Observation studies of paediatric patients admitted to Geelong ICU
- Critical illness, subsequent fertility and pregnancy related outcomes
- Review of junior medical staff training in medical emergency teams
- Description of training in paediatric ICU clinical skills
- Description of ECMO at Geelong Hospital
- Description of lung ultrasound in patients with acute dyspnoea.
- Long term outcomes in elderly patients with severe traumatic brain injury
- Red cell changes in septic shock
- Pathophysiology of septic acute kidney injury
- Observational study of ventilator associated pneumonia
- Observational study of filter patency in renal replacement therapy
- Outcomes following ICU admission with Guillain-Barre syndrome
- Pulmonary artery catheter, echocardiography and arterial waveform analysis after Cardiac surgery.
- Collaboration with the Australian New Zealand Intensive Care Society – Clinical Trials Group

- Age of stored blood for transfusion (TRANSFUSE)
- Role of corticosteroids septic shock (ADRENAL)
- Effect of a new sedation medication for patients in ICU (SPICE III)
- A technique to ventilate severely disease lungs (PHAR LAP)
- How many calories to feed ICU patients (TARGET)
- Comparison of saline vs. plasmalyte as parenteral fluids (ICU SPLIT)
- Collaboration in studies led by other health institutions
- Nebulised heparin for lung disease (NEB HEP) – St Vincent’s hospital, Melbourne
- Aspirin in ICU patients with systemic inflammation (PROTECTIN) – The Austin Hospital
- Blood pressure in acute kidney injury (REACT SHOCK) – John Hunter hospital, Newcastle
- Supplementary parenteral nutrition (SUPP PN) – The Alfred Hospital

## *Major Achievements - Highlights from the last Twelve Months*

- Commenced weekly research meetings of research activity / research projects
- Sir Richard Stawell Memorial Prize – Medical Journal of Australia.
- “The most clinically significant research article - 2015”
- Entesari-Tatafi D, Orford N, Bailey MJ, Chonghaile MN, Lamb-Jenkins J, Athan E.
- Effectiveness of a care bundle to reduce central line-associated bloodstream infections.
- Med J Aust 2015 Mar; 202(5):247-250.
- Head of Intensive Care Unit Research – Dr. Matthew Maiden (BSc, BMBS, PhD)

## Looking Forward - Anticipated Highlights in the next Twelve Months

- Intervention study to improve bone density in ICU patients
- Study haematocrit in patients with septic shock
- Functional MRI studies of kidneys in a model of septic shock
- Duration of survival following ICU admission
- Different blood glucose levels in diabetic ICU patients
- Prevalence of discussion about goals of care in patients who died in ICU

- Dr. Claire Cattigan
- Dr. Nicholas Simpson
- Dr. Martina NiChonghaile
- Dr. Joe McCaffrey
- Dr. Nima Kakho
- Dr. Matthew Maiden
- Dr. Andrew Tierney
- Allison Bone
- Tania Elderkin
- Tania Salerno
- David Cordon

## Staff

### Currently Leading Ethics Committee Approved Research Projects

- Associate Professor Neil Orford
- Associate Professor Charlie Corke

## Students

**Associate Professor Neil Orford**  
PhD student (Monash University)

“Bone density in patients surviving admission to an intensive care unit”

## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. Australasian College for Emergency Medicine – Early Career Researcher Grant	Changes to red cell in septic shock	M Maiden	\$20,000

## Professional Affiliations

### University Affiliations

- Deakin University, Faculty of Health Sciences, School of Medicine
- Monash University, Medicine, Nursing and Health Sciences
- Australian and New Zealand Intensive Care Research Centre (ANZIC-RC)
- University of Adelaide, Faculty of Health Sciences, School of Medicine, Discipline of Acute Care Medicine

### Research Institute Affiliations

- South Australian Health and Medical Research Institute (SAHMRI)
- Preclinical, Imagine and Research Laboratories
- Peer Reviewers
- Journal Review
- Critical Care and Resuscitation
- Grant Review
- NHMRC Project Grants
- NHMRC Fellowship Grants
- Research Abstract Review
- ANZICS Annual Scientific Meeting
- CICM Annual Scientific Meeting

# NEPHROLOGY

## *Research Focus*

The main current areas of research interest within this department are:

- Extended hour haemodialysis (home nocturnal haemodialysis)
- "Green" Dialysis
- The effect of ultrafiltration rate on morbidity and mortality in haemodialysis
- Participation in PDOPPS a world-wide multicentre study of practices and outcomes in peritoneal dialysis
- Participation in clinical trials through the Australian Kidney Trials Network (AKTN)
- Use of plastic cannulas to optimise successful early utilisation of AV fistulas in haemodialysis
- Empowering home haemodialysis patients with vascular access ultrasound

## *Major Achievements - Highlights from the last Twelve Months*

- Award for Best Novice Presenter to Ms Hannah Millier (home haemodialysis nurse) at the Renal Society of Australasia (RSA) Annual Meeting (Gold Coast, June 2016) for her presentation on "Empowering the home haemodialysis patient with the use of portable hand held ultrasound"
- Victorian Renal Clinical Network Project Grant (DHHS) for \$41614 awarded to support the "Empowering the home haemodialysis patient with the use of portable hand held ultrasound" project
- Ms Vicki Smith (Vascular Access Nurse) an invited speaker at RSA annual meeting in Gold Coast (June 2016), presenting her work on the use of plastic cannulae to optimise successful use of new AV fistulae. This work has been published in the Journal of Vascular Access (Vol 2 Issue1, March 2016)
- Ms Rosie Simmonds (NUM, Home Dialysis Unit) was an invited speaker at RSA annual meeting (Gold Coast, June 2016) advocating for a home dialysis network to promote the development of home dialysis therapies
- Dr Emily See (renal advanced trainee registrar 2015) will present her study: "Nocturnal haemodialysis in associated with equivalent post-transplant early graft

function and long term graft survival compared to conventional haemodialysis" at the American Society of Nephrology annual scientific meeting in Chicago in November 2016

## *Looking Forward - Anticipated Highlights in the next Twelve Months*

- Continuation of above themes
- Participation in project on Green Dialysis promoted from Victorian Renal Clinical Network (DHHS)
- Increasing focus on role of ultrafiltration rate in health of haemodialysis patients

## *Staff*

### **Professor John Agar**

Honorary Nephrologist, Has a world-wide reputation as an innovator in the fields of nocturnal and extended hour dialysis and green nephrology as his presentations listed above will attest

**Associate Professor Christine Somerville**  
Nephrologist

**Mr Richard Knight**  
Operations Manager, Renal Services

**Mr Anthony Perkins**  
Research Nurse, with main areas of interest being Green Dialysis and co-ordinating our participation in the AKTN trials

**Dr Emily See**  
Advanced Trainee in Nephrology

**Ms Rosemary Simmonds**  
NUM Home Dialysis Unit

**Ms Vicki Smith**  
Vascular Access Nurse

**Ms Hannah Millier**  
Home Haemodialysis Nurse

The entire renal team, including dialysis nurses and senior and junior medical staff contribute to this research

## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. VRCN (DHHS) grant	Empowering the home haemodialysis patient with the use of portable hand held ultrasound	Rosemary Simmonds, Hannah Millier	2016-2017 \$41614

## Professional Affiliations

### John Agar

- MAB Quanta (Quanta Fluid Solutions, Warwickshire, UK)
- Investigator: Song-HD (George Institute: Sydney, Australia)
- Investigator: ANZDATA Dialysis Modalities Project (ANZDATA, Adelaide, Australia)
- Monthly Blog: Home Dialysis Central (Medical Education Institute, Wisconsin, USA)
- MAB: Renal Solutions Inc: Sorbent Dialysis (RSI, Pittsburgh, USA)
- Various other national and international collaborations

### Mr Richard Knight

- Is a member of the following DHHS Committee
- Victorian Renal Hub Reference Group (VRCHN)

### Ms Rosemary Simmonds is a member of

- Home Dialysis Network Nationwide under the auspices of Renal Society of Australasia

### Associate Professor Christine Somerville is a member of the following DHHS Committees

- Victorian Renal Clinical Health Network Leadership Group (VRCHN)
- Victorian and Tasmanian Renal Transplant Advisory Committee (VTRTAC)

# OCCUPATIONAL THERAPY

## *Research Focus*

Over the last two years the Occupational Therapy Service at Barwon Health has had a planned progression of research and service improvement projects from scoping, to data collection and analysis to communication via presentations and publication.

The following research projects have progressed as follows:

### **Conference Presentations**

Student Education Model 1

### **Data Analysis**

Occupational Therapy pathway in GEM  
Student Education Model 2

### **Data Collection**

SENse Project

### **Scoping of Project**

Feasibility of allied health staff using the K10 as a screening tool in primary care

Research into the use of assistive technology in rehabilitation (SAEBOFlex and TAPit®) has continued with the survey of consumers and staff prior to the purchase of assistive technology equipment and set up of some items in the Independent Living Unit at the Inpatient Rehabilitation Centre at Mc Kellar Centre.

Deakin University has introduced a fourth year research placement and Barwon Health has had 9 research ideas accepted. These are in the areas of mental health, hand therapy and rehabilitation.

## *Major Achievements - Highlights from the last Twelve Months*

### **Research Outcomes**

- TAPit®: Five mixed methods case studies have been completed into the use of this device with people who have experienced neurological trauma. This study was published in the April 2016.
- Saebo: Patient and therapist experiences of the SaeboFlex: A pilot study, has been completed involving twelve clients and with upper limb hemiplegia. This study has been submitted for published in 2016.
- Fieldwork: A mixed methods study was completed in 2013 with some ongoing work and data collected completed in 2014. This study has published in 2016.
- Fieldwork: A further research project evaluating student and clinician satisfaction of new models of fieldwork. Data analysis and a draft paper for publication developed with Deakin University and Charles Sturt University has commenced.
- SENSE (Study of the Effectiveness of Neurorehabilitation on Sensation) is an evidence-based therapy approach targeting the loss of sensation in the hand following a stroke. Barwon Health is one of ten clinical trial sites in this study lead by the Florey Institute of Neuroscience and Mental Health and La Trobe University. Fourteen staff have been trained from subacute programs. Clients are now being recruited.

### **Conference Presentations**

- Nikki Lyons (2015) Implementing peer reflective practice: A Model for OT students. Barwon South West Grampians Allied Health Conference 2016

### **External Funding**

- Deakin University in-kind 0.1 EFT for research assistance with ethic proposals, writing of publications, conference presentations

## *Looking Forward - Anticipated Highlights in the next Twelve Months*

Over the next twelve months the Occupational Therapy service will continue to formalize a research plan aligned with the Barwon Health research plan that focuses on building capability and capacity, promotes a culture of research and innovation thru partnerships with universities and other health agencies.

To focus on research which benefits consumers and Occupational Therapy practice as a whole across Barwon Health, specifically in the areas of assistive technology, mental health, cognition and pressure care.

