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This year, we launched our new Academic Strategic Plan 2017-2020. This follows on from our previous Research Strategic Plan 2013-2016. We are proud to announce we have achieved all of our key objectives in the previous strategic plan. Going forward, with the view of aligning to our strategic pillar, “Research, Education and Training for Excellence”, we are bringing together Barwon Health’s research plan, clinical education and training plan, and library and literacy plan into an all-encompassing academic agenda. We believe this integrated approach will produce the best alignment and outcomes for Barwon Health’s success as a premier academic health service.

This year, Barwon Health celebrated a milestone in translating research into practice. Our research teams and academic clinicians contributed to a thorough process to expand the scope of our clinical trials to include Early Phase Clinical Trials (Phase 1a, Phase 1b, and First Time In Human Patients) and develop an ethics and research governance framework to ensure participant safety, which the Board of Directors subsequently approved. We would like to thank the guidance and mentorship that Melbourne Health Office for Research provided in this development. The expanded scope of clinical trials will allow Barwon Health to provide our region’s patients with better access to clinical trial drugs and therapies in development.

Research capability does not occur on its own. Early career researchers, as well as those who have never participated in research, need to be supported and cultivated to take their first steps. With this in mind, Barwon Health launched its Academic Skills Program this year. The program focuses on building research capability and capacity amongst our clinical and non-clinical staff. Almost 250 staff registered to attend the first cycle of 10 sessions and feedback from participants has been extremely positive. We intend to expand the regional reach of this Academic Skills Program in the forthcoming year.

Academia is all about collaboration with like-minded partners, and Barwon Health has found a new partner this year in Latrobe University, as we launched the Professional Doctorate Program pilot together. I am glad to report it has been progressing well, with an excellent uptake amongst our staff. The program is available to both clinicians and non-clinicians, and is an indication of the maturity of the organisation in the clinical arena, as well as corporate areas.

It looks like another successful year for our Research Week, again in collaboration with Deakin University, with a large number of poster presentations indicating engagement with staff and students. Sarah Henderson MP will deliver a Brief Address and we will have the privilege of hearing from Monash University’s Associate Professor Helen Abud, who is our Scientific Speaker for the Opening Session.

We were also determined to stay true to having ’Consumers at the Forefront’, as described in our Strategic Plan, and to engage our consumers in all parts of the organisation, including research activity. For the first time, we will have consumer representatives contributing to the Poster Judging during Research Week, having consumer representative involvement in the Research Week Operations Committee, as well as participating in the highlight Ethics Panel Discussion!

A successful Research Week is all about the planning and support behind the scenes, so our thanks and appreciation go to the hardworking members of the Research Week Operations and Executive Committees.

This was a particularly prolific year with three senior academic appointments. We congratulate Peter Vuillerman (Professor of Paediatrics), Felice Jacka (Professor of Nutritional Psychiatry), and Peter Martin (Professor of Clinical Communication and End of Life Care), as each received full professorships. We are excited to have world-leading experts within our stable of academic clinicians.
I’m excited to join a health service that has a keen interest in academia and research. I am certain that our academic program will continue to blossom, ultimately leading to better outcomes through research translation for our community.

I would like to thank Professor Frances Quirk and the Research Directorate team, for all the work they have done to support research capability and capacity growth at Barwon Health, and for all the academics and clinicians who ultimately made this a fantastic year for the organisation on the academic front.

Finally, I would like to sign off with some figures that hopefully make our community and supporters proud, and humble our academic clinicians; 480 peer-reviewed journal article publications (10% increase from last year), 553 open research projects, 133 Clinical Trials and $7792, 204 of National Health and Medical Research Council Project and Partnership Grants (2017) to our Joint Appointment clinical academics, their research team staff or research partners. It is a testament to the efforts of all that the trajectory of these research metrics has been upwards year on year for the past five years.

Thank you for continuing along our journey with us.
Overview
The purpose of the Academic Strategic Plan is:

- To enhance the use of inquiry, knowledge and evidence in the pursuit of academic excellence and quality care.
- To position Barwon Health for future national and international recognition as a premier Academic Health Service and Academic Health Science Centre partner.

Vision
Barwon Health has an embedded culture of inquiry, translated to world class evidence-based practice and innovative person-centred care.

Mission
To support our workforce to engage in life-long learning and lead in health research and translation that enhance health outcomes.

Strategic Themes

1. Leadership
Develop our academic culture to position Barwon Health as a premier provider of care, education and research.

2. Innovation
Promote and nurture innovation through and within academic services to advance excellence in evidence based healthcare.

3. Knowledge Exchange and Integration
Integrate our academic services to accelerate the translation and application of knowledge into healthcare.

4. Real World Solutions
Identify facilitators and challenges to develop solutions for healthcare and health system problems in our region, our nation and globally.
Strategic Objectives / Initiatives

1.1 Foster collaboration amongst academic and clinical services to embed academic activities in service delivery

1.2 Develop inter-professional forums for learning and developing clinical excellence

1.3 Engage consumers as active participants in research, education, care planning and service delivery

1.4 Share best practice with other centres

1.5 Promote our research and evidence based practice profile

1.6 Target appointments to clinical research priorities and leadership in best practice learning environments

2.1 Promote key scientific contributions and communications

2.2 Disseminate and promote publications that changed policy or practice

2.3 Engage with industry, Higher Education Providers, Research Institutes and other Health Services as innovation partners

2.4 Support growth in clinical trials, health system and health services research

2.5 Leverage industry and philanthropic funding to support early development projects and leading edge research

2.6 Facilitate and enhance research and teaching at point of care

2.7 Facilitate access to up to date clinical information at point of care

3.1 Strengthen research and teaching capacity and capability of health professional staff

3.2 Establish and embed the role of inquiry, research, education and evidence in enhancing quality of care

3.3 Involve research and translation leaders in education and training

3.4 Embed library professional services in the knowledge exchange lifecycle

3.5 Establish teaching, training and research agenda for each Clinical Directorate

3.6 Develop evaluation capacity and capability

3.7 Set up automated environmental scanning to capture innovations and best practice approaches in the research support setting

4.1 Implement, evaluate and undertake research to support the Health Literacy Strategy

4.2 Collaborate with regional, national and global partners in data sharing and management, research, education and training initiatives

4.3 Engage communities and consumers in identification of health priorities for research and selection of patient reported outcomes measures (PROMS)

4.4 Support cross-disciplinary and interdisciplinary approaches to healthcare challenges

4.5 Develop Clinical Research and Teaching Fellowship program addressing local and global clinical problems

4.6 Support whole of organisation initiatives to capture and interrogate health information and data and facilitate data linkages with other agencies
Ever since, community support has played a key role in the building of the quality health service we have today.

The Barwon Health Foundation creates and nurtures philanthropic partnerships with the community to raise funds and invest in excellence in medical services and facilities, ensuring they remain accessible to all. In addition to providing much needed equipment to various hospital services, in 2017 the Foundation saw the completion of ‘Project Love’ – a multi-million dollar campaign to fund the redevelopment of the Chemotherapy Day Ward and Oncology Pharmacy. The new ‘Kids Appeal’ campaign will raise funds for a new children’s rehabilitation facility at the McKellar Centre.

Additionally, the Barwon Health Foundation works with other philanthropic institutions in seeking grant applications for clinical and research equipment and resources.

The Barwon Health Foundation Future Fund aims to encourage bequests and major gifts, operating with the key purpose of building an endowment fund for the next generation, with a focus on ensuring that clinical education and research flourish culturally and financially.

In 2017, the Future Fund established the Research Leadership Circle with the aim of providing additional scholarship support for our important research teams. We have already seen an enthusiastic response from leaders within our community to support this initiative and the Future Fund expects to be in a position to offer more scholarships in the near future.

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

The community of Geelong and the surrounding region has a long history of looking after its own. In 1848, community leaders understood the value of investing in the health of the Geelong region and launched the first Hospital Appeal. The Geelong Infirmary and Benevolent Society (now the University Hospital Geelong) was opened four years later.

Contact details
Barwon Health Foundation
283 Ryrie Street, Geelong
Victoria 3220
Tel: 03 4215 8900
Last year, Library & Literacy relocated to St Mary’s Hall and is now well established at this location with a new name, St Mary’s Library and Research Centre (LARC). The St Mary’s Hall redevelopment was awarded a National Trust Heritage award in May, and the Library was Highly Commended in the 2017 ALIA Library Design Awards. St Mary’s is well used, having two meeting rooms and a conference area downstairs, which can be booked on the Library site (library.barwonhealth.org.au). The Library offers nine computers, a quiet space for study or research, many useful online resources, and help from friendly staff. If you haven’t visited before, the St Mary’s Library and Research Centre is located at 192 Myers Street or you might recognise the building below (entrance at the back). If you are a fan of the What3Words app (which locates any place in the world using a unique three word combination), it is located at tester.scans.blurred.

In November 2017, the main Barwon Health Research Week activities will be held at St Mary’s Conference area and meeting rooms. It is also the site of the Academic Skills Program, which is designed to support health service staff to develop research literacy and capability (more details on the Library website). The number of Barwon Health research publications continues to grow and more than 480 research citations will be added to the Barwon Health Publications Repository (access at tinyurl.com/bh-research, or on the Library home page). If you would like to keep up with research generally, have a look at two Library additions – BrowZine for accessing journals on your PC or mobile, and Joanna Briggs Institute for evidence-based information.