The following research projects should have progressed as follows:

### **Publication**

Student Education Model 2

### **Conference presentations**

Assistive technology  
Student Education Model 2  
Student Education Model 2  
Occupational Therapy pathway in GEM

### **Data analysis**

SENSe project

### **Data Collection**

Development of a care pathway around the use of the K10 in community health

## *Students*

### **Monique Walsh**

Completing Master of Public Health (Cancer Prevention), Flinders University

### **Sarah Tomlison**

Masters of Clinical Leadership, Deakin University

## *Grants*

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. *NAB Community Grant	Assistive Technology Program	Larissa Andriske, Sara Coulter, Bec Boromeo, Coralie Cooper	2014-2016 \$50,000

\*Noted in the 2015 Research Report

# ORAL HEALTH SERVICES

## *Research Focus*

The major research focus of the Oral Health Services Research Team supports continuous improvement to the model of care for oral health and improvement in treatment procedures utilising minimal intervention dentistry and a holistic approach to treatment. The WIDE Smiles minimal intervention project showed the effect of topical fluoride application to tooth surfaces with a key performance indicator of a change in International Caries and Detection System (ICDAS-II) scored for children aged 3-6 years throughout the Geelong and Colac-Otway region. In addition, an oral health needs assessment for adolescents within the Colac-Otway region is being undertaken to develop an appropriate, acceptable and accessible service with any barriers to accessing treatment investigated. A novel setting for screening for diabetes in the dental setting is being piloted at Colac Area Health Oral Health Service. Dental complications of diabetes include tooth loss, periodontal disease and dental decay and these conditions could indicate the individual has undiagnosed diabetes. Screening for diabetes in the dental setting provides the potential for early intervention for participants and encourages inter-professional collaboration to facilitate a model whereby healthcare professionals and research teams work together for patient care.

## *Major Achievements - Highlights from the last Twelve Months*

The prevalence of caries free deciduous teeth upon visual examination in kindergarten settings. (2016) Rogers MJ, Pawlak JA, Mason A, Mayze L, Sharp S, Smith M. Preventive Medicine 1 No. 1:2.

### **Conference Presentations**

- Western Alliance 2nd Annual Symposium 'A preventative approach to oral health for children in the regional/rural community in South-West Victoria' M. Smith
- Population Health Congress 'Kinder Wide Smiles: an active preventative approach to oral health service' M. Smith, A. Mason, L. Mayze, J. Pawlak, M.J. Henry, S. Sharp.
- 4th International ADOHTA Conference 'ECC Screening and prevention in early education settings – Wide Smiles – Barwon Health' L. Mayze, A. Mason, J. Pawlak, M.J. Henry, S. Sharp, M. Smith.
- 4th APAC Forum 'Kinder Wide Smiles: a community dental healthcare solution to the ever growing health care problem in Australia' M. Smith, S. Sharp, J. Pawlak, M. Henry
- 2nd Annual World Congress of Oral and Dental Medicine Oral presentation – 'A preventative approach to oral health for children in the regional/rural community in South-West Victoria, Australia' A. Mason, L. Mayze, J. Pawlak, M.J. Henry, S. Sharp, M. Smith
- 23rd National Conference of the Australian Health Promotion Association 'Assessing the barriers for improvement to oral health for adolescents living in the Colac Otway Region' L. Mayze

### **External Funding**

- Colgate Palmolive Pty. Ltd. Alliance for a Cavity Free Future (ACFF) \$8050.00 'Assessing the barriers for improvement to oral health for Colac-Otway adolescents'
- Collier Charitable Fund \$29,000.00- 'A novel setting for assessing diabetes in the general community'

## *Looking Forward - Anticipated Highlights in the next Twelve Months*

- Manuscript describing the economic savings of the WIDE Smiles program.
- Adolescent project (Phase 2) to further explore the findings utilising qualitative methods, semi-structured interviews and focus groups.
- Evaluation, manuscript preparation and dissemination of results from the pilot study 'A novel setting for screening diabetes in the general community.'
- Roll-out of diabetes screening in dental clinics at Barwon Health Community Clinics including Belmont, Colac, Newcomb and Wathaurong Aboriginal Coop Ltd. Oral Health Service.

- Stage 2 of the 2016 VicHealth section of the VicHealth NHMRC Partnership Project Grant application submitted July 2016 – ‘What you don’t put in your mouth is the key to your health. A novel approach to health improvement: the community dental clinic.’ Peer review announcement expected mid-September 2016. If successful a full proposal to the NHMRC will be submitted in December 2016 for the VicHealth NHMRC Partnership Project Grant.

Margaret has published over 100 papers in the public health area largely in regional Victoria.

#### Dr Jacqueline Pawlak

Ethics Submission Coordinator – Oral Health Services. Jacqui is interested in collaborative, ethical ways to address public health issues with research and has a background in neurotransmitter and cardiovascular research (co-authoring over 25 papers) and three papers in the oral health field.

#### Ms Lara Mayze

Oral Health Therapist

Currently completing Masters of Public Health and working clinically with children attending community clinics. Lara has been involved in several research projects focusing on preventative dentistry and was a finalist in the Victorian Young Achiever of the Year.

## Staff

#### Dr Michael Smith

Head of Oral Health Services at BH and Wathaurong Aboriginal Health Service and Colac Area Health Service.

Michael has played an integral role in public health research projects in Regional Victoria with the Romp-&-Chomp, Smiles-4-Miles and Kinder Wide Smiles programs.

#### Ms Sharon Sharp

Coordinator of Oral Health Services at BH and Wathaurong Aboriginal Health Service and Colac Area Health Service.

Sharon has been involved in a number of public health research projects within regional Victoria with the Romp and Chomp, Smiles-4-Miles and Kinder Wide Smiles programs.

#### Associate Professor Margaret Rogers

Professional writer and data analyst – Oral Health Services, Barwon Health.

## Students

#### Ms Lara Mayze

Currently completing Masters of Public Health (University of Melbourne)

#### Ms Stacey Kellett

Currently completing Masters of Public Health

#### Ms Grace Horne

Deakin University School of Health and Social Development – Work placement student – Trimester 2, 2016.

## Grants

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. Colgate Palmolive Pty. Ltd. Alliance for a Cavity Free Future (ACFF)	'Assessing the barriers for improvement to oral health for Colac-Otway adolescents'	Dr M. Smith, Ms L. Mayze, Dr J. Pawlak Associate Professor M. Rogers Ms M. White	1 Jan 2016 – 31 Dec 2016 \$8050.00
2. Collier Charitable Fund	'A novel setting for assessing diabetes in the community'	Dr M. Smith, Ms S. Sharp, Associate Professor. M. Rogers, Dr J. Pawlak, Ms S. Kellett, Ms M. White, Professor T. Dunning	\$29,000.00
3. William Buckland Foundation	Effectiveness of a simplified method of managing carious primary molar teeth in young children using preformed metal crowns – Phase 2'	Adjunct Professor Hanny Calache (DHSV)	2013 – 2016 \$245,835.00 over 3 years

\*Noted in the 2015 Research Report

## *Professional Affiliations*

### **Community Engagement**

- The research program investigating strategies for early detection, intervention and remineralisation of children's carious lesions involves engaging the Early Learning Centres/Kindergartens across the regions of Camperdown (n=1 Kindergarten), Colac (n=11 Kindergartens), Geelong (n=42 Kindergartens) and the Surfcoast (n=8 Kindergartens). In addition, the Prep. Classes of 25 Primary Schools have been engaged in the WIDE Smiles program. A total of 6051 children have been involved in the Wide Smiles program from 2013-2015.
- Four Secondary Schools within the Colac-Otway region to date have been involved in the project aimed to identify barriers and the need for dental care in students aged 12-17 years old. To date 144 Secondary school students have completed the dental surveys and screenings within the Colac-Otway region. A second phase of the project is underway to utilize a qualitative methodology to further explore concepts gathered in Phase 1 and work towards a service redesign model and tailored health promotion materials.
- The pilot study to facilitate early screening for diabetes in potentially high risk dental patients is underway at Colac Area Health Public Oral Health Service. To date 151 participants have completed the AUSDRISK tool while 130 participants have participated in HbA1c testing in the dental clinic, reducing pathology visits for these patients, demonstrating an efficient means of diabetes screening.

### **Committees**

- Dr Smith is a member of the following Committees:
- Health Purchasing Victoria Dental Requisites – Product Reference Group
- Barwon Health Anti-Microbial Stewardship Committee
- Barwon Health Significant Medication Incident Review Committee
- Barwon Health Radiation Safety Advisory Group
- Barwon Health GP, Dental and Medical Training Placement, Credentialing Committee
- CHRS Safety & Quality Committee
- CHRS Divisional Quality Committee
- Member of Public Health Association of Australia (PHAA)
- Dr Pawlak is a member of the:
- Barwon Health Research Review Committee

### **Key Collaborations with Named Organisations**

- Dr Michael Smith also has an Honorary Appointment as a Fellow – Faculty of Medicine, Dentistry and Health Science, University of Melbourne.
- Dr Michael Smith is a member of the International Association for Dental Research (IADR)
- Associate Professor Margaret Rogers has a conjoint appointment as Clinical Associate Professor at Deakin University and is an Honorary Associate Professor at the University of Melbourne.
- Ms Marg White – Director of Community Services, Colac Area Health
- Professor Trisha Dunning AM Chair in Nursing and Director Centre for Nursing and Allied Health Research, Deakin University and Barwon Health, Geelong.

# PALLIATIVE CARE

## *Research Focus*

The current areas of research focus include;

- Clinical Research in Palliative Care symptoms including pain, cachexia, breathlessness and nausea. Aiming to improve quality of life for palliative care patients.
- Evaluation of the multidisciplinary Cachexia and Nutrition Support Clinic-the patient and carers' perspective-a qualitative research project.

## *Major Achievements - Highlights from the last Twelve Months*

- Completion of multi-site trial into Breathlessness
- Development of Research Group within palliative care to support and encourage novice researchers and new projects
- Meg Harrison, Peter Martin - A multidisciplinary approach to the treatment of cancer cachexia: an important component of lung cancer care?
- Presented at Australian Lung Cancer Conference 18th July 2016
- M Grant, N O'Connor, P Eastman Examining Clinical utility of imaging for inpatient palliative care
- Published in American Journal of Hospice and Palliative Medicine March 22nd 2016
- Presented at Australian Radiology Conference

## *Looking Forward - Anticipated Highlights in the next Twelve Months*

- Evaluation of the multidisciplinary Cachexia and Nutrition Support Clinic-the patient and carers perspective (a qualitative view) – Commencement of recruitment
- Continued growth of Clinical trials
- Aim to commence a blanket research protocol for the cachexia clinic-with an opt out rather than opt in approach-currently have developed protocol and will submit to ethics shortly.

## *Staff*

**Dr Peter Martin**  
Regional Director, Palliative Care

**Dr Peter Eastman**  
Palliative Care physician

**Dr Ian Grant**  
Palliative Care physician

**Dr Helen Farrell**  
Palliative Care physician

**Ms Meg Harrison**  
Nurse Practitioner/ Cachexia,

**Ms Anna Dowd**  
Clinical Trial Co-ordinator

**Ms Michelle Wilson**  
Research Nurse

## *Students*

**Ms Meg Harrison**  
Endorsed as a Nurse practitioner in Palliative Care in 2016

## *Professional Affiliations*

- Active contributors to Palliative Clinical Studies Collaborative (PaCCSC)
- Members of ALTG
- Collaboration with scientists at Deakin University (Cachexia research)
- Medical students involved in our research meetings and projects

# PHARMACY

## *Research Focus*

The Pharmacy Department has a wide pharmacy practice research focus encompassing advanced hospital pharmacy practice, workforce innovation, telehealth, radiopharmacy, medication safety, antimicrobial stewardship and smoking cessation. In addition the Pharmacy Department supports over 100 investigator led or industry sponsored clinical trials within Barwon Health.

## *Major Achievements - Highlights from the last Twelve Months*

- Funding was received for two DHHS projects involving advanced pharmacy practice.
- A multi-site study, Partnered Pharmacist Medication Charting for general medicine patients (\$75,000).
- Regional Community Palliative Care Partnerships: A pharmacy outreach program (\$135,000).

## **Conference Presentations**

- Society of Hospital Pharmacists of Australia National Conference. December 15th 2016 Melbourne.
- Financial savings by forgoing anticoagulation in HITH patients with atrial fibrillation.
- A Pharmacist led approach on the reduction of high falls risk medications in general medicine.
- Integrating smoking cessation into routine hospital care: a randomised controlled trial of a system change intervention.
- Readability of participant information and consent forms at a tertiary hospital.
- Optimising analgesia after caesarean section.
- Evaluation of a robotic inventory and dispensing system at Barwon Health.
- Sustainability of Pharmacist prescribing.
- Oceania Tobacco Control Conference 2015
- Smoking & You: A unique Pharmacist and Occupational Therapist co-facilitated inpatient client education group
- Australian Society of Infectious Diseases Annual Conference, Launceston. 20th-23rd April 2016.

- Duration and Quantity of Antimicrobials Prescribed on Discharge: What are our practices?
- National Centre for Antimicrobial Stewardship, Melbourne. Antimicrobial Stewardship Pharmacist Seminar July 22nd-23rd 2015.
- The Barwon Health AMS experience.

## *Looking Forward - Anticipated Highlights in the next Twelve Months*

- Publication of a Cochrane Review which is in the final stage of the review process on non-medical prescribing across primary and secondary care.
- The outcomes of funding applications for three projects involving pharmacological management of smoking cessation for inpatients, the pharmacist role in hepatitis C treatment and a telehealth project for regional patients at risk of medicine misadventure post-discharge.
- The arrival of three students from Utrecht University (Netherlands) via our links with Monash University to undertake six month full time Masters research projects in asthma and areas to be determined.

## *Staff*

### **Dr Greg Weeks (Director of Pharmacy)**

Advanced Practice and Workforce redesign Projects

### **Dr Diana Bortoletto (Education and Training Pharmacist)**

Assessing GPs perspective of hospital discharge opioid supply for post-surgical patients and communication received. (Pharmacy Intern Education Project)

### **Alicia Neels (Antimicrobial Stewardship)**

Antimicrobial Stewardship Project

### **Lisha Kuruvilla ( McKellar Centre pharmacy manager and palliative care pharmacist)**

Community Palliative Care Research Project

### **Garth Birdsey (Specialist Cardiac Pharmacist)**

Cardiology related Projects

### **Paul Muir (Clinical trials Pharmacist)**

Clinical Trials Management

## Students

### Completed - Michelle Kent

Master of Pharmacy (UTAS)

Minor thesis: Tobacco Dependence and Mental Health Professionals' Attitudes and Knowledge: The effects of a pilot E-learning package

### Completed - Lauren Maxwell

Master of Pharmacy (UTAS)

Minor thesis: Improving the Safety of Medicated Transdermal Patches with Inpatients in a regional public teaching hospital

### Completed - Greg Weeks

PhD (Monash)

Collaborative prescribing as part of advanced practice for Australian Hospital Pharmacists

### Current - Alicia Neels

Master of Philosophy (Melbourne)

R3 S7': A new paradigm for antimicrobial stewardship in general practice in Australia

### Current - Clair Szabo

Master of Clinical Pharmacy (Monash)

### Current - Tenay Rankin

Master of Clinical Pharmacy (Monash)

### Current - Claire Jones

Master of Health Administration (Latrobe)

## Grants Received

Grant Name	Project Title	Names of Team Members	Period / Funding Amount (\$)
1. Workforce Innovation Grant (DHHS)	A Multi-Site Study, Partnered Pharmacist medication charting for general medicine	Greg Weeks, James Polmear, Deb Friedman, Adrian Low	2015-2016 \$75,000
2. Advanced Practice in Allied Health Workforce Grant (DHHS)	Regional Community Palliative Care Partnerships: A pharmacy outreach program	Greg Weeks, Lisha Kuruvilla, Peter Martin	2016 \$135,000
3. DHHS	Pharmacy Efficiency through redesign: Supply Chain project	Leonie Abbott	2015 \$16,000

## Professional Affiliations

- Collaboration and joint appointments with Monash University Centre for Medication Use and Safety in the Faculty of Pharmacy and Pharmaceutical Sciences, Parkville.
- Joint appointments and teaching Deakin University Medical School
- DHHS and seven hospitals The Efficiency through Redesign: Supply Chain project

# PHYSIOTHERAPY

## *Research Focus*

The current areas of research focus include;

- Evaluating transcatheter arterial embolisation for improvement of pain in OA of the knee. Coordinating Principal Investigator Dr Steve Landers. Associate Investigator(s): Dr Andrew Hely, Dr Benjamin Harrison, Dr Stephen Gill  
**Collaborators: Mr Peter Schoch, Ms Rachael Hely**

### SENSE Upper limb STUDY

- Multicenter, multi discipline research project. 3 therapists training in SENSE upper limb Ax. No patients recruited yet. Once sufficient cohort of patients recruited and assessed, project will progress
- Progress to SENSE treatment. Staff yet to be trained in treatment. OTs also involved.
- Activity focused Environment Enrichment to Optimise Functional Outcomes for Stroke Survivor- Natasha Selenitsch
- Feeder site for RAPPER@: A Clinical trial to evaluate the safety and feasibility of Robot Assisted Exercises with REX Exoskeleton

### RAPPER 2

- A Clinical trial to evaluate the safety and feasibility of robot Assisted Exercises with REX exoskeleton.
- This is a Victorian Spinal Cord Service study with Austin Health Ethics approval.
- They are looking to recruit 20 Victorian participants.
- As we have a spinal outpatient service we have been identified as a potential feeder site.
- Activity focussed Environment Enrichment to Optimise Functional Outcomes for Stroke Survivors

### Researchers

- Natasha Selenitsch, Dr Stephen Gill, David Meade, Dr Michael Bennett, Heather Smith
- Stroke survivors in an inpatient sub-acute rehabilitation environment have been shown to be inactive and alone more than half the time (West and Bernhardt, 2012). There is evidence that increased practice of

activity improves outcomes for these patients. The Multidisciplinary Neurological Team of the North Wing of the Inpatient Rehabilitation Center at the McKellar Centre received a grant from the Victorian Stroke Clinical Network at the Department of Health and Human Service to implement an enriched environment. According to Janssen et al. (p.255, 2014) "An enriched environment refers to conditions in which the provision of equipment and organization of the environment facilitates physical, cognitive and social activity".

## *Major Achievements - Highlights from the last Twelve Months*

- Renee Sheedy was Awarded Clinical Doctorate of Physiotherapy from LaTrobe University posthumously on 14th October 2015.
- Renee was awarded the degree of Doctor of Physiotherapy with her PhD titled – 'Does Care Differ for Patients with Acute Haemorrhagic and Ischaemic Stroke?'
- \*Poster submitted in conjunction with staff from Royal Women's Hospital and Southern Health. Bold type indicates BH staff

## *Looking Forward - Anticipated Highlights in the next Twelve Months*

- Outcomes from "Activity focused Environment Enrichment to Optimise Functional Outcomes for Stroke Survivors" project  
*Project lead by Natasha Selenitsch*
- Complete SENSE UL AX on suitable clients
- Staff to be trained in SENSE UL treatment
- Recruit suitable clients for the REX exoskeleton Victorian Spinal Cord Service (Austin Health)

## *Staff*

### **Christopher Lindner**

Manager, Physiotherapy. Interests: Management, Amputee Rehab and Clinical Education.

**Peter Schoch**

Grade 4 Physiotherapist at UHG. Interests: orthopaedics and service development.

**Naomi Nalder**

Grade 2 Physiotherapist UHG. Interests: Cardiorespiratory Physiotherapy and Women's Health.

**Tom Crawford**

Grade 3 Clinical Lead Physiotherapist – Cardiorespiratory. Interests: Cardiorespiratory Physiotherapy – ICU.

*Students*

**Jane Dow**

Masters in Burns and Trauma Rehabilitation (commenced)

**Gemma Paterson**

Masters of Advanced Health Care Practice (Paediatric Physiotherapy) (commenced)

**Sarah Tinali**

Masters of Physiotherapy by Research (commenced)



# OTHER RESEARCH GROUPS

## *Overview*

Several other units within Barwon Health have begun to participate in research over the past year, especially in areas not traditionally involved in further study. These emerging research groups expect to boost their output over the next few years.

The Rehabilitation Service has a major research focus on the quality of patient experience, prevention of disability by the utilisation of orthotics, assistive technology and new therapy techniques underpinned by consumer-centred care. There have also been a number of projects exploring professional training, skills and attributes required by rehabilitation staff in a number of settings. There is a particular emphasis on enhancing the research culture and learning from the progress of analogous services.

The Neurology Department is developing new and emerging treatments for Multiple Sclerosis, developing a Clinical Registry, researching new reperfusion strategies for stroke patients and working on population-based Epidemiology. They expect to begin recruitment into two studies over the next year.

The Gastroenterology Unit will continue to work with teams from St Vincent's Hospital on Inflammatory bowel disease, identifying its epidemiology, therapeutic monitoring and optimal treatments. Other research will focus on Coeliac Disease, Pancreatic diseases and managing acute GI bleeding.

Aged Care and the Cardiology Unit have also begun to research issues critical to patient-centred care.

# CLINICAL TRIALS AT BARWON HEALTH

## *Industry Sponsored and Investigator Initiated*

### *Anaesthesia*

The Research Unit for the Department of Anaesthesia, Perioperative and Pain Medicine has successfully contributed to many ANZCA-sponsored and NHMRC funded multicentre clinical trials over the past few years. We anticipate that this cooperation will continue and that Barwon Health will remain one of the primary contributors to the success of these clinical trials. One of the first of the ANZCA clinical trial collaborations, the ATACAS trial,<sup>1</sup> completed its final 12-month participant follow-up earlier in 2016; and we have recently received authorisation to participate in both the PADDI trial<sup>2</sup> and the TRICS III trial<sup>3</sup>. The PANACEA trial,<sup>4</sup> our single site RCT investigating post-operative neurocognitive outcomes is recruiting participants at the predicted rate and is on track to complete recruitment in 2019.