St Mary’s is now housing the new Consumer Engagement Manager Maureen Johnson, who brings a wealth of experience to the role and helped write Standard 2 – Partnering with Consumers for the National Safety and Quality Health Service Standards. Maureen will be involved in improving the WISE (written information suitability evaluation) process, the Health Literacy Strategy and increasing consumer engagement.
Early Interest in Research

Peter has two strong research interests: cancer cachexia and communication skills.

Inspired by his own love of cooking and fine dining, he felt distressed observing firsthand the effects of cachexia, a wasting syndrome that prevents people from enjoying these life pleasures. Cachexia is a metabolic disorder, which typically involves extreme weight and muscle-loss, affecting some nine million people worldwide, including as many as 80 per cent of people with advanced cancer. Peter was concerned cachexia was poorly understood and no services were available to support or treat people suffering it. He established a dedicated cancer cachexia service at Barwon Health in 2008 and brought together a multidisciplinary team, including health professionals from Palliative Medicine, Physiotherapy, Dietetics and a Nurse Practitioner.

Peter’s interest in communication skills was driven by patient needs and medical students’ reports that they felt unprepared for difficult clinical conversations. The evidence was clear that good communication could improve outcomes for patients and doctors, and Peter has come to believe that communication skills are just as important in clinical training as clinical knowledge and procedural skill. Peter’s interest was also fuelled by his experience at Cambridge (UK), where he was involved in the use of evidence-based frameworks in the teaching and assessment of clinical communication.

Research Motivation and Success

Peter has been motivated by a desire to reduce and prevent cachexia in cancer patients. Previous cachexia research had been focused on cachexia sufferers at the extreme end of the condition. Peter’s success in treating cachexia has been in part due to a shift in research focus upstream and working toward preventative measures. Peter linked scientists at Deakin University working with animal models of cachexia and introduced routine analysis of data from the cachexia clinic. With a better understanding of the condition, Peter was able to achieve more cohesive and better targeted services throughout the various phases of cachexia. Peter has improved outcomes for patients suffering cachexia and has reported stabilisation and improved weight, stamina and strength for an extended period of time in a high proportion of patients over the past 10 years.

Peter’s motivation to improve clinical communication stems from his belief that healthcare should be more person-centred and this approach is underpinned by well-developed communication skills, which need to be taught, learnt and practiced like any other “procedural” skill. Peter has been inspired by work in Denmark and their Patient’s Cancer Hospital, which provides person-centred treatment and care, as well as shared decision-making. Peter’s team is interested in better preparing health professionals to communicate effectively with their clients/patients and empowering the community to get the most from their encounters with health professionals using health literacy education.
Career Highlights

Peter is very pleased to see the growth of the cancer cachexia clinic over the past 10 years. He is gratified that patients have affirmed the cachexia services’ success and his methods have been well-received. He is pleased that bringing a team of multidisciplinary health professionals together has been a positive experience for the patients and team members. Peter is also pleased to see the increasing integration of communication skills into the curriculum at Deakin Medical School and the establishment this year of the Centre for Organisational Change in Person Centred Healthcare, of which he is the founding Director.

What does the future look like?

Peter hopes the understanding and treatment of cachexia will continue to improve by streamlining services and combining approaches to treatment from health professionals across diverse specialities. He hopes to see more quantifiable measures of patient health in the future, including quantifiable measures of skeletal muscle mass, as well as the phase of cachexia, and to provide detailed descriptions of the outcomes for the cohort attending the cancer cachexia clinic.

Advice to those thinking of starting out in Research

Peter’s advice for people new to research is to get involved, follow a passion and look for collaborations. Peter believes Barwon Health is a progressive institute that supports innovative research and provides a good environment to pilot research ideas.
HARP is a team of experienced health professionals providing case management, care coordination and system navigation for people with complex medical and psychosocial needs.

The HARP service works with people with chronic disease or multifaceted health needs who frequently use hospitals or are at risk of hospitalisation. HARP provides client-centred management and coordinates community-based care to enhance self-management and to reduce the risk of hospital re-admission.

With the support of the Victorian Department of Health, Barwon Health implemented a HARP program, initially called Community Admission Risk Team, comprised of six clinical staff. HARP has evolved to a community-based program employing more than 30 staff, including registered nurses, physiotherapists, social workers, diabetes educators, occupational therapists, a dietitian and administration staff. This diversity enables HARP to provide comprehensive assessment, care planning and special support to address the needs of clients referred to the service.

The HARP team’s objectives are to:

- improve client health outcomes and their ability to self-manage healthcare needs
- provide integrated seamless care within and across hospital and community sectors
- reduce avoidable hospital admissions and emergency department presentations
- ensure equitable access to healthcare.

Research Motivation and Interests

The HARP service came about as a result of a Victorian Department of Human Services (DHS) funding initiative to address the increasing pressure on acute services and the need to address the complexities, inefficiencies and frustration experienced by both consumers and providers in managing healthcare for people who need support across a range of services.

DHS’s evaluations of early versions of HARP demonstrated its effectiveness in reducing hospital demand and in coordinating care, and led to mainstreaming of HARP and ongoing funding of HARP projects.

This ongoing commitment and support from the now Department of Health and Human Services (DHHS) has enabled the Barwon Health HARP team to continue building on the work of its predecessors. The HARP team is now engaged in a variety of research activities, including projects that focus on evaluating needs and experiences of HARP clients and the impact of the HARP service, as well as projects that aim to optimise client experiences, such as the partnership with Personalised Healthcare, a home monitoring tele-health solution that seeks to build health literacy.

The HARP team describes its work as challenging, meaningful and very rewarding. While their program has ameliorated the experience of many of their clients, the HARP team members explain they also learn from their clients and they feel privileged to share their journeys. Some of the team describe their work with HARP, in developing a more holistic, two-way exchange with health consumers, as the highlight of their careers.
The HARP team became interested in research as initial participants in the OPHELIA (OPtimising Health Literacy and Access to health information and services) project, led by Deakin University public health researchers. The team’s current research focus originated from a grassroots approach aimed at developing the team’s research skills through sharing a passion for one project: promoting consumer-centred care.

Program Highlights

The HARP service has had many positive outcomes for individual clients, including a more coordinated transition from hospital to home and a decrease in the number of hospital admissions for people at risk of readmission. The Barwon Health HARP service enjoys the respect of both peer HARP programs and the DHHS, and recognition of the team’s achievements in integrating and coordinating a number of health and support services within and across the hospital and community sector.

The HARP program reflects an evidence-based approach to service delivery with continuous evaluation, benchmarking, reporting and review. The team has an impressive list of research outputs and is currently focused on optimising consumer-centred care and care coordination by exploring client and clinician experiences of service delivery. Barwon Health is one of 10 sites invited to take part in DHHS’s HealthLinks: Chronic Care (HLCC) project. The HARP team will be instrumental in this novel approach to public hospital funding reform. The evaluation of HLCC will determine whether a new flexible funding model will enable health services to provide integrated services to patients who are at risk of multiple admissions.
What does the future look like?

The HARP team hopes to see increased consumer participation in its work and research, with ongoing projects exploring client experiences of HARP. The team members will continue to evaluate the program and hope the results of these evaluations will lead to further streamlining of services and improved outcomes for their clients.

Advice to those thinking of starting out in Research?

The HARP team has made a commitment to ongoing research activities to inform their practice and has embedded research into its clinical work. The team suggests clinicians call on experts for advice about research possibilities, to make time for research and involve consumers – as both research participants and as part of the research team, as consumer experts are the best source of knowledge about their own health needs.

Staff

Mr Tim Brown
HARP Community Clinician, RND1, Credentialed Mental Health Nurse

Ms Jan Byrnes
HARP Coordinator, RND1, Credentialed Diabetes Educator

Ms Helen Fay
HARP Community Clinician, RND1

Dr Robert Pereira
HARP Team Leader, Occupational Therapist

Ms Jo Stevens
Manager Chronic and Complex Care, RND1

Ms Michelle Wilson
HARP Community Clinician, RND1

Researchers

Dr Robert Pereira
HARP Team Leader, Occupational Therapist

Ms Jan Byrnes
HARP Coordinator, RND1, Credentialed Diabetes Educator

Mr Tim Brown
HARP Care Coordinator, RDN1, Credentialed Mental Health Nurse

Current Research Projects

Title: “Exploring consumer and clinician experiences of a regional care coordination outreach service for people living with complex needs” (Barwon Health Human Research Ethics Committee Reference: 16/144)

Mr David Meade, Co-Director Community Health Rehabilitation and Palliative Care BSp Masters Health Services Management

Ms Jo Stevens, Manager Chronic and Complex Care BN Hon BA BCom Cert Rehabilitation Nursing

Title: “HealthLinks: Chronic Care Evaluation” (Barwon Health Reference 17/88 Approved on 7/4/2017 by the Monash Health Human Research Ethics Committee)

Research Thesis BN Honours Deakin University

Josephine Stevens, John Rolley, Natisha Sands, “The Patient Experience of Participation in a home tele-monitoring program that aims to support the self-management of their chronic disease”.

Barwon Health
Research Week Poster Competition Winners 2016

In 2016, the REGI Unit received 80 high quality entries into the Poster Competition.

Congratulations to the following researchers on their awards:

- **Anthony Cardin**  
  Most Outstanding ‘Health Outcomes/Clinical Practice’ Research Poster - The use of computed tomography (CT) in the diagnosis of acute appendicitis and correlation with the Alvarado Score

- **Gemma Vincent**  
  Most Outstanding ‘Basic Science’ Research Poster - Development of an autogenous vaccine to control Coxiella burnetii infection in a dairy goat herd

- **Gil Stynes**  
  Most Outstanding ‘Clinical Research’ Research Poster - Toward a skin-material interface with vacuum-integrated capped macroporous scaffolds

- **Jacob McCann**  
  Most Outstanding ‘Early Career’ Research Poster - Mechanisms of action of Metformin to improve islet survival for transplants

- **Sophia Sui**  
  Most Outstanding ‘Population Health’ Research Poster - Muscle Strength and Cognitive Decline: Data from the Geelong Osteoporosis Study of Women

- **Samantha Phillips**  
  Most Outstanding ‘Service Delivery/Health Systems’ Research Poster - Post Hoc Ergo Propter Hoc. Unplanned return to theatre trends at University Hospital Geelong

- **Natalie Hyde**  
  Most Outstanding ‘Audience Choice’ Research Presentation.

Summary and Outcomes
Section 2

Barwon Health / Deakin University Collaborative Research Groups
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, 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 five years ago and has evolved into a fully established partnership with core laboratory and office space at Barwon Health’s University Hospital Geelong. In addition to the work done at the core facilities, GCEID is also an important hub for facilitating partner collaboration and coordination of swift research on emerging infectious diseases, including diagnostics, vaccines, therapeutics, and epidemiology.

Major Research Projects Include:

The sequencing of the genome of a human picornavirus (human parechovirus 3) causing meningitis in young infants in Geelong in late 2015.

The research has focused on identifying the genomic sequence of this virus from cases in and around Geelong, Sydney, Adelaide and Darwin 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.

The 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 genetic detail. 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.

The metagenomics of viruses in Australian wild birds.

Australia is home to more than 800 species of birds, both endemic, introduced and migratory species. Wild birds are potential hosts of many viruses such as Murray Valley encephalitis virus, Kunjin virus, and Ross River virus. The introduction or transmission of viruses to novel hosts or habitats can have significant health and economic consequences. We currently have limited knowledge of the avian host-associated virus communities, including pathogenic and non-pathogenic viruses, yet they are potential carriers with a risk of zoonotic disease emergence. In addition, as birds can fly over large distances, they may also passively carry other viruses; e.g. insect and plant viruses present in their food sources. This research project aims to address the lack of knowledge through method development for virus community detection and characterisation using metagenomics to identify the virome of birds. This research will also help understand the prevalence, transmission routes and associations of virus types with disease or health status. It will provide insight into the wild bird virome with relation to ecology and contribute towards better understanding the risks of potentially zoonotic viruses in wild birds.

The comparison of methods for 16S rRNA sequencing of bacterial species.

Bird and human faecal samples will be extracted using traditional microbiome methods and virome/ribosome nucleic acid extraction. The resultant sequences from sequencing of a traditional 16S amplicon will be compared to the novel virome/ribosome NGS metagenomic sequences obtained.
Development of a serological test for exposure to Mycobacterium ulcerans.

Mycobacterium ulcerans causes a necrotising infection of the skin and subcutaneous tissue. In Australia, it is known as Bairnsdale or Daintree ulcer, but is known globally as Buruli ulcer. The mode of transmission remains unclear. The objective of the current project is to develop a serological test to better understand exposure in Victoria's hotspot areas. The study also includes mapping of cases in time and space from 1994 to 2014, to understand distribution pattern and identify possible risk factors.

Other Barwon Health/Deakin Projects Include:

The scientific support for processing and analysis of samples collected in a number of national cohort studies, including the birth cohort, Barwon Infant Study (BIS), The Environmental Determinants of Islet Autoimmunity (ENDIA) Type 1 diabetes study, the Adhesive Capsulitis Biomarker Study (AdCaB), the MANGO–SZ study, and the Melbourne Infant Study: BCG for Allergy and Infection Reduction – BIS-related research focuses on the microbiome and immunological mechanisms associated with a number of important non-communicable diseases in infancy and childhood, including food allergy, asthma, obesity, early markers of cardiovascular disease and neurodevelopmental disorders.

The investigation of the association between psychotropic medications used in the treatment of mental health disorders and skeletal integrity

Long term use of anti-depressant medications has been demonstrated to cause reduction in bone density and lead to increased incidence of fracture. Ongoing work using human in vitro models of bone remodelling is being conducted to investigate the mechanism of action of these drugs on bone cell function.

Major Achievements – Highlights from the past 12 Months

- Professor Soren Alexandersen is a CI representing GCEID on a funded NHMRC Centre of Research Excellence - Australian Partnership for Preparedness Research on Infectious Disease Emergencies (APPRISE).

- Launch of the CSIRO-Deakin University One Health Training Centre, part of GCEID and located at University Hospital Geelong. This new training centre will foster collaboration in holistic ways to combat emerging infectious diseases.

- Publications in Nature Scientific Reports of results for the project on a human picornavirus causing meningitis in infants.

- Publications in collaboration with Deakin IMPACT detailing connection between mental health and bone health.

- Completed a Zika virus pilot study in collaboration with CSIRO–AAHL.

- World One Health Day public event at GCEID, featuring presentations by researchers/clinicians from Barwon Health, Deakin University and CSIRO (AAHL).

- Took part in organisation and participated in the 2016 International One Health/EcoHealth Congress in Melbourne, with a special GCEID Symposium and presentations from invited international speakers and each of the GCEID partners.

- Participated in the Animal Health Australia Workshop on their Biosecurity Research Strategy

- Media coverage 2016/2017:
  - 9th July 2016 Geelong Advertiser “Experts take on diseases”
  - 5th November 2016 Geelong Advertiser “Deadly baby virus”
  - 26th November 2016 Geelong Advertiser “A united front for diseases”
  - 17th March 2017 Geelong Advertiser “Geelong scientists help unlock mysteries of deadly baby virus” 17th March 2017 ABC News Radio “New virus discovered in south east Australia poses risks to babies”
Looking Forward – Anticipated Highlights in the next 12 Months

- Initial work on potential development of an infection model for human picornavirus which could be used to assess potential vaccines.
- Further work on the above project in collaboration with the GCEID partners.
- Continue collaboration with the Centre for Integrative Ecology (CIE), broadening the screening and genomic analyses of wild bird samples related to the project on coronaviruses and the wild bird virome.
- Continue work on the NHMRC CRE APPRISE mentioned above.
- Continue collaboration with Deakin University/Centre for Integrative Ecology and CSIRO-AAHL on circovirus in parrots.
- Arrange, promote and participate in International One Health Day - 3rd November, 2017.
- Initiate further projects within GCEID as well as with external collaborators.
- Collaboration with the University of Copenhagen on influenza virus in animals at the human/animal interface.
- Welcome two new PhD students in 2017 to GCEID.
- Commencement of human bone cell in vitro studies investigating action of psychotropic medications and serotonin.
- Continued BIS collaborations with MCRI, WEHI and Susanne Brix Pedersen, Disease Systems Immunology, Department of Biotechnology and Biomedicine, Technical University of Denmark.

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 Anthony Chamings  PhD, Joint Associate Research Fellow

Registered veterinarian and epidemiologist with an interest and expertise in infectious diseases, particularly viruses, in commercial, pet and wild animals.

Dr Jason Hodge  PhD, Laboratory Manager/Senior Scientist

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

Dr Fiona Collier  PhD, BAppSci, Senior Scientist

Expertise in immunology, molecular biology, and flow cytometry, with particular research focus related to immune and microbiome studies within the Barwon Infant Study.

Students

Current PhD Candidates

Michael Selorm Avumegah

Primary Supervisor: Professor. Soren Alexandersen

Research topic: One Health approach to investigate Mycobacterium Ulcerans disease

Jessy Vibin

Primary Supervisor: Professor. Soren Alexandersen

Associate Supervisor: Dr Tiffanie Nelson

Research topic: Viral metagenomics of Australian wild birds

Darcie Paige Cooper

Associate Supervisor: Professor Soren Alexandersen

Research topic: Prosthetic Joint Infections and Superbug Biofilms

Vinoomika Chandrasekaran

Co-supervisor: Dr Jason Hodge

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

Jasmine Cleminson

Co-supervisor: Dr Jason Hodge

Research topic: The role of serotonin in bone mass control
## Grants

<table>
<thead>
<tr>
<th>Grant Name</th>
<th>Project Title</th>
<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>NHMRC CRE</td>
<td>Australian Partnership for Preparedness Research on Infectious Disease Emergencies (APPRISE)</td>
<td>CI – Professor Soren Alexandersen</td>
<td>2016-2020</td>
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<td>CSIRO One Health Training Centre</td>
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<td>Deakin GCEID contribution - internal</td>
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<td>Barwon Health</td>
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<td>Deakin University</td>
<td>Zika Virus pilot study</td>
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<td>Deakin University</td>
<td>One Health EcoHealth 2016 Congress, GCEID Symposium</td>
<td>CI- Professor Soren Alexandersen</td>
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<td>NHMRC Equipment Grant 2016</td>
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<td>Deakin University</td>
<td>Small Equipment Grant</td>
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<td>Bird Life Australia</td>
<td>2017 Stuart Leslie Bird Research Award</td>
<td>C/- Jessy Vibin</td>
<td>2017</td>
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<td>Deakin University</td>
<td>Infection &amp; Immunity Theme of Centre for Molecular and Medical Research</td>
<td>C/-Professor Soren Alexandersen</td>
<td>2017</td>
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<td>Deakin University</td>
<td>Research Equipment Support Scheme (RESS)</td>
<td>C/-Professor Soren Alexandersen</td>
<td>2017</td>
<td>$42,265.00</td>
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## Miscellaneous/Scholarship/Esteem

**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)  
Member of Australia’s National Avian Influenza Wild Bird (NAIWB) Steering Group  
Member of the EPICORE international team  
Member of the Editorial Board for Nature Scientific Reports

**Dr Jason Hodge**  
Participant in Newcomb Secondary College P-Tech Mentor Training Program

**Dr Fiona Collier**  
Conjoint Staff of Murdoch Children’s Research Institute (MCRI),  
Member of inFLAME collaborative network,  
Member of Barwon Health & Deakin University Research Week Operational Committee,  
Member of Barwon Infant Study (BIS) Steering Committee.