### *References*

1. Aspirin and Tranexamic Acid for Coronary Artery Surgery A randomised controlled trial (ATACAS) ACTRN012605000557639
2. The Perioperative ADministration of Dexamethasone and Infection in diabetic and non-diabetic surgical patients- The PADDI Trial ACTRN12614001226695
3. Transfusion Requirements in Cardiac Surgery III (TRICS-III) NCT02042898
4. The Post Anaesthesia N-Acetyl-Cysteine Evaluation trial (PANACEA) ACTRN12614000411640

### Number of trials that began this financial year

- TRICS III – Date Authorised 17.5.16 – Date of 1st patient randomised into study 19.7.2016
- PADDI – Date Authorised 24.5.16 – No patients randomised into study at this time

### Number of trials ongoing

- 5 Clinical Trials currently recruiting participants.

### Total number of participants recruited into trials

- For the time period 1.7.2015 – 31.6.2016 a total of 165 participants were recruited into Clinical Trials in Anaesthesia

### Number of feasibilities conducted

- The Anaesthetic Research unit has conducted feasibilities for PADDI, TRICS III and ITACS.

## Endocrinology

The Clinical Trial Unit (CTU) commenced 4 new projects in the 2015/2016 year, bringing the total number of projects to 16 and the total patients involved in CTU trials to 262. The total funding attracted to the unit by these projects was approximately \$500K. CTU currently has 4.8 FTE with 2 Division 1 nurses (1 is a diabetes educator), 2 Medical Scientists and 1 Nuclear Med Tech / Scientist qualified in bone densitometry. The unit's broad range of skill sets allows for the diversity of the units research and therapeutic areas to be appropriately managed with regards to patient care.

The CTU covers 3 main therapeutic areas of Endocrinology, Infectious Diseases (ID) and Paediatrics (Paeds) Research.

The milestones for the year included the following study and unit achievements.

### Study Activity

- Commenced a Phase 1 RSV paediatric study and recruited the first participant in the Southern Hemisphere
- Lead site for 9 of the 15 trials for Australia
- Highest recruiter in Australia for 4 of our current studies
- Recruited above target for 3 of our current studies

### Unit Profile & Output

- Two additional Staff members achieved ACRP (Academy of Clinical Research Professions) certification in March of 2015, successfully passing a 3 hour exam to demonstrate their knowledge of clinical research and Good Clinical Practice.
- Acceptance into the JDRF (Juvenile Diabetes Research Foundation) Type 1 Diabetes Clinical Research Network

Table 1. Summary of CTU research projects for 2015/ 2016 including site type, recruitment target and actual number of participants enrolled.

BH Project No.	Short Title	Site Type	Enrolled	Actual/Status
14/152	SENIOR	Lead Site (endo)	7	awaiting close-out/ eCRF lock
14/104	Ertu	Participating Site (Endo)	8	recruitment to re- open
14/154	ZAFGEN	Participating Site (Endo)	12	12 recruited above target
12/28	ARCH	Lead Site (Endo)	7	Ongoing (highest recruiter)
13/17	Frame	Lead Site (Endo)	12	Ongoing (above target)
16/49 and 16/50	Zoster (2 Studies)	Lead for both (ID)	133 on previous trials	Extension study to commence
09/27	ZiPP	Single Site (Endo)	8 Interventional 4 observational	Ongoing
13/141	AHO	Single Site (ID / paed)	1	Closed (1st paediatric patient at BH)
14/18	C.diff	Lead Site (ID)	5	Currently recruiting (1st patient recruited in Australia)

BH Project No.	Short Title	Site Type	Enrolled	Actual/Status
13/76	DECLARE	Collaboration with CRU (Endo)	36	Ongoing (highest recruiter 70pts total with CRU)
14/133	Bacteraemia	Participating site (ID)	0	Closed
16/3	Regeneron	Lead site (Paeds / ID)	0	Closed (6 weeks recruitment)
16/4	JNJ RSV	Lead Site (Paeds / ID)	1	Target 2 – ongoing recruitment
15/108	CNS Flu Study	Participating Site (ID)	11	Closed recruitment
16/121	RESP16001	Participating Site (ID)	17	Target 200 – ongoing recruitment

Note: Total number of participants in CTU trials for 2015/16 was 262.

## Haematology/Oncology

The Haematology Oncology Trials Team would like to highlight the following Clinical Trial Departmental achievements which have taken place during the 2015/2016 financial year:

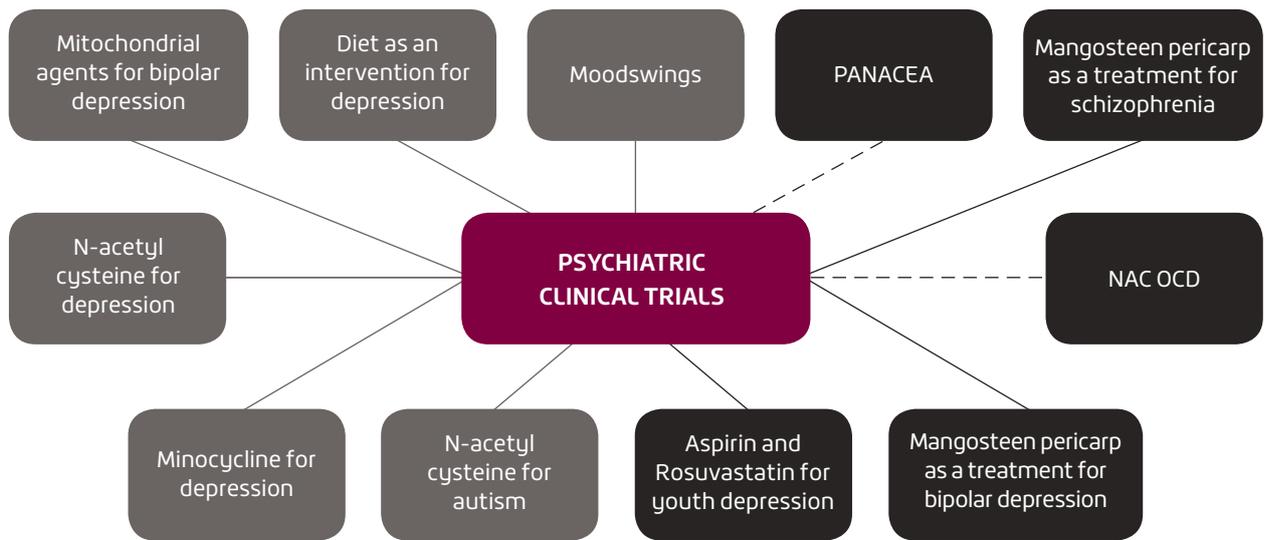
- Over the last Twelve months we have successfully expanded the research portfolio to include Phase 1b studies. This successful growth and development has meant that our patients have access to cutting edge therapies and ensures Barwon Health remains comparable to the larger metropolitan sites. We currently have two active and open to accrual Phase 1 studies with several others in the pipeline. The most notable accomplishment in this Phase 1 portfolio has been demonstrated by a study led by Dr Hannah Rose looking into B-Cell Lymphoid Malignancies, where the haematology team managed to recruit an increase of almost 200% of its predicted patient numbers.
- The Australian Leukaemia and Lymphoma Group (ALLG) Janey Stone Perpetual Award 2016 – Recipient, Sonja Gauci
- Medical Oncology Group of Australia (MOGA) annual scientific meeting to present data and findings from “Neonab”, an investigator-initiated study led and coordinated through ALCC by Dr Mustafa Khasraw with sites at South West Healthcare, Warrnambool,

Royal North Shore Hospital, Sydney and Bankstown-Lidcombe Hospital, Sydney – Poster Presentation, Rob Tobler

- The celebration of International Clinical Trials Day was a wonderful opportunity to engage the public on the importance of clinical trials within the centre with a fun mock trial involving cake! Clinical trial jargon can be very confronting so this event was a great way to break down some barriers and increase patient education – Organiser, Violet Mukaro

### Recent Clinical Trial Figures

- 17 Haematology/Oncology Clinical trials were opened during the 2015/16 financial year
- 24 Haematology/Oncology Clinical trials remain open to accrual and are still looking for patients
- 240 Patients were recruited to Haematology/Oncology clinical trials during the 2015/16 financial year
- Approximately 50 Haematology/Oncology feasibilities were conducted during the 2015/16 financial year



Proposed trials (pending funding)



## IMPACT SRC

### Summary of clinical trials at IMPACT

The Figure above indicates clinical trials recently completed (red), currently ongoing (green) and proposed (blue). All trials within the IMPACT SRC are investigator initiated. We are preparing the results of three newly completed trials, one under analysis, one showing benefits of a Mediterranean diet on depressive symptoms, and the last showing benefits of minocycline as an adjunctive antidepressant. We had one trial start recruitment this financial year (mangosteen pericarp for schizophrenia) with the other trials in green continuing to recruit.

## Intensive Care

- The majority of clinical trials work undertaken in Intensive Care is investigator initiated, collaborative research under the auspices of the Australian and New Zealand Intensive Care Society – Clinical Trials Group.
- ICU Research is financed through ANZICS-CTG and collaborative trials income, commercial trials income where appropriate, the ICU Private Practice fund, competitive grant income and Barwon Health resources. Fifty-nine patients were enrolled in Clinical Trials in the 2015-2016 financial year and over 400 patients enrolled in observational studies.

### Trials Income

- ANZICS – CTG /Collaborative Trials income (2015-2016 financial year) - \$45,000
- Commercial trial income (2015-2016 financial year) - \$20,000

### Grant Funding

- i-Validate funding (Barwon Health) 2014 - \$250,000
- Early Career Researcher Grant (M Maiden) 2016 - \$20,000

### NEW/PENDING PROJECTS 2015-2016

#### Barwon Health Investigator-Initiated

- Denosumab as a potential therapy to prevent bone loss in female ICU patients.
- Long term survival after critical illness
- Critical illness, subsequent fertility and pregnancy related outcomes
- Review of junior medical staff training in medical emergency teams
- Description of training in paediatric ICU clinical skills



- Description of lung ultrasound in patients with acute dyspnoea.
- Long term outcomes in of ICU patients
- Red cell changes in septic shock
- Observational study of ventilator associated pneumonia
- Observational study of filter patency and fluid balance in renal replacement therapy
- A 10-year retrospective audit of obstetric patients admitted to intensive care in an Australian tertiary hospital.
- Outcomes of patients admitted to intensive care with haematological malignancies in an Australian tertiary hospital; a retrospective 5-year audit

#### **ANZICS-CTG / Collaborative Studies**

- TARGET - The Augmented versus Routine approach to Giving Energy Trial
- REACT Shock - Relative Hypotension and Acute Kidney Injury In Patients with Shock

#### **Feasibility assessments Conducted**

- 1x Commercial trial
- 1x ANZICS-CTG trial

#### **Barwon Health Investigator-Initiated**

- i-Validate -Identifying values, listening, and advising high-risk patients in acute care
- Before and after study of the effects of ventilator associated pneumonia bundle care in a tertiary critical care
- Outcomes of patients admitted to tertiary ICU with Guilliane Barre: A retrospective audit
- Softer: A prospective, observational study of bone mineral density following prolonged critical illness
- A prospective observational study of critically ill paediatric patients admitted to a tertiary mixed adult/ paediatric hospital
- ICU National Death Index data linkage project
- A descriptive study of the evolution of a regional ECMO service 2000-2012

#### **ANZICS Clinical Trials Group**

- ADRENAL - Adjunctive corticosteroid treatment in critically ill patients with septic shock
- PHARLAP - A multi-centre randomised controlled trial of an Open Lung Strategy including Permissive Hypercapnia, Alveolar Recruitment and Low Airway Pressure in patients with acute respiratory distress syndrome
- SPICE III - Sedation Practices in Intensive Care Evaluation Early Goal Directed Sedation Compared with Standard Care in Mechanically Ventilated Patients in Intensive Care
- TRANSFUSE – Standard Issue Transfusion versus fresher red blood cell use in intensive care - a randomized controlled trial

#### **Other Collaborative Investigators**

- Neb-Hep ALI - Nebulised Heparin for Lung Injury
- Supp PN - Supplemental Parenteral Nutrition in Critically Ill Patients, A Pilot Randomised Controlled Study
- PROTECTIN - PROspective TrEatment to Counter the Systemic InflammatoRy Response Syndrome with AspirIN
- SPLIT - A Pilot, Randomised, blinded, multicentre, feasibility, safety and biochemical and physiological efficacy study of normal saline vs. plasmalyte in Intensive therapy

#### **Commercial**

- ASPECT - A Prospective, Randomized, Double-Blind, Multicenter, Phase 3 Study to Assess the Safety and Efficacy of Intravenous Ceftolozane/tazobactam Compared With Meropenem in Adult Patients with Ventilated Nosocomial Pneumonia

# SECTION 3

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*Research Directorate*



# RESEARCH DIRECTORATE

## *Introduction*

Barwon Health is a Public Health Service committed to facilitating and engaging in health and medical research that addresses the health challenges of the Barwon South West Region. Major areas of strength are in mental health, population health and epidemiology and these areas are supported by medium to large research groups of clinical academics, research scientists and postgraduate students. Collaborative relationships with Higher Education Providers, such as Deakin University have enhanced Barwon Health's research capacity and capability and contribute to research education and training within the health service.

## *Barwon Health's Research Vision and Mission*

Barwon Health's health and medical research takes a whole of lifespan, whole of health system approach to transforming healthcare and health service delivery addressing the leading health challenges of the Barwon South West Region.

With a clear focus on population health and chronic disease Barwon Health's health and medical research changes lives, translates knowledge into practice and policy and focuses on research excellence to deliver sustainable healthcare that benefits the Barwon South West Region.

Our Key Defining Features, from a research perspective are:

- Expertise in key areas relevant to the Region's health challenges - mental health, population health, epidemiology, growing capacity in aged care, rehabilitation, end of life, health service innovation and e-health
- Engagement through a research-willing workforce, a participative community and leading a robust network of Regional partners
- Environment that provides a unique conflagration of access to research partners (Deakin University, CSIRO/ Australian Animal Health Laboratory), health service partners (Western Victoria Primary Health Network, Regional Health Partners Public and Private), local government (Committee for Greater Geelong), State and National Government Agencies (TAC, NDIA) and unique access to a representative demographic in a defined catchment

## *Research in Context*

Health and medical research is about helping people to be healthier and ensuring better health outcomes for communities; whether that is through the development of new and better ways to prevent, diagnose and treat diseases or promote population health. Significant collaborative projects, such as The Geelong Centre for Emerging Infectious Diseases (GCEID), are indicative of Barwon Health's research capacity and capability and contribute to the development and leveraging of a high-value knowledge economy for the Geelong region. Health and medical research conducted at Barwon Health contributes to the generation and transfer of knowledge that influences health care delivery, health outcomes and health policy for the Barwon South West Region and beyond highlighting the key link between investment in health research and the quality of health services.

Barwon Health is an instrumental partner in contributing to the research and scientific profile of the South West Region and is an emerging leader in regional health service research, health system innovation and consumer-centred approaches to integrated health care. Barwon Health continues to build on past and current success to support health and medical research across the whole spectrum of comprehensive, excellence-based research to secure the vision of enabling world class integrated health care informed by research that benefits the region.

## Research Community

The research community at Barwon Health is diverse, and these diverse groups, whilst all engaged in forms of health and medical research, require different levels of support from the organisation. Support ranges from the facilitative (e.g. a framework of support for efficient and best practice governance processes) to more interventionist approaches (e.g. developing research projects/programs for researchers to participate in to gain skills). The diverse nature of these heterogeneous groups requires a flexible approach to ensure the right balance is struck between empowering staff to be research-engaged, individual researcher needs and interests and organisational needs and other interests (e.g. themed research supporting strategic health or service delivery priorities). A research willing workforce is Barwon Health's greatest asset and providing directed support that is centrally driven to meet the needs of early graduate practitioners, to build research capacity and capability is a priority in facilitating the vibrant research culture at Barwon Health.

## Staff

- Headed by **Professor Frances Quirk**, the Barwon Health Research Directorate's prime task is to enable quality, relevant health and medical research aligned with Barwon Health's strategic plan. It also supports the intent of Barwon Health's research objectives and addresses the health challenges of the region.
- **Professor Quirk** provides leadership in the mentoring and fostering of research across the organisation, facilitates research capability and capacity building and provides leadership in the development, governance, quality and risk management of research associated with Barwon Health and its partners. She manages the three units of the Research Directorate (Research, Ethics, Governance and Integrity Unit, Biostatistics Unit and Health Service Research Unit) and links to the Barwon Health Executive through membership of Teaching, Training and Research Governance Committee, OHS, Risk and Emergency Management Governance Committee and the Executive Governance Committee.
- **Dr Giuliana Fuscaldo** manages the Research Ethics, Governance & Integrity (REGI) team, that works together to ensure all research conducted under the auspices of Barwon Health exemplifies the highest ethical standards and complies with national and international guidelines and legislation. Dr Fuscaldo and her team provides support, advice and training to experienced and novice researchers on research design, ethics applications and research dissemination. The REGI team manages the ethics, review and monitoring of audits, low and high risk research and the work of the Barwon Health Human research ethics committee (HREC) and its associated sub-committee, the Research Review Committee
- **Lisa Fry**, Research Governance Officer, part of the REGI team, facilitates collaborative research between Barwon Health and pharmaceutical companies, healthcare institutions and universities, She ensure patients at Barwon Health are offered participation in high quality, well managed research projects.
- **Melissa Cadwell**, Research Ethics Officer, brings to the REGI unit a background in social research and evaluation, project coordination and administration. Melissa's role is to support research conducted within the auspices of Barwon Health, to ensure that research exemplifies rigorous standards of ethics and governance and complies with national standards, guidelines and regulations.
- Administrative tasks within the Research Directorate and the REGI team are handled by **Rhani-Lee Morgan**, **Donna Killeen** and **Kristin Wallis** as the Research Administrative Officer.
- Health service research project management and consultation advice is provided by Stephen Gill in his role as Health Service Research Co-ordinator in the Health Service Research Unit.
- Support for the efficient and compliant running of the new GCEID Laboratory is provided by **Jason Hodge** in his role as GCIED Laboratory Manager and Senior Scientist

# GOOD PRACTICE PROCESS PILOT SUMMARY

**Lisa Fry**

Research Governance Officer, REGI Unit, Barwon Health

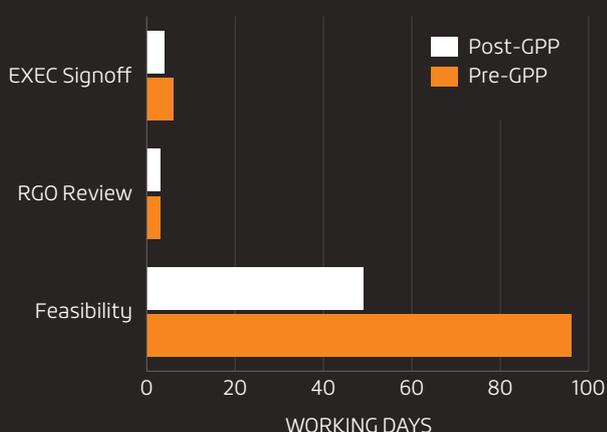
## *What is Good Practice Process?*

As reported last year, Barwon Health was delighted to be chosen as a pilot site for the NHMRC initiative 'Good Practice Process'. The NHMRC sought input from key stakeholders to develop a national 'Good Practice Process' (GPP) which aimed to streamline the research governance process in order to reduce delays in clinical trial commencement. A six month pilot of the GPP commenced at a number of institutions across Australia in July 2015 and I am pleased to report on the achievements of this pilot program at Barwon Health.

## *Data Collection*

Timeframes for key components of the research governance process were recorded. The main timeframes of interest were feasibility timeframe, governance submission to site authorisation, and site authorisation to first patient recruited at site. These timeframes were collected pre GPP implementation as baseline figures, and then collected for the six months of the pilot to determine if delays were reduced.

## *Graph 1 - GPP Data Analysis*



## *Site Assessment and authorisation timeframes*

Graph 1 highlights the timeframe improvements post-GPP (white) implementation at Barwon Health.

It was also pleasing to see additional reductions in RGO review timeframe (4 working days to 3 working days) and Executive signoff timeframes (6 days pre-GPP to 4 days post GPP) - Graph 1.

## *Site Assessment and Authorisation practice*

Beyond the improvements in timeframes, site Assessment and authorisation practice at Barwon Health has certainly changed for the better due to implementation of the GPP. It appears much of this improvement is linked to enhancing communication, understanding and transparency between all parties involved in clinical trial start-up. For example, it is now common practice for Commercial Sponsors (drug companies) to communicate directly with our Research Governance Officer and in collaboration with CT Co-Ordinators.

In addition the enhanced communication and understanding of roles and responsibilities has resulted in a change to RGO review practice: CT Co-Ordinators now seek RGO advice and provide essential documents for review well before complete RGO submission. While this approach requires good tracking of projects within the research office, it often means that by the time the final documents, (such as HREC approval), are submitted to RGO, much of the review has already been completed.

We would like to thank the NHMRC for providing the opportunity to participate in the GPP pilot. Participation has led to increased efficiencies in trial commencement and, ultimately, has assured Barwon Health's position as a leading site to conduct clinical trials amongst international commercial sponsors.

# CLINICAL TRIALS ADVISORY COMMITTEE SUMMARY

## Chair Lisa Fry

*The Clinical Trials Advisory Committee began in 2013 as a committee to support and build capacity for high quality clinical trial research at Barwon Health. CTAC membership comprises a core group of clinical trial experts across the clinical disciplines, as well as our Research Ethics, Governance and Integrity Unit Manager and Research Governance Officer. Meetings are held every three months, with associate members from supporting disciplines such as Pharmacy, Radiology and Knowledge and Information services attending as requested.*

CTAC aims to identify and make recommendations to the Research Directorate on shared and individual resourcing opportunities and requirements, to identify potential avenues to collaborate, and to ensure best practice management of clinical trials across the organisation. In addition, CTAC is a forum to review, advise and maintain currency on procedural and compliance aspects of clinical trial conduct in accordance with the National Statement on Ethical Conduct in Human Research (March 2007) and other regulatory documents.