**Dr Tiffanie Nelson**  
School of Medicine Early Career Research Committee member
Research Focus

The Epi-Centre for Healthy Ageing 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. There is particular interest in the identification of modifiable risk factors that could be targeted in order to delay a decline in physical and mental health often 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, cognitive decline 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 past 12 Months

- This year, we completed the 11-year follow-up phase of the prospective study known as the Vitamin D in Pregnancy (VIP) study and commenced the 15-year follow-up phase of the male arm of the prospective study known as the Geelong Osteoporosis Study (GOS).

- Student matters: Dr Natalie Hyde graduated from Deakin University with a PhD degree, Joanna Dignall successfully completed her PhD candidature and Sarah Hosking submitted her PhD thesis for examination. Three students completed Honours in 2016 and another two commenced in 2017.

- Dr Kara Holloway, Pamela Rufus, Monica Tembo and Sophia Sui passed the ANZBMS Clinical Densitometry course and are licenced to operate the study dual energy-x-ray absorptiometry (DXA) machines.

- Dr Natalie Hyde was awarded the Rotary Past District Governor Geoff Betts 2016 Early Mental Health Researcher Award.

- Barwon Health-Deakin University Research Week award winners: Sophia Sui (best Public Health poster), Dr Natalie Hyde (Audience Choice presentation).

- Sarah Hosking accepted the young investigator European Society for Clinical and Economic Aspects of Osteoporosis, Osteoarthritis and Musculoskeletal Diseases/International Osteoporosis Foundation ESCEO-IOF UCB Fellowship at the WCO-IOF-ESCEO World Congress in Florence, Italy, in March 2017.

- Pamela Rufus, Sarah Hosking, Sophia Sui, Monica Tembo, Veena Chandrasekaran, Jasmine Cleminson, Kara Anderson and Marlene Goganovic were awarded travel grants to Brisbane to attend the Australian and New Zealand Bone and Mineral (ANZBMS) Conference in June 2017.

- Pamela Rufus was joint winner of the three-minute thesis (3MT) competition for PhD students in the School of Medicine, Deakin University, and third in the competition at Faculty level.

- PhD scholarship holders (Deakin): M. Amber Sajjad, Sophia Sui, Stephanie Cowdery, Monica Tembo, Veena Chandrasekaran and Jasmine Cleminson. Postdoctoral Fellowship holder (Deakin): Dr Kara Holloway.

Here is the new GOS logo:
Looking Forward – Anticipated Highlights in the next 12 Months

- Continue with the 15-year follow-up assessment of men enrolled in the Geelong Osteoporosis Study (GOS).
- Use bone microindentation as a novel method for measuring structural properties of bone in situ for men enrolled in the GOS – we are 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 our 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.
- 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 and Deputy Director of the IMPACT Strategic Research Centre.

Dr Lana Williams  BPsysch, 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 Epi-Centre for Healthy Ageing. 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 (Nana & Biomaterials) (Hons), PhD
Kara is an Alfred Deakin Research Fellow who heads the Musculoskeletal Epidemiology unit in the Epi-Centre for Healthy Ageing. Kara’s work investigates the epidemiology of osteoporosis and fractures, identifies risk factors for fractures and describes fracture-related morbidity.

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 Epi-Centre for Healthy Ageing’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 a 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

Fatima Hajara Aslam – Deakin University
A2 milk and the microbiome.

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.

Leila 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.

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
Associations between physical and mental decline: a potential regulatory role of sarcopenia on cognitive impairment.

Monica Tembo – Deakin University
Biological factors that underpin frailty and musculoskeletal decline.

2016 Honours Students (Deakin University)

Claire Clissold
Risky Drinking and Bone Health: a Study in Men.

Elizabeth Degabriele
The association between childhood asthma status and fracture risk.

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

2017 Honours students (Deakin University)

Kara Anderson
The utility of trabecular bone score in fracture risk assessment.

Marlene Gojanovic
Inflammatory potential of diet in association with sarcopenia.
### Grants

<table>
<thead>
<tr>
<th>Grant Name</th>
<th>Project Title</th>
<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>RESS grant (equipment) – Deakin University</td>
<td>Peripheral quantitative computed tomography (pQCT) scanner and Leonardo platform.</td>
<td>Pasco JA, Kotowicz MA, Orford, N, Dwyer K, Howlett K</td>
<td>2016</td>
<td>$112,685</td>
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</table>

### Miscellaneous/Scholarship/Estee

- The Epi-Centre for Healthy Ageing is 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.
  - 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.
  - Department of Medicine – Western Health, Melbourne Medical School, The University of Melbourne, on projects related to musculoskeletal disorders, including osteoporosis, sarcopenia, osteosarcopenia and sarcopenic obesity.
  - 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.
  - Visiting Academic exchanges with the Hebei Province in China.
Nutritional Psychiatry (Food and Mood Centre)

Professor Felice Jacka

Research Focus

The Food & Mood Centre is a new collaborative research centre, sitting within the IMPACT SRC at Deakin University, based at Barwon Health. It represents a multi-disciplinary team of researchers, clinicians, post-doctorates and PhD students who are studying the ways in which diet and nutrition influence our brain, mood, and mental health; this is known as ‘Nutritional Psychiatry’ research. Prof Felice Jacka established the Food & Mood Centre in 2016 and it is the first such centre in the world with a sole focus on Nutritional Psychiatry research. The Food & Mood Centre website also acts as a resource for evidence-based information on diet and mental health, presented in a way that is accessible to the general public, as well as to scientists and clinicians.

Major Achievements – Highlights from the past 12 Months

The Food & Mood Centre was established at the end of 2016. Since its inception, it has grown substantially and now comprises six full-time PhD students and one honours student. We have commenced recruitment for two more PhD students, supported by scholarships from Fernwood Gyms and the A2 Dairy Company. Our first Postdoctoral Research Fellow, supported by an Alfred Deakin Research Fellowship, has just arrived from Finland and we are currently recruiting for another postdoctoral fellow, supported by a sponsorship agreement with Fernwood Gyms. Major achievements in this short time include:

- Sponsorship arrangement with Fernwood Gyms
- Funding for a large Randomised Controlled Trial (RCT) from the A2 Dairy Company
- Publication of the world’s first RCT to assess dietary improvement as a treatment strategy for Major Depression. This garnered worldwide media interest.

Looking Forward – Anticipated Highlights in the next 12 Months

Professor Felice Jacka, Director of the Food & Mood Centre, will convene the first international conference of the International Society for Nutritional Psychiatry Research (ISNPR), of which she is founder and president. This will take place in Bethesda (Washington DC USA) in July/August 2017.

A number of studies have just commenced and will take place over the next three years. Most of these have a focus on diet, gut microbiota and mental health.

We will have the results of our Healthy Parents, Healthy Kids study, conducted at the Royal Children’s Hospital in collaboration with the Murdoch Children’s Research Institute. This important study is the first to address maternal diet in an attempt to improve gut microbiota endpoints in mothers and their infants.

Staff

Professor Felice Jacka

Professor Felice Jacka is an NHMRC Career Development Fellow and director of the new Food & Mood Centre. She holds Honorary Principal Research Fellow appointments at the Centre for Adolescent Health, Murdoch Children’s Research Centre, and the Black Dog Institute in NSW. She is founder and president of the International Society for Nutritional Psychiatry Research (ISNPR), which represents hundreds of research and clinical members globally. She is immediate past president of the Australian Alliance for the Prevention of Mental Disorders (APMD).

Dr Anu Ruusunen

Dr Anu Ruusunen is an Alfred Deakin Research Fellow and has a PhD in Epidemiology and a MSc in Nutrition. She is also a qualified dietitian. Anu will commence with the Food & Mood Centre in July 2017 as a postdoctoral research fellow, supported by an Alfred Deakin Research Fellowship. The main aims of her postdoctoral program of research are to investigate inpatients with psychotic symptoms/disorders, dietary patterns, intake of nutrients, prevalence of food allergies and sensitivities, and composition of gut microbiota, in order to evaluate the possible role of each in the onset and
progression of psychotic disorders. She will also assess the feasibility and impact of dietary intervention pilot studies of both a ketogenic diet and exclusion diets for addressing psychotic symptoms and functioning.