The CTAC group recently collaborated on the Good Practice Process Pilot project to great success.

I would like to thank all members for their contributions, and hope we continue to lead the way in streamlining clinical trial start-up timeframes, and maintaining Barwon Health's position as an institution of integrity and excellence in the conduct of clinical trials.

# BARWON HEALTH HUMAN RESEARCH ETHICS COMMITTEE

*The Barwon Health Human Research Ethics Committee (“BH HREC”, or “The Committee”) carries out the functions of an institutional ethics committee, consistent with the NHMRC National Statement on Ethical Conduct in Human Research (2007) (the National Statement). The role of the BH HREC is to ensure that human research undertaken at Barwon Health and affiliated institutions conforms to the highest ethical standards and with statutory requirements of State and Federal legislation.*

The Committee applies and promotes the values that underpin ethical research conduct: respect for research participants; research merit and integrity; justice; and beneficence, as outlined in the National Statement. All members of the BH HREC are familiar with and receive regular training regarding the National Statement so that they are equipped to apply these values in the review of human research projects which come before the Committee. Within Barwon Health the Committee reports to Barwon Health Board of Directors through the Chief Executive Officer, via the Teaching, Training and Research Governance Committee (TTRGC). The BH HREC is supported by the Research Ethics, Governance & Integrity (REGI) Unit, which is an organisational unit of the Barwon Health Research Directorate.

The role of the BH HREC is to ensure that all research:

- Has scientific and social merit;
- Has potential benefits that outweigh the risks;
- Adopts appropriate research methods;
- Is based on a review of the current literature;

- Ensures respect for and the safety of participants;
- Is conducted and supervised appropriately, and is carried out with integrity; and,
- Represents a just allocation of benefits and burdens.

The BH HREC upholds and promotes these values and principles by ensuring an appropriate assessment of the risks and benefits involved in all research proposals, and that these risks and benefits are appropriately communicated to participants.

This year has been a busy and productive time for the BH HREC, including the successful transition to paperless meetings, introduction of the Acknowledgement of Country at all meetings, formalising recognition of the contribution of non-BH Committee members, and the relocation to the newly refurbished St Mary’s building as a meeting venue in line with the organisational strategy for Barwon Health Board meetings and associated sub-committee meetings.

The decision to introduce the Acknowledgement of Country enables the Committee to show support for Barwon Health’s commitment to ensuring better access and culturally sensitive care for Aboriginal people, in recognition that this is a whole-of-service responsibility, one which Barwon Health and the Committee take seriously. As a further measure of support the Research, Ethics, Governance and Integrity Unit (REGI) have, on behalf of the BH HREC sought to strengthen cultural ties and promote access to appropriate guidance and expertise from the traditional owners and local Aboriginal groups, such as the Wathaurong Aboriginal Cooperative, particularly relating to research and services being conducted under the auspices of Barwon Health, which may affect Aboriginal people, in support of the Barwon Health Reconciliation Action Plan.

The decision to move towards paperless meetings aligns with industry best practice as recognised in the McKeon review and NHMRC Certification, and enhances organisational efficiency gains, cost savings and data security measures in support of BH policy.

## *Barwon Health Research Review Committee*

The Research Review Committee (RRC) is a standing subcommittee of the BH HREC, and now operates as a virtual committee. The RRC has two roles:

1. To review all research projects for scientific merit, methodology and integrity, and to make recommendations to the HREC;
2. To review low and negligible risk research applications.

The HREC delegates the authority to the RRC to approve low risk projects, when required. The RRC also provides advice to the HREC and projects reviewed by the RRC are formally ratified by the HREC.



# CONTRIBUTIONS FROM HREC MEMBERS

## *for Barwon Health Research Report 2016*

**Simon French**  
*HREC Chair*

"It is a pleasure to have completed another year as the Chair of the Barwon Health HREC committee. Working alongside other members of the HREC and the staff from the Barwon Health Research Office is a rewarding experience. The level of commitment from all members of the HREC committee and the diligence and professionalism of the Research Office staff make the role of Chair considerably easier to fulfil.

All members of the HREC and the Research Office staff are highly committed and take their roles seriously. All projects are thoroughly reviewed and during meetings all members are active in giving input which reflects their own perspective, whether as a lay person or as a health professional.

As a committee we are provided with frequent opportunities to build upon our skills and knowledge so as to ensure that the work that we do is informed by current best practice. This includes updates about changes to the processes for ethical review, the National Statement and information about processes adopted by other HRECs.

Being a part of the process is rewarding because it allows us to see how much valuable research is taking place in our region and it is our aim to continue to make a positive contribution to support the excellent research that is carried on through Barwon Health."

**Lynsey Blakston**  
*HREC member – Pastoral Care*

"My time on the Research Ethics Committee has been very instructive for me as I learn the processes behind research at Barwon Health and as an outsider get to know some of the hospital's staff. The wide scope of the committee members' backgrounds is reassuring to me as a layperson to know that the interests of people consenting to participate are well attended to and that I am personally able to commend the benefits of our work to community members. It is encouraging for me to see how the committee and the research office adapt to challenges of developments in research fields and have the necessary skills to meet them."

**Catherine (Kate) Birrell, OAM**  
*HREC member – Professional Care*

"I have been a member of the Barwon Health Human Research Ethics Committee (HREC) in the role of 'Person with Professional Experience' for just over a year now. In this time, I have come to appreciate the vigilant attention to detail goes into both the preparation of a research application and the committee's scrutiny and response to that application. The diversity of skills around the committee table ensures each application is considered from many viewpoints and reflects the intent of the National Statement on Ethical Conduct in Human Research (2007).

The administrative support to the committee and individual members is excellent. The transition towards a paperless meeting, whilst challenging, is also very stimulating as it pushes you to a new way of doing business along with responsible consideration of the environment. The encouragement and support from the Research Office to attend ongoing education in relation to research, via online learning webinars and attendance at workshops and information sessions, provides an invaluable opportunity to better understand your role and responsibilities as a committee member.

With a strong nursing background, I am particularly interested in projects that have the potential to improve the quality of patient care and patient outcomes. It is therefore pleasing to see the variety of innovative requests that come to the committee that meet these criteria.

I am delighted to be a member of the Barwon Health Human Research Ethics Committee as it is personally rewarding to be involved with other committed committee members who share the same desire to support and promote excellence in research at Barwon Health."

**John Hannagan**  
HREC member – Lawyer

"I was invited to join the HREC as a legal member because I had previous experience in ethics processes in legal research at Deakin. However, the ethical issues around human research in relation to medical and human health issues are dramatically different to surveys regarding legal services!

The variety of projects that come before the HREC is extraordinary and it is quite an eye opener to realise that there is such significant research being undertaken locally. Rarely but occasionally, there is also a sense of dismay when you realise that the research proposal before the HREC is very basic because so little is known about a particular disorder or disease.

As a lawyer, my role is to contribute in relation to specific legal concerns but most of the time, my role is the same as the other lay people on the HREC - commenting on the research proposal's compliance with the National Statement on Ethical Conduct in Human Research.

My usual approach when I don't know what I'm doing is to listen and learn from others, so I don't think I spoke for the first 6 months – there was so much to learn. Now I know to focus my attention on the Protocol, the Patient Information and Consent Form and the National Ethics Application Form, rather than try to do my own background research on the topic.

The members of the HREC have varied backgrounds and life experience and those with a medical research background are all excellent communicators which has made my time on the HREC a great learning experience. From a lawyer's perspective, it is also quite a humbling experience when I've been lucky enough to meet so many outstanding individuals committed to medical research.

It is also a privilege to be part of this process and to play a small role in ensuring that the proper ethical principles are being followed."

## Open Research Projects during 01 July 2015 and 30 June 2016

The REGI Unit managed a total of 617 open research projects during this time. This number of research projects can be categorised into the below research types as follows:

*Ongoing Research Projects for the Period 01 July 2015 to 30 June 2016*

Research Type	Number of projects
Basic Applied Research (e.g. Laboratory Work)	1
Clinical Research	144
Clinical Trial under CTN/CTX Scheme	155
Epidemiological Research	31
Register: Database	37
Review/QA	209
Section 19(5) (Authorised Prescriber)	5
Qualitative Research	33
Public Health	2
<b>Total</b>	<b>617</b>

Of the total number of open research projects during the reporting period, 141 of these were new projects approved by the REGI Unit.

Of these new projects:

- 39 projects were approved through the Streamlined Ethical Review Process
- 10 projects were approved as greater than low risk
- 21 projects were approved as low risk
- 71 projects were approved as exempt/negligible risk

## Comparison of 2016 Ongoing Projects (By Category) with 2015

Ongoing Research Projects for the Period 01 July 2014 to 30 June 2015		Ongoing Research Projects for the Period 01 July 2015 to 30 June 2016	
Research Type	Number of projects	Research Type	Number of projects
Basic Applied Research (e.g. Laboratory Work)	1	Basic Applied Research (e.g. Laboratory Work)	1
Clinical Research	135	Clinical Research	144
Clinical Trial under CTN/CTX Scheme	138	Clinical Trial under CTN/CTX Scheme	155
Epidemiological Research	30	Epidemiological Research	31
Register: Database	33	Register: Database	37
Review/QA	131	Review/QA	209
Section 19(5) (Authorised Prescriber)	3	Section 19(5) (Authorised Prescriber)	5
Qualitative Research	16	Qualitative Research	33
Public Health	0	Public Health	2
Psychological	0	Psychological	0
Data Access Request	0	Data Access Request	0
Social Science	0	Social Science	0
Unclassified	0	Unclassified	0
<b>Total</b>	<b>487</b>	<b>Total</b>	<b>617</b>

# BARWON HEALTH ETHICS COMMITTEE ACTIVITY

## *HREC Membership between 1 July 2015 and 30 June 2016*

- Mr Simon French (Chair)
- Ms Melissa Cadwell (Secretary)
- Dr Nicole Anastos
- Ms Catherine Birrell
- Mr Lynsey Blakston
- Professor Trisha Dunning
- Dr Leah East
- Dr Rod Fawcett
- Mr John Hannagan
- Mr Vincent Haveaux
- Dr Cate Nagle
- Ms Gayle Newbury
- Dr Cameron Osborne
- Dr Renee Otmar
- Dr John Rolley
- Ms Elizabeth Thomas
- Mr Darryl Towers
- Mr Greg Weeks

## *Incoming - Appointments to the HREC*

- Ms Catherine Birrell

## *Outgoing - Resignations from the HREC*

- Dr Nicole Anastos
- Dr John Rolley
- RRC Membership between 1 July 2015 and 30 June 2016
- Dr Giuliana Fuscaldo (Chair)
- Ms Melissa Cadwell (Secretary)
- Dr Olivia Dean (Leave of Absence)
- Professor Trisha Dunning
- Dr Rod Fawcett
- Ms Kathryn Ives
- Associate Professor Mark Kotowicz
- Mr Paul Muir
- Dr Jacqui Pawlak
- Ms Tania Salerno
- Dr Michael Smith
- Ms Susan Streat
- Ms Carollyn Williams

## *Outgoing (Resignations from the RRC)*

- Ms Tania Salerno
- Ms Carollyn Williams

## *Meetings during the period of 01 July 2015 and 30 June 2016*

- The HREC met 9 times during this period.
- The RRC now operates as a virtual committee with reviews conducted out of session.

# SECTION 4

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*Barwon Health Research  
Collaboration and Partnerships*



# AUSTRALIAN COLLABORATIONS AND PARTNERSHIPS

## *A Snapshot of Collaborations and Partnerships across Australia*

ACRP (Association of Clinical Research Professionals)

ADEA Endorsement Committee

ADEA member, Research Advisory Group 2014–

ADEA representative on the Deakin University Advisory Committee for the Graduate Certificate in

Diabetes Education 2008–

ADEA Research Council

ADEA Research Foundation

Age of stored blood for transfusion (TRANSFUSE)

AGITG (Australasian Gastro-Intestinal Trials Group)

All Cancer Trials Australia Tumour Group Teleconferences

ALLG (Australian Lymphoma and Leukaemia Group)

ALTG (Australasian Lung Cancer Trials Group)

ANF (Australian Nursing Federation)

ANZBCTG (ANZ Breast Cancer Trials Group)

ANZBMS

ANZDATA, Adelaide

ANZGOG (ANZ Gynaecological Oncology Group)

ANZICS Annual Scientific Meeting

ANZMTG

ANZUP (ANZ Urogenital and Prostate Cancer) Trials Group

AQSHC HAI Advisory Group

ARCS (Association of Regulatory and Clinical Scientists)

Asia Pacific Orthopaedic Association (APOA), Melbourne

Australasian Leukaemia and Lymphoma Group

Australian and New Zealand Diabetes and Cancer Consortium

Australian and New Zealand Intensive Care Research Centre (ANZIC-RC)

Australian College of Nursing Aged Care Expert Advisory Group

Australian Commission for Quality and Safety in Health Care, National insulin Inpatient chart pilot

test advisory group 2013–

Australian Diabetes Educators Association (ADEA)

Australian Diabetes Educators Association Victorian Branch

Australian Endocrine Surgeons

Australian New Zealand Intensive Care Society – Clinical Trials Group

Australian Orthopaedic Association National Research Advisory Committee

Australian Paediatric Society

Australia's National Avian Influenza Wild Bird (NAIWB) Steering Group

AYA (Adolescent and Young Adult) Program

Board of Management Diabetes Victoria

Breast Cancer Network Australia's Strategic Advisory Group

Burnet Institute

Cancer Australia Intercollegiate Advisory Group

Cancer Council

Cancer Council Victoria, Cancer Trials Management Scheme (CTMS) Review Steering Committee

Cancer Council Victoria's Clinical Network - Clinical Research Professionals Committee

Cancer Services Information Technology Reference Group (ITRG) Committee

Cancer Services Level 2 Operation Group (L2OG) Committee

Cancer Trials Australia (CTA)

Centre for Clinical Research in Cancer (CCRV), Victorian Cooperative Oncology Group (VCOG)

CHRS Divisional Quality Committee

CHRS Safety & Quality Committee

CI George Institute, Sydney

Clinical Drug Safety

Clinical Trial Advisory Committee (CTAC)

CM Annual Scientific Meeting

CNSA (Clinical Nursing Society of Australia)	Home Dialysis Network Nationwide under the auspices of Renal Society of Australasia	Royal Australasian College of Surgeons (RACS)
COGNO	Internal Medicine Journal	Royal Australasian College of Surgeons (RACS) Professional Development and Standards Board
Committee for the 2016 International One Health/Ecohealth Congress and Co-Chair of the Scientific	International Association for Dental Research (IADR)	Sanofi Advisory Group
Program Committee (SPC)	Journal of Bone and Mineral Research	School of Medicine Early Career Research
Community Services, Colac Area Health	MCRI	Society for Clinical Research Sites
COSA (Clinical Oncology Society of Australia)	Médecins Sans Frontières (MSF)	South Australian Health and Medical Research Institute (SAHMRI)
Cotton on Foundation	Medical Journal of Australia	St Vincent's Hospital, Melbourne
CSIRO	Medicare MBS review taskforce Member 2016-2017	The Institute of Health and Ageing, Australian Catholic University, Melbourne
Dana Faber Cancer Institute	Melbourne Medical School-Western Campus and the Australian Institute for Musculoskeletal Science (AIMSS)	The Rotary Bowel Scan – Geelong District
Deakin University	Member of Public Health Association of Australia (PHAA)	The Royal Melbourne Hospital
Deakin University School of Nursing and Midwifery Centre for Quality and Patient Safety Research	Members of ALTG	The Scientific Advisory Committee of the Cure Brain Cancer Foundation
Department of Epidemiology and Preventive Medicine, Monash University	Mental Health Research Institute	The Scientific Program of the Asian Society of Neuro-Oncology Meeting
Department of Health (DHS) Ministerial Advisory Committee on Access to Surgery	MOGA (Medical Oncology Group of Australia)	The Therapeutic Committee of ANZ Breast Cancer Trials Group (ANZBCTG)
Department of Health and Ageing (DoHA) Pharmaceutical Policy Branch	Monash Comprehensive Cancer Centre	The University of Adelaide
DHHS Committee	Monash University	The University of Melbourne
Diabetes Australia	National Fracture Alliance	The University of NSW
Diabetes Australia – Victoria Clinical Advisory Committee	Newcomb Secondary College P-Tech Mentor Training Program	The University of Western Australia
Diabetes Australia International Affairs Committee	NHMRC	TROG (Trans-Tasman Radiation Oncology Group)
Diabetes Australia Policies and Programs Committee	NHMRC Good Process Practice Pilot Study Committee	Victorian and Tasmanian Renal Transplant Advisory Committee (VTRTAC)
Diabetes Australia Research Trust Grants (DART)	NHMRC Grant Review Panel 2016	Victorian Cancer Agency
Edith Cowan University	Northern Sydney Local Area Health Human Research Ethics Committee Member 2015-	Victorian Cancer Council
Epworth Geelong	NSW Cancer Institute	Victorian Renal Clinical Health Network Leadership Group (VRCHN)
Epworth Geelong Council of Clinicians	Nurses Board of Victoria	Victorian Renal Hub Reference Group (VRCHN)
Faculty of Medicine, Dentistry and Health Science, University of Melbourne.	Osteoporosis International	WEHI
Flinders University	Palliative Clinical Studies Collaborative (PaCCSC)	Western Alliance
Florey Neurosciences Institute	PC4 (Primary Care 4)	WestVic Phn
Health Purchasing Victoria Dental Requisites – Product Reference Group	Peter McCallum Cancer Centre	
Healthy Together Geelong (HTG)	PoCOG (Psycho-Oncology Co-operative Research Group)	
	Royal Australasian College of Physicians Evolve Forum	

# INTERNATIONAL COLLABORATIONS AND PARTNERSHIPS

## *A Snapshot of Collaborations and Partnerships across the World*

Active Life Sciences Inc., Santa Barbara, California, USA – Dr Peter Burks

AGILE Group Developing international adaptive trials for Glioblastoma (USA, EU, AUS, China)

AOA National Joint Replacement Registry Annual Shoulder Report – 2016

Autonomous University of Barcelona, Department of Internal Medicine – Professor Adolfo Díez-Perez

Calderdale Hospital Trust, Halifax

Cancer Research UK, ORTC review panel

Center of Bone Diseases Lausanne University Hospital, Lausanne, Switzerland – Professor Didier Hans

Colchester Hospital

De Montfort University, Leicester

Dr. Tan Ming Yeong, International Medical University, Malaysia

EFORT, Geneva, 2016

EPICORE international team

Galway University Hospital

GLASS Consortium

Guys Hospital, London

Harvard University

HIV Medicine Association (HIVMA)

IDF Nominating Committee 2015-2017

IDF Organising Committee Abstract Selection Committee, Western Pacific Region 2014-2016

Infectious Diseases Society of America (IDSA)

International Consortium of Obesity and Diabetes (ICOD)

International Federation of Ageing – Expert Advisory Group 2016

International Journal of Shoulder Surgery

International Shoulder Arthroplasty Consortium

Ipswich Hospital

Irish Association of Anaesthetists

J. Craig Venter Institute, US

Kaiser-Permanente, California

Leicester Royal Infirmary

MAB Quanta (Quanta Fluid Solutions, Warwickshire, UK)

MAB: Renal Solutions Inc: Sorbent Dialysis (RSI, Pittsburgh, USA)

McMaster University, Canada

Monthly Blog: Home Dialysis Central (Medical Education Institute, Wisconsin, USA)

Ortopedkliniken-Danderyds Sjukhus, Sweden

Paediatric Anaesthetists of Great Britain & Ireland

Professor Alan Sinclair, Director, Diabetes Frail, UK

Professor Marit Graue, Bergen University College, Norway

Professor Vibeke Kaufmann, Viborg University, Denmark

Royal Australasian College of Surgeons (RACS) International Committee

Royal College of Anaesthetists, Brighton

Royal Free Hospital, London

Sigma Theta Tau International the RACS AusAid Timor Leste Surgical Program

St Thomas's Hospital, London

Steno Diabetes Centre, Malaysia

Tallaght Hospital Dublin

University College Hospital, Cork

University Hospital, Sligo

University of Edinburgh – Professor Stuart Ralston

Visiting Academic exchanges with the Hebei Province in China

Whitlam Orthopaedic Research Institute

World University Network INFLAME



# SECTION 5

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*Publication and  
Conference Presentations*



# PUBLICATIONS

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# SNAPSHOT OF AUSTRALIAN CONFERENCES

**Amgen Bone Academy meeting, Melbourne, Australia, 19th-20th March 2016 Inflammatory arthritis and bone. Brennan-Olsen SL (Invited Speaker).**

- The relationship between obesity and low back pain and disability is affected by mood disorders-A population-based, cross-sectional study of men. Chou L, Brady SRE, Urquhart DM, Teichtahl AJ, Cicuttini FM, Pasco JA, Brennan-Olsen SL, Wluka AE.
- Associations between regular physical activity and exceeding intervention thresholds for fracture using FRAX calculated with trabecular bone scores. Osteoporosis International 2016; 27: S435. POSTER. Brennan-Olsen SL, Holloway KL, Leslie WD, Kotowicz MA, Pasco JA.
- Prediction of hip fractures in Australian men using FRAX scores adjusted with trabecular bone score. Osteoporosis International 2016; 27: S351. POSTER. Holloway KL, Mohebbi M, Brennan-Olsen SL, Kotowicz MA, Pasco JA.
- Associations between maternal health literacy and bone mineral density of the child. Osteoporosis International 2016; 27: S432. POSTER. Hosking S, Pasco JA, Buchbinder R, Hyde NK, Brennan-Olsen SL.
- Gestational vitamin D status and offspring bone mineral measures in childhood: a preliminary analysis. Osteoporosis International 2016; 27: S428-S429. POSTER. Hyde NK, Hosking SM, Brennan-Olsen SL, Wark JD, Bennett K, Morse AG, Pasco JA.