Fernwood Postdoctoral Research Fellow: Supported by Fernwood Gyms, this position, currently recruiting, will be responsible for developing and advancing a comprehensive translational program of research, based on the extensive research evidence already generated by the Food & Mood Centre director.

Trial Coordinator

This position, currently recruiting, will be responsible for coordinating the A2 Dairy Company RCT, as well as working as a research assistant on other projects across the Food & Mood Centre.

Students

Sarah Dash (PhD Candidate)
Research Question: “What are the biological pathways associated with the diet-depression link? An examination of dietary-associated pathways in Major Depression”
Data utilised: SMILES RCT; Geelong Osteoporosis Study (GOS).

Samantha Dawson (PhD Candidate)
Research Question: “What is the relationship between the prenatal diet and gut health of mothers and their infants?”
Data utilised: Healthy Parents Healthy Kids RCT (RCH); Barwon Infant Study.

Amelia McGuinness (PhD Candidate)
Research Question: “What is the relationship between gut microbiota, mental health and mental-health related physical comorbidities in adults?”
Data Utilised: Micro-’scope (collaboration between Deakin University, University Hospital Geelong and the Epworth Hospital)

Hajara Aslam (PhD Candidate)
Research Question: “What is the impact of A2 vs conventional dairy consumption on gut health, immune function, oxidative stress and adipocytes in middle-aged women?”
Data utilised: A randomised controlled trial of A2 vs standard commercial dairy products in middle-aged women

Claire Young (PhD Candidate)
Research Question: “What is the feasibility of an online dietary intervention in achieving engagement of participants with depressive symptoms and adherence to the intervention?”
Data utilised: An Online Dietary Intervention targeting Gut Health for Improvement of Depressive Symptoms (RCT)

Sara Campolonghi (PhD Candidate)
Research Question: “What are the perceived external and internal barriers and facilitators affecting food choices in families?”
Data utilised: Healthy eating from pregnancy to weaning, and beyond: A qualitative study

Jess Davis (Honours student)
Research Question: “What is the association between A. muciniphila abundance and obesity in an Australian population?”
Data utilised: The Geelong Osteoporosis Study (GOS) (GOS Microbiome Study)
Grants

<table>
<thead>
<tr>
<th>Grant Name</th>
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<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Industry Partnership</td>
<td>A randomised controlled trial of A2 vs standard commercial dairy products in middle-aged women</td>
<td>Felice Jacka Hajara Aslam TBD</td>
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<td>Fernwood Fellowship</td>
<td>Felice Jacka TBD</td>
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<td>Industry Partnership</td>
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<td>Felice Jacka TBD</td>
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**Miscellaneous/Scholarship/Esteem**

- International Society for Nutritional Psychiatry Research (ISNPR) – (FNJ president)
- Alliance for the Prevention of Mental Disorders (APMD) – (FNJ immediate past president)
- Australian Rotary Health

**Current University Collaborations**

- APC Microbiome Centre, University College Cork, Ireland
- Harvard University/ Massachusetts General Hospital
- Norwegian Institute of Public Health, Oslo, Norway
- Department of Epidemiology and Community Medicine, University of Ottawa, Canada
- National Center for Global Health and Medicine Research, Tokyo, Japan
- National Centre for Neurology and Psychiatry, Tokyo, Japan
- National Research Council (CSIC), Valencia, Spain
- School of Medicine, Universidad Autónoma de Madrid, Spain
- Universidad de las Palmas de Gran Canaria, Spain
- BGI-Shenzhen, China
- Centre for Research on Ageing, Health & Wellbeing, Australian National University
- WHO Collaborating Centre for Obesity Prevention, Deakin University
- Deakin Health Economics Unit, Deakin University
- Dept of Psychiatry, St Vincent’s, University of Melbourne
- School of Psychology, Deakin University
- Centre for Adolescent Health, Murdoch Children's Research Institute
- School of Population and Global Health, University of Melbourne
- Black Dog Institute, NSW

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Barwon Health
Paediatrics (The Child Health Research Unit (CHRU))

Professor Peter Vuillermin

Research Focus

The Child Health Research Unit (CHRU), led by Professor Peter Vuillermin, 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 NHMRC-funded research projects are run through the CHRU: the Barwon Infant Study (BIS) & the Environmental Determinants of Islet Autoimmunity (ENDIA).

BIS is a population derived birth cohort of 1074 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

ENDIA is a 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 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. Read more at www.endia.org.au/about/the-endia-study

Looking Forward – Anticipated Highlights in the next 12 Months

Publications regarding:
- The maternal and infant microbiome and food allergy
- The infant microbiome and subsequent mental health
- Exposure to modern chemical and neurodevelopment

Staff

Professor Peter Vuillermin
CHRU Director, Peter is a General Paediatrician and Researcher with a particular interest in the early life origins of immune dysregulation in the modern environment.

CHRU Staff Members
- Jasmin Foster
- Nakita Clements
- Magenta Musgrove
- Danielle Kennedy
- Minh Tran

Students

Current PhD Students

John Molloy
PhD project titled “Modifiable early life risk factors for IgE mediated food allergy.” Thesis under examination.

Kate McCloskey
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”.

Elizabether Senn
PhD project entitled “The infant microbiome and neurocognitive outcomes”.

Grants

<table>
<thead>
<tr>
<th>Grant Name</th>
<th>Project Title</th>
<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
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<tbody>
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<td>Rebecca Couper</td>
<td>Microbial exposure, innate immune development and asthma</td>
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<td>the top ranked application).</td>
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<td>NHMRC Project Grant</td>
<td>Epigenetic mechanisms of dysregulated immune function in autoimmune and allergic disease of childhood</td>
<td>Prof Leonard Harrison, Dr Yuxia Zhang, Prof Jennifer Couper, Prof Peter Vuillermin, Prof Anne-Louise Ponsonby, A/Prof Lynne Galam</td>
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<td>$452,298</td>
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<td>Prof Nigel Curtis, Prof Mike South, A/Prof Peter Vuillermin, Prof Frank Shann, Prof Susan Donnath</td>
<td>2016-2020</td>
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Miscellaneous/Scholarship/Esteem

Community Engagement

Professor Peter Vuillermin has given more than 20 media interviews in the past 12 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.

International/National Affiliations

Professor Peter Vuillermin has led multidisciplinary collaborations for BIS with researchers from MCRI, WEHI, CSIRO, and J. Craig Venter Institute in the US.

Professor 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).
Research Focus

Professor Michael Berk is currently a NHMRC Senior Principal research Fellow, and is Alfred Deakin Chair of Psychiatry at Deakin University and Barwon Health, where he heads the IMPACT Strategic Research Centre. He also is an Honorary Professorial Research fellow in the Department of Psychiatry, the Florey Institute for Neuroscience and Mental Health and Orygen Youth Health at Melbourne University, as well as in the School of Public Health and Preventive Medicine at Monash University. He is a past president of the International Society for Bipolar disorders and the Australasian Society for Bipolar and Depressive Disorders. He is an ISI highly cited researcher who has published over 800 papers, predominantly in mood disorders. His major interests are in the discovery and implementation of novel therapies, and risk factors and prevention of psychiatric disorders. He is the recipient of a number of national and international awards including the Brain and behaviour Foundation Colvin prize, and holds grants from the National Institutes of Health (US), Simon Autism Foundation, NHMRC CRE and project grants, Beyondblue and Stanley Medical Research Institute and is a lead investigator in a Collaborative Research Centre.

The 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. IMPACT research spans three major themes:

- IMPACT TRIALS
- The Epi-Centre for Healthy Ageing
- Food and Mood Centre

Using an integrated series of approaches, IMPACT research addresses both mental and physical health. The psychiatric arm of IMPACT aims to develop novel therapies for the treatment of major psychiatric disorders. In tandem, we research the biochemical underpinnings of these disorders, including alterations in oxidative biology, inflammation, neurogenesis and mitochondrial dysfunction as well as lifestyle risk factors such as diet. IMPACT’s treatment developments 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 past 12 Months

IMPACT SRC has experienced another fruitful year, achieving significant grant successes, awards, and having a presence at several significant international conferences.

Some of the major highlights are listed below:

- Lana Williams was awarded a NHMRC Career Development Fellowship;
- Felice Jacka was promoted to Professor, and Lana Williams and Ajeet Singh to Associate Professor;
- Professor Michael Berk was announced as one of Thomson Reuters most cited researchers in 2015 and 2016;
- Completion of the 11 year follow-up for the Vitamin D in Pregnancy Study;
- PhD student Natalie Hyde was awarded the Past District Governor Betts 2016 Early Career Mental Health Award and Amgen-ANZBMS Outstanding Abstract Award;
- Olivia Dean was nominated for the 2017 Women in Community Life, City of Greater Geelong;
- Melanie Ashton received scholarship support from Australian Rotary Health and the Ian Parker Bipolar Research;
- Melanie Ashton joined and received support from the CRC for Mental Health;
- 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 randomised controlled trial of quetiapine versus lithium in the maintenance phase following a first episode of mania”;
• 2016 saw the launch of the next phase of data collection for the male cohort for the 23 year longitudinal Geelong Osteoporosis Study;
• 2016 saw the launch of collaborative Research Centre “The Food and Mood Centre”;
• 2016 saw the establishment IMPACT TRIALS; Directed by Olivia Dean.