**Australian Rheumatology Association (ARA), Darwin, Australia, 30th Apr-4th May 2016.**

- The relationship between obesity and low back pain and disability is affected by mood disorders – A population-based, cross-sectional study of men. Osteoarthritis and Cartilage 2016; 24: S443-S444. \*Chou L, \*Brady SRE, Urquhart DM, Teichtahl AJ, Cicuttini FM, Pasco JA, Brennan-Olsen SL, Wluka AE.
- The relationship between obesity and low back pain and disability is affected by mood disorders – A population-based, cross-sectional study of men. \*Chou L, \*Brady

SRE, Urquhart DM, Teichtahl AJ, Cicuttini FM, Pasco JA, Brennan-Olsen SL, Wluka AE.

- The prevalence and multimorbidity of personality disorder in women with bipolar disorder. Quirk SE, Stuart AL, Berk M, Pasco JA, Brennan-Olsen SL, Williams LJ.
- Australian and New Zealand Bone and Mineral Society (ANZBMS), Joint Annual Scientific Meetings of the Endocrine Society of Australia, the Society for Reproductive Biology and the Australian and New Zealand Bone and Mineral Society, Gold Coast, Queensland, Australia, 21st -24th August 2016
- Self-reported and symptom-based arthritis prevalence according to age, sex and social disadvantage in six low and middle income countries: The World Health Organization Study on global AGEing and adult health (SAGE)-Wave 1. POSTER. Brennan-Olsen SL, Cook S, Leech MT, Bowe SJ, Kowal P, Naidoo N, Page RS, Pasco JA, Hosking SM, Mohebbi M..
- The contribution of high alcohol consumption on fracture risk: the Geelong Osteoporosis Study. POSTER. Clissold CM, Holloway KL, Brennan-Olsen SL, Williams LJ, Pasco JA.
- A cross-sectional association between asthma status and bone mineral density and bone mineral content in children. POSTER. Degabriele E, Hyde NK, Pasco JA, Holloway KL, Williams LJ, Brennan-Olsen SL.
- The association between skeletal muscle index and cancer risk. POSTER. Green D, Brennan-Olsen SL, Williams LJ, Holloway KL, Pasco JA.
- The Ageing, Chronic Disease and Injury Study: Epidemiology of emergency department presentations for falls across Western Victoria. POSTER. Holloway KL, Sajjad MA, Mohebbi M, Kotowicz MA, Livingston PM, Khasraw M, Hakkennes S, Dunning TL, Brumby S, Page RS, Pedler D, Sutherland A, Venkatesh S, Brennan-Olsen SL, Williams LJ, Julie A Pasco JA.
- Health literacy and the agreement between osteoporosis defined by self-report versus bone mineral density results in older women. POSTER. Hosking SM, Buchbinder R, Stuart AL, Pasco JA, Hyde NK, Williams LJ, Brennan-Olsen SL.

- Maternal vitamin D during pregnancy and offspring trabecular bone score. ORAL (BEST ABSTRACTS CATEGORY)
- Marijanovic N, Holloway KL, de Abreu LLF, Pasco JA, Kotowicz MA. Bone Mineral Density In Diabetes And Impaired Fasting Glucose. POSTER. Hyde NK, Brennan-Olsen SL, Wark JD, Hosking SM, Pasco JA.
- Sarcopenic Obesity in Older Men: The Geelong Osteoporosis Study. POSTER. Pasco JA, Holloway KL, Rufus P, Brennan-Olsen SL, Williams LJ, Sui SX, Hyde NK, Kotowicz MA.
- Microindentation testing of tibial bone using the OsteoProbe®: a feasibility study. POSTER. Rufus P, Holloway KL, Brennan-Olsen SL, Kotowicz MA, Pasco JA.
- Dual energy X-ray absorptiometry scans among 70+ year olds: Do reductions in out-of-pocket expenses translate to reduced fracture incidence? A population-based study. POSTER. Stuart AL, Brennan-Olsen SL, Pasco JA, Morse AM, Holloway KL, Hosking SM, Williams LJ.
- Personality disorders and bone: Geelong Osteoporosis Study (GOS). POSTER. Williams LJ, Quirk SE, Stuart AL, Berk M, Brennan-Olsen SL, Chandrasekaran V, Hodge JM, Pasco JA.
- Muscle strength and cognition: A potential opportunity for delaying dementia POSTER. Pasco JA, Stuart AL, Brennan-Olsen SL, Holloway KL, Williams LJ, Kotowicz MA.

#### Oceania Stata User Group Meeting, Sydney, 29th -30th September 2016.

- The development of a risk index for depression using Stata's GSEM with complex survey data. Dipnall JF.
- The Ageing, Chronic Disease and Injury Study: Epidemiology of hip fractures across Western Victoria, Australia. POSTER. Holloway KL, Sajjad MA, Mohebbi M, Kotowicz MA, Livingston PM, Khasraw M, Hakkennes S, Dunning TL, Brumby S, Page RS, Pedler D, Sutherland A, Venkatesh S, Brennan-Olsen SL, Williams LJ, Julie A Pasco JA.
- Health literacy and uptake of dietary calcium recommendations in women. ORAL (YOUNG INVESTIGATOR AWARD). Hosking SM, Buchbinder R, Pasco JA, Hyde NK, Williams LJ, Brennan-Olsen SL.
- Sarcopenic obesity in older women: The Geelong Osteoporosis Study. POSTER. Pasco JA, Holloway KL, Rufus P, Brennan-Olsen SL, Williams LJ, Sui SX, Hyde NK, Kotowicz MA.

#### Western Alliance, Warrnambool, Australia, 8th-9th September 2016

- The impact of age, accessibility, and socioeconomic status on cancer incidence across western Victoria. POSTER. Cowdery SP, Holloway KL, Sajjad MA, Mohebbi M, Kotowicz MA, Livingston PM, Khasraw M, Hakkennes S, Dunning TL, Brumby S, Page RS, Pedler D, Sutherland A, Venkatesh S, Brennan-Olsen SL, Williams LJ, Pasco JA.
- The Ageing, Chronic Disease and Injury Study: Epidemiology of hip fractures in women across Western Victoria. POSTER. Holloway KL, Sajjad MA, Mohebbi M, Kotowicz MA, Livingston PM, Khasraw M, Hakkennes S, Dunning TL, Brumby S, Page RS, Pedler D, Sutherland A, Venkatesh S, Brennan-Olsen SL, Williams LJ, Pasco JA.
- Ageing, Chronic Disease and Injury (ACDI): A Study in Western Victoria. ORAL. Pasco JA, Holloway KL, Cowdery S and Sajjad MA, on behalf of the ACDI research team.
- Anxiety Disorders and Falls among Older Adults. POSTER. Holloway KL, Holloway KL, Williams LJ, Brennan-Olsen SL, Morse AG, Kotowicz MA, Nicholson GC, Pasco JA.
- Health literacy and the agreement between osteoporosis defined by self-report versus bone mineral density results in older women. POSTER. Hosking SM, Buchbinder R, Stuart AL, Pasco JA, Hyde NK, Williams LJ, Brennan-Olsen SL.
- Bone Mineral density in diabetes and impaired fasting glucose POSTER. Marijanovic N, Holloway KL, de Abreu LLF, Pasco JA, Kotowicz MA.

### Oral Presentations

- Fiona Brennan Key elements of effective supervision for Physiotherapists. 11th National Allied Health Conference 2015
- Mark Napper - The impact of a Physiotherapist led paediatric fracture clinic, sharing the load of outpatient fracture care. 11th National Allied Health Conference 2015
- Stephen Gill - Acceptance of Primary Contact Physiotherapy by Emergency Department staff – results of a qualitative study. 11th National Allied Health Conference 2015
- Natasha Selenitsch and Andrew Rank (2015) Improving the Outcome of a Young Stroke Patient Using Tele-Rehabilitation. Barwon South West Grampians Allied Health Conference 2016\*
- \*Presentation in conjunction with staff from Colac Area Health. Bold type indicates BH staff

### Posters

- Advanced practice in continence and women's health physiotherapy: a multi-site pilot. 11th National Allied Health Conference 2015. Sherburn M, Cleaver S, Carlin J, Irving H, Lorentzen S, Brennan Fiona, McNeel Yvonne, & Graetz Hannah

# SNAPSHOT OF INTERNATIONAL CONFERENCES

**International Bone and Mineral Society, Brugge, Belgium, 28th February-1st March, 2016.**

- Associations between inflammation, social disadvantage and bone mineral density. POSTER. Brennan-Olsen SL, Pasco JA, Page RS, Williams LJ.

**Osteoarthritis Research Society International, Amsterdam, Netherlands, 31st March-3rd April, 2016**

**American College of Rheumatology (ACR), San Francisco, USA, 6th -11th November 2015**

- Chou L, Brady SRE, Urquhart DM, Teichtahl AJ, Cicuttini FM, Pasco JA, Brennan-Olsen SL, Wluka AE. The relationship between obesity and low back pain and disability is affected by mood disorders – A population-based, cross-sectional study of men. POSTER

**International Osteoporosis Foundation (IOF) Regionals 6th Asia-Pacific Osteoporosis Meeting, Singapore, Singapore, 4th -6th November 2016**

**American Society for Bone and Mineral Research (ASBMR), Atlanta, USA, 16th-19th September 2016**

- Arthritis prevalence, defined by self-report and symptomatology, according to age, sex and social disadvantage in six low and middle income countries: The World Health Organization Study on global AGEing and adult health (SAGE) Wave 1.. POSTER. Brennan-Olsen SL, Cook S, Leech MT, Bowe SJ, Page RS, Naidoo N, Kowal P, Pasco JA, Hosking SM, Mohebbi M.

**ISBD/ ISAD, Amsterdam, Holland, 13th-16th July 2016**

- A pro-inflammatory diet is associated with increased risk of de novo depression at 5-year follow up in Australian women. Dash S, Shivappa N, Hebert JR, O'Neil A, Quirk S, Stuart A, Williams LJ, Pasco JA, Jacka FN.

**World Congress on Osteoporosis, Osteoarthritis and Musculoskeletal Diseases (WCO-IOF-ESCEO), Malaga, Spain, 14th -17th April 2016.**

**5th International Congress of Arthroplasty Registries, Manchester, UK, 28th-30th May 2016**

- Geographic locality, socioeconomic position and primary total shoulder arthroscopy: A multi-level study of the Australian Orthopaedic Association National Joint Replacement Registry data. Brennan-Olsen SL, Page RS, Lane SE, Lorimer M, Buchbinder R, Osborne RH, Pasco JA, Wluka AE, Sanders KM, Ebeling PR, Graves SE.

**European League against Rheumatism (EULAR), London, UK, 8th-11th June, 2016.**





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