Looking Forward – Anticipated Highlights in the next 12 Months
Recruitment began for two new clinical trials to investigate the effectiveness and benefits of the mangosteen fruit extract for people with schizophrenia and bipolar disorder. The placebo study has received approval. We have a multitude of biological correlates data to be disseminated.

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.

Associate Professor Ajeet B Singh MD MBBS MPsyCh MD FRANZCP
Associate Professor 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 Lesley Berk
BA, Psych Honours, MA (Clin-Psych), PhD
Dr Berk is post-doctoral research fellow currently developing psychosocial interventions for people with bipolar disorder and examining risk factors that affect illness course. She is also developing programs for family and friends of people with depression. In addition, she works on the aforementioned GOS study and is interested in examining psychosocial resilience factors that help with quality of life in older adults.

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 Emma Gliddon BAppSci (Psych), BSci (Hons), PhD – Associate Research Fellow
Dr Gliddon is an Associate Research Fellow working on the NIMH-funded randomised controlled trial of the MoodSwings 2.0 online intervention for people with bipolar disorder. This is a collaborative project with Stanford University in the United States. Emma also recently completed her PhD thesis investigating peer support discussion forums within the MoodSwings 2.0 program, and is currently managing the online care team with the not-for-profit organisation DepressioNet, which provides online peer support for Australians living with depression.

Brisa Fernandes
Brisa Fernandes is an experienced psychiatrist, biochemist and statistician with particular expertise in the areas of biomarkers, precision psychiatry, meta-analysis and machine learning. She leads the biomarker program in the SRC.
IMPACT TRIALS

Dr Olivia Dean  
BSc (Hons) PhD
Director of the IMPACT TRIALS, a 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 Helen McKenzie  
MBBS - Research Assistant – Minocycline Trial
Dr McKenzie works in adult mental health, particularly areas of mood and substance use disorders.

Ellie Brown  
BSc Hons (Psyc), PGCert
Ellie is a Trial Coordinator at IMPACT TRIALS in the final stages of a Prof Doc in Counselling Psychology. She has worked with individuals with mental health problem in a clinical and research capacity for over 10 years. She has worked on a number of large investigator-initiated trials in the UK with a focus on health services, research and novel, multi-disciplinary interventions for SMI.

Dr Alyna Turner  
BSc (Psyc) (Hons), PhD - Research Fellow
Dr Turner is a Research Fellow/Trial Coordinator at IMPACT TRIALS, and a registered Clinical Psychologist. She has worked with people with comorbid conditions (mental health/ substance misuse/ physical health conditions) in a clinical and research capacity for over 16 years, with a focus on therapy development and evaluation. Her work spans the areas of stroke and its psychological sequelae, health behaviour change for CVD secondary prevention and CVD primary prevention in people with severe mental illness (SMI), and clinical trials of novel pharmacological agents for SMI and substance misuse.

Ms Bianca Kavanagh
Bianca Kavanagh is a Research Assistant working on a clinical trial looking at the efficacy of mangosteen pericarp as an adjunctive treatment for schizophrenia. It is believed that symptoms of schizophrenia are partially caused by increased inflammation and oxidative stress in the brain. Mangosteen pericarp contains neuroprotective properties, which may be beneficial in reducing oxidative stress and target symptoms present in schizophrenia. This trial aims to recruit 150 participants with schizophrenia or schizoaffective disorder to take part in this 24-week randomised placebo controlled trial.

Dr Lesley Berk  
BA, Psych Honours, MA (Clin Psych), PhD
Dr Berk is post-doctoral research fellow currently developing psychosocial interventions for people with bipolar disorder and examining risk factors that affect illness course. She is also developing programs for family and friends of people with depression. In addition, she works on the GOS study mentioned above and is interested in examining psychosocial resilience factors that help with quality of life in older adults.

The Epi-Centre for Healthy Ageing

Associate Professor Lana Williams  
BPsych, Grad Dip App Psych, MPsych (Clinical), PhD, MAPS
Associate Professor 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 10 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 of her work is 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.

Dr Mohammadreza Mohebbi  
Senior Research Fellow – Biostatistician, BSc, MS, PhD
Dr Mohebbi has been involved in design and analysis of large population-based cohort studies, clinical trials and statistical issues related to survey data. His primary areas of research are biostatistics and epidemiologic aspects of public health and psychiatric research. He is CI investigator of two NHMRC project grants and CI biostatistician in a NHMRC partnership grant. Dr Mohebbi is in a supervisory panel of five PhD candidates.

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.
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.

Gosia Bucki-Smith  
BSc (Monash) MND (Deakin) Grad CertCTMgt (UC) - Research Fellow  
Gosia Bucki-Smith 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.

Dr Natalie Hyde  
BBiomedSc (Hons) PhD – Research Fellow  
Natalie Hyde is a Research Fellow, who recently completed her PhD. Her work encompasses looking at early life exposures and physical and mental health in childhood. She also plays an active role in the Geelong Osteoporosis Study and is working towards introducing pQCT measurements as part of the assessments of bone within the cohort.

Food and Mood Centre

Professor Felice Jacka BA, Pgrad Dip Med Sci, PhD - Associate Professor (Research). 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).

Students

PhD Students

THE EPI CENTRE FOR HEALTHY AGEING - Joanna Dipnall  
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 increasingly 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.

Vinoomika Chandrasekaran  
Bipolar Disorder and Bone Health

Bipolar Disorder is a significant social and economic burden. Osteoporosis is suspected to be a comorbidity of bipolar disorder. However, the evidence base studying this relationship is small. The first part of this study will observe this association in Geelong’s population, comparing the bone health of healthy volunteers in the Geelong Osteoporosis Study with that of individuals with Bipolar Disorder. Next, the effects of anticonvulsants on bone cells will be determined, in the laboratory. A consensus will then be reached on how these two components relate, to give a clearer picture of the bone health of individuals with Bipolar Disorder.

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 20 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.

Jasmine Cleminson

Serotonin and bone metabolism

Serotonin is a neurotransmitter generated in the brain and enterochromaffin cells of the duodenum. The majority of the body’s serotonin synthesised by enterochromaffin cells is taken up by platelets; the remainder acts as a circulating hormone which diffuses into tissues, such as bone. Serotonin receptors are found in all major bone cell types which may indicate a possible direct action in bone homeostasis. Selective serotonin re-uptake inhibitor (SSRIs) antidepressants have shown clinically significant impacts on bone metabolism, associated with osteoporosis and increased fracture risk. To better understand the role of serotonin on bone metabolism, we will comprehensively investigate the relationship between dietary tryptophan, gut health, antidepressant use and bone metabolism utilising data from the comprehensive fracture study (PROFRAC) and population-based study, the Geelong Osteoporosis Study. In vitro studies of human bone cells will further investigate the role of serotonin and SSRIs in bone cell formation and function.
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 our 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 ensure we will be better placed to develop interventions to support the effective translation of osteoporosis prevention guidelines for the Australian public.

Sophia Sui  
Associations between physical and mental decline: a potential regulatory role of sarcopenia on cognitive impairment

This project focuses on the role of sarcopenia on cognitive impairment. It is unclear to what extent sarcopenia or its components may play a role on cognitive decline. The rationale of the project is that sarcopenia can be slowed or reversed, any links discovered between sarcopenia and cognition would have important public health implications for slowing the development of cognitive impairment. The overall aim is to examine the association between sarcopenia (and its components) and cognitive impairment using the data from Geelong Osteoporosis Study (GOS).

Stephanie Cowdery  
Mental Health and its association with cancer risk and associated mortality

The role of mental health and psychological factors in cancer onset and progression is contentious. The overall objective of this study is to determine the association between disturbances in mental health, and cancer risk, mortality and associated mechanisms utilising data from three population based studies; the Ageing Chronic Disease and Injury (ACDI) study, the Geelong Osteoporosis Study (GOS), and the Nord-Trøndelag Health (HUNT) study.

Amber Sajjad  
Acute Health Service Utilisation in Diabetes Mellitus: A Project in Western Victoria

Despite being a condition amenable to primary care, many people with diabetes end up using acute health services (Emergency Department visits and hospitalisations). The underlying determinants of this disproportionately higher use of acute health services in diabetes are poorly understood, particularly in the regional areas. This doctoral project aims to address this knowledge gap by identifying area- and person-level predictors of acute health service utilisation in diabetes.

Pamela Rufus  
Bone Material Strength Index: A new method for determining the material properties of the bone Fragility

Fractures constitute a significant medical, social and economic burden to individuals and the society. The current gold standard used for ascertainment of fracture risk is bone mineral density (BMD). However, BMD does not fully explain fracture risk; with the largest absolute number of fragility fractures occurring in people with moderate deficits in BMD. This project involves the use of a hand-held device known as OsteoProbe® for measurement of bone material properties in-vivo. The device quantifies the ability of the bone to resist the growth of cracks and this is expressed as the bone material strength index (BMSi). This material property of bone, which is a component of bone quality, should be useful for determining strength and ability to resist fracture.

Monica Tembo  
Biological factors that underpin frailty and musculoskeletal decline

Frailty is a multifaceted syndrome characterised by age related decline in functional reserves across a range of physiological systems. It is not only a burden to the individuals but also to the health system in Australia as its effects can lead to fractures, disability, hospitalisation, falls and institutionalisation. With the increase in the aged...
population in Australia, it is vital to identify elderly people who are at risk of developing this condition. Currently there are numerous assessment tools that have been developed and used, yet there is no consensus on the gold standard diagnostic assessment tool. The aim of my project is to firstly identify people from the Geelong Osteoporosis study who meet the criteria for frailty according to existing frailty assessment tools. Furthermore, determine the contribution of musculoskeletal health to frailty as well as quantify inflammatory markers association with frailty towards developing a new frailty prediction or risk score for identifying risk factors for frailty.

IMPACT TRIALS

Melanie Ashton
*Mangosteen pericarp extract as an adjunctive treatment for bipolar depression*

The study aims to trial a supplement is made from the husk, or pericarp, (in which the flesh of the fruit is contained) of the Garcinia Mangostana Linn (commonly known as mangosteen) fruit. The pericarp is comprised of antioxidant, anti-inflammatory and neuroprotective properties which will hopefully target some of the changes occurring in bipolar depression. To trial this, we aim to recruit 150 participants into a 24-week randomised placebo-controlled trial.

Bianca Kavanagh
*Personality as a Moderator of Psychiatric Clinical Outcomes*

Personality disorder has critical implications for psychotherapeutic and pharmacological treatments. Individuals with personality disorders often have comorbid psychiatric disorders and receive suboptimal treatment; however, these disorders are often neglected in clinical and research settings. This study will examine the role of personality disorder in relation to clinical and health outcomes (i.e., treatment response, withdrawal rates, adverse events, functioning, quality of life and health service utilisation) in psychiatric clinical trial and epidemiological studies. Taken together these results will be translatable to clinical and epidemiological research and to broader clinical treatment.

Food and Mood Centre

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.

Samantha Dawson
*Targeting the prenatal diet for maternal and infant gut health*

Samantha's PhD aims to describe the relationship between dietary intakes during pregnancy and the gut microbiota of women and their infants. She is running a randomised controlled trial, called the Healthy Parents, Healthy Kids study, and she aims to investigate whether dietary advice and support provided to women during pregnancy will help women improve their diets, and whether this results in differences in gut microbiota in mothers and babies measured four weeks after birth.

Amelia McGuinness
*Micro-‘Scope: a study of lifestyle, gut microbiota and mental health in community-dwelling adults*

Mental disorders, particularly depression, are the leading cause of disability globally, accounting for the largest component of the global burden of disease in working-age adults. Recent developments have suggested that the commensal bacteria that live symbiotically within our gastrointestinal system, collectively known as the ‘gut microbiota’, are able to influence and potentially determine mental health and behaviour via the ‘gut-brain-axis’. Environmental factors including poor diet, smoking, sedentary behaviour and sleep disturbances have been implicated in causing potentially deleterious microbiome alterations. The overall objective of this study is to determine associations between health behaviours, particularly diet, and mental health symptoms in adults, and correlate these with the composition and activity of the gut microbiota.

Sara Campolonghi
*Perceived internal and external barriers and facilitators for healthy eating and healthy lifestyle among new mothers and fathers*

The overarching aim of the project is to identify enablers and barriers for healthy eating in families. This project will follow-up the Healthy Parents Healthy Kids project (HPHK) ongoing RCT conducted at the Royal Children Hospital investigating the relationship between healthy eating and mothers’ and
infants' gut health. The role of fathers as important factors influencing food choices in families will be explored; and to inform the development of more effective, efficient and innovative interventions (especially online and coaching based) addressing parents to promote healthy eating and healthy lifestyle in families.

Jessica Davis
While the accepted cause of obesity is an imbalanced energy equation, there is increasing evidence suggesting an individual's gut microbiota may play an important role in protecting against or promoting obesity. A microbe of particular interest is Akkermansia muciniphila and current research suggests that greater abundance of Akkermansia muciniphila is associated with healthier metabolic profiles and body composition. Jessica's study aims to assess Akkermansia muciniphila abundance in overweight and obese Australian men, taking into account detailed measures of diet quality.

Hajara Aslam
A RCT of A2 vs standard commercial dairy products in middle-aged women
Milk consumption is under scrutiny due to its reported links to negative health outcomes. The bio active peptide beta-casomorphin 7 (BCM-7), is derived from A1 beta-casein available in milk. It is characterised as a μ-opioid peptide receptor ligand, formed under normal gut conditions. Consumption of A1 beta-casein has produced evidence for triggering inflammation and oxidative stress which are crucial in determining bone health. Most commercial dairy products consist a mixture of A1 and A2-beta casein and upon consumption produces BCM-7, which elicits a physiological response in individuals. Bone fragility is suspected to be a comorbidity of consuming A1-beta casein. However, there is only limited evidence on this. The study aims to understand whether 24-week milk consumption of A2 milk products have positive impacts on bone quality in women who are regular dairy consumers, compared to standard dairy product consumption.

Grants

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<td>Australian Respiratory Council Harry Windsor grant</td>
<td>Can we reduce tobacco smoking using N-acetylcysteine as a cessation treatment?</td>
<td>Dodd S, Berk M, Dean O.</td>
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<td>The efficacy of adjunctive Garcinia mangostana Linn. pericarp for bipolar depression: A 24-week double-blind, randomised, placebo-controlled trial</td>
<td>Dean O, Berk M, Ng C, Dodd S, Hopwood M, Turner A, Jacka F.</td>
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<td>Minocycline as an adjunctive treatment for unipolar depression – Thai samples to Deakin University</td>
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<td>Central Research Grants Scheme – Deakin University</td>
<td>Exploring the bioactive compounds and mechanisms of action in mangosteen pericarp</td>
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<td>Australasian Society for Bipolar and Depressive Disorders/ Servier Depression Grant</td>
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<td>NHMRC Project Grant (APP1078928).</td>
<td>Gene Expression Signature Technology to Repurpose Drugs for Bipolar Disorder.</td>
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<td>Cooperative Research Centres CRC for Mental Health</td>
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<td>Berk M, Martins R, Masters C, Horne M, Everall I, Dean B, Jablensky A.</td>
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<td>Alfred Deakin Fellowship</td>
<td>Association between dysglycaemia and bone material strength in men</td>
<td>Holloway, K.</td>
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International Collaborations with IMPACT SR

- Stanford University, Stanford, CA, USA
- Harvard Medical School, Cambridge, MA, USA
- Loyola University Chicago, Maywood, IL, USA
- Northwest University, Kirkland, Washington, USA
- Edward Hines Jr VA Hospital, Hines, IL, USA
- University of Cambridge, Cambridge, UK
- University of Oxford, Oxford, UK
- University College Cork, Cork, Ireland
- University of Southern Denmark, Odense M, Denmark
- Norwegian Institute of Public Health, Nydalen, Oslo
- University of Copenhagen, København, Denmark and Beijing Genomics Institute, Shenzhen, China [collaboration]
- University of Eastern Finland, Joensuu, Finland
- Norwegian University of Science and Technology, Trondheim, Norway
- University of Bergen, Bergen, Norway
- Lausanne University Hospital, Lausanne, Switzerland
- Université Paris-EST, Paris, France
- Autonomous University of Barcelona, Barcelona, Spain
- University of Barcelona, Barcelona, Spain
- Universidad Complutense, Madrid, Spain
- University of Cantabria, Santander, Spain
- Hospital Santa Maria, Lisbon, Portugal
- University of Lisbon, Lisbon, Portugal
- University of Toronto, Ontario, Canada
- University of Manitoba, Winnipeg, Canada
- Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil
- McGill University, Montreal, Quebec, Canada
- Universidad de Antioquia, Medellín, Colombia
- Universidade Estadual de Londrina, Paraná, Brazil
- Shiraz University of Medical Sciences, Shiraz, Iran
- Guojang Medical University, Guijiang, China
- Chulalongkorn University, Bangkok, Thailand

National Collaborations with IMPACT SRC

- The University of Melbourne, Parkville, Victoria
- Australian Catholic University, Melbourne, Victoria
- The University of Sydney, Camperdown, New South Wales
- The University of Western Australia, Nedlands, Western Australia
- Monash University, Clayton, Victoria
- The University of Queensland, St Lucia, Queensland
- University of New South Wales, Sydney, New South Wales
- James Cook University, Townsville, Queensland
- Queensland University of Technology, Brisbane, Queensland
- University of Queensland Diamantina Institute, Woolloongabba, Queensland
- Australian National University, Canberra, Australian Capital Territory
- Curtin University, Canberra, Australian Capital Territory
- Orygen - The National Centre of Excellence in Youth Mental Health, Parkville, Victoria
- Florey Institute of Neuroscience and Mental Health, Melbourne, Victoria
- Murdoch Children's Research Institute, Parkville, Victoria
- The Brain and Mind Research Institute, Sydney, New South Wales
- Menzies Research Institute, Hobart, Tasmania
- The Black Dog Institute, Sydney, New South Wales
- QIMR Berghofer Medical Research Institute, Brisbane, Queensland
- The Australian Institute for Musculoskeletal Sciences, Melbourne, Victoria
- University Hospital Geelong, Barwon Health, Geelong, Victoria
- Sir Charles Gairdner Hospital, Nedlands, Western Australia
- Royal North Shore Hospital, New South Wales
- Albert Road Clinic, Melbourne, Victoria
- The CADE Clinic, Sydney, New South Wales;
- The Melbourne Clinic, Richmond, Victoria;
- City of Greater Geelong, Geelong, Victoria;
- Kardinia Health, Geelong, Victoria;
- G21 Alliance, Geelong, Victoria;
- Community and Research Network (CARN), Geelong, Victoria.
Professor David Watters is a Past President of RACS (May 2015-May 2016) and since 2000 has been Professor of Surgery for Barwon Health, initially with Melbourne (2000-2010), and then Deakin University (since 2011).

He is actively engaged in advocating for global surgery and has spent almost 20 years in developing countries, including Papua New Guinea, Hong Kong, Zambia and South Africa. Professor Watters is an Edinburgh University graduate, and in addition to the FRACS, a fellow of the Edinburgh, Hong Kong, and East Central and Southern Africa Colleges of Surgeons. Deakin University appointed him an Alfred Deakin Professor (August 2016). In recognition of his contribution to surgery and surgical training in Papua New Guinea, he was awarded the Order of the British Empire (2012), and Rotary’s Paul Harris Fellowship (2000).
Research Focus

The Department of Surgery has a strong research focus and a productive publication output, and constantly strives to improve patient outcomes, areas of interest include:

- Microbiome (Micro-'scope)
- Robotics / HAPTICS
- Global Surgery
- Surgical Audit (Outcomes and Performance indicators)

The Department of Surgery promotes and encourages students to undertake PhD, Master of Surgery and Honours programs, which are supervised by department academics. The Department of Surgery is a unit within the Barwon Health Surgical Services Division. The unit is made up of three academic surgeons and a small but effective team of research and administrative support staff. Each year the Department of Surgery hosts a number of medical students and HMOs.

Professor David Watters is the Chair of Surgery. Professor Watters also holds the position of Barwon Health Divisional Medical Director of Surgery. Professor Glenn Guest is the Deputy Head of the Unit and also holds the position of Barwon Health Supervisor of Surgical Training; Professor Guest is also the Chair of Surgery for Epworth Hospital Geelong. Associate Professor Douglas Stupart is the Coordinator of the Deakin University, Barwon Health Surgical Rotation at University Hospital Geelong.

All three academics are practicing General Surgeons. Mrs Anne Vandewater is the Executive Assistant to the Chair of Surgery. Ms Christine Campbell and Ms Stephanie Kempton are the General Surgery Clinical Information and Trauma Audit Coordinators. Dr Eileen Moore is the Department of Surgery Post-Doctoral Research Fellow.

Major Achievements – Highlights from the past 12 Months

- 2017 has seen the First Trainee, James Ross, complete training in the new Regional Training Hub.
- Undergraduate Teaching has now been expanded into Epworth Hospital.
- Samantha Phillips was awarded Most Outstanding ‘Service Delivery/Health Systems’ Research Poster Award at the Barwon Health / Deakin University Research Week 2016.
- Suat Chin Ng completed her Master of Surgery (thesis submitted 2017), University of Melbourne.
- Mark Boydell completed his Master of Surgical Sciences (thesis submitted 2017, awarded Distinction), University of Edinburgh.

Looking Forward – Anticipated Highlights in the next 12 Months

Associate Professor Douglas Stupart
Convenor
Royal Australasian College of Surgeons, Victorian Annual Scientific Meeting
Geelong, 21-22 October 2017

Professor Glenn Guest
Convenor
General Surgeons Australia, Annual Scientific Meeting
Fiji, September/October 2018

Anticipated highlights over the next 12 months include: outcomes of prospective studies, writing and publishing 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. Prof Watters is a General Surgeon with research interests including history of surgery, surgical audit and performance, colorectal outcomes, perioperative mortality and global health. He has over 200 peer reviewed publications and 6 books including Stitches in Time - Two centuries of Surgery in Papua New Guinea (Xlibris, 2012) and ANZAC Surgeons of Gallipoli (RACS 2015).

Professor Glenn Guest MBBS FRACS BSc(Hons)
Professor of Surgery with Deakin University and General/Colorectal Surgeon with University Hospital Geelong, Barwon Health. Prof Guest is the Supervisor of General Surgical trainees for the South West Victorian Regional Hub and Director of the RACS AusAid Timor Leste Surgical Program. Prof Guest is the Chair in Surgery at the Epworth Hospital Geelong. Special interests include Colorectal and Minimally invasive Surgery, Surgical Education and Health in Developing Countries.

Associate Professor Douglas Stupart MBChB FCS(SA) FRACS
Associate Professor and Senior Lecturer in Surgery with Deakin University and General Surgeon with University Hospital Geelong, Barwon Health since 2010. Associate Professor Douglas Stupart completed his PhD with the Department of Surgery, Deakin University in 2015 and has special interests in Surgical Education, Colorectal Surgery, Laparoscopic Surgery and Inherited bowel cancers.
Mrs Anne Vandewater *Adv Dip of Management CPM AAPM Dip of Bus*
Executive Assistant to the Chair of Surgery

Appointed Executive Assistant to the Chair of Surgery in June 2015. Mrs Anne Vandewater coordinates and compiles the department’s annual report, research reports and related publications; liaises with the Deakin Clinical School in regards to clinical training, OSCE exams and research. She also has a special interest in Executive / Business Administration and manages and coordinates the Department of Surgery Research website www.surgical-research.com.

Dr Eileen Moore *BSc(Medical, Forensic & Analytical Chemistry) (Hons) PhD*
Post-Doctoral Research Fellow & Clinical Trials Coordinator Department of Surgery and Department of Anaesthesia, Perioperative Medicine & Pain Management

Dr Eileen Moore completed first class Honours (2008) and PhD (2013) with the Department of Psychiatry, The University of Melbourne and Department of Surgery, University Hospital Geelong. Eileen was awarded the Smart Geelong Researcher of the Year Awards in both 2011 and 2012 and has research interests in: surgical audits; surgical performance and outcomes. Eileen coordinates the clinical trials for the Department of Anaesthetics and supports a number of clinician-driven research initiatives in the Department of Surgery. Eileen is currently completing a course in Data Science and Management at Harvard University.

Ms Stephanie Kempton *BSc(Hons) MPsych(Neuro) CCN MAPS*
Trauma Audit Coordinator

Manages and coordinates the trauma database. Ms Stephanie Kempton prepares quarterly trauma audit reports for the Multi Trauma Audit Committee held in the Department of Surgery, University Hospital Geelong and provides research support to members of the department. The Smashed and Bashed Grand Rounds data is also generated from this trauma database.

Ms Christine Campbell *BNurs*
General Surgery Clinical Information Coordinator

Manages and coordinates the thyroid, inguinal hernia, cholecystectomy, and colorectal surgery databases. Ms Christine Campbell prepares annual audit reports, retrieves surgical data providing assistance to researchers in the department and has a special interest in Surgical Audit and Risk Management.

**Students**

**Wendy Crebbin** - PhD (by research, commenced 2015), Deakin University

**Andrew Cheng** - PhD (by research, commenced 2015), Deakin University
Thesis title: *Postoperative Atrial Fibrillation after Cardiac Surgery.*

**Siven Seevanayagam** - PhD (by research, commenced 2017), Co-supervised by Department of Surgery, University Hospital Geelong and Deakin University
Thesis title: *Health Informatics.*

**Amelia McGuinness** – PhD (by research, commenced 2016), Co-supervised by Department of Surgery and Department of Psychiatry, University Hospital Geelong and Deakin University
Thesis title: *Effect of bowel prep for colonoscopy on intestinal microbiota.*

**Suat Chin Ng** – MS, Master of Surgery (thesis submitted 2017), The University of Melbourne
Thesis title: *Is there any role for surveillance in elderly colorectal cancer patients post curative resection.*

**Mark Boydell** – MSSc, Master of Surgical Sciences (thesis submitted 2017, awarded Distinction), University of Edinburgh
Thesis title: *Diverticular Disease in Victoria, Australia.*

**Research**

**Global Surgery Indicators in the Pacific**
Glenn Guest, David Watters

**Global Surgical Indicators in Myanmar**
Glenn Guest, David Watters

**Cost-effective DALYs (Disability Adjusted Life Years)**
Matthew Stokes, Dominic Bagguley, Andrew Fordyce, Morgan Short, David Watters

**Furthering the evidence for the cost effectiveness of visiting surgical services in the Pacific Region; a retrospective review of cardiothoracic services from the RACS PIP**
Morgan Short, Matthew Stokes, Dominic Bagguley, Andrew Fordyce, Glenn Guest, David Watters
AV Fistula Reviews in Nauru
Matthew Stokes

Rates of Caesarean Section Study in the Pacific
Andrew Fordyce, et al.

Cleft Lip in Vanuatu
Elizabeth McLeod

Cleft Lip in East Timor
Priya Nandoskar, Mark Moore

Quantifying Access Delays to Bellwether Surgical Procedures under the Three Delays Framework at Hospital Nacional Guido Valadares (Timor Leste’s National Hospital)
Dominic Bagguley, Andrew Fordyce, Jose Guteres, Alito Soares, Edgar Valadares, Glenn Guest, David Watters

Diverticulitis Outpatient Treatment Trial (DOT)
Sam McClintock, Su Mei Hoh, David Watters, Glenn Guest, Prof Douglas Stupart, James Pollard, David Wardill, Pia Bernardi, Michael Sheridan, Eileen Moore

Barwon Health HREC Ref: 16/222

Do anticoagulants affect the outcome of faecal occult blood test
Jordy Dagen, Sonal Nagra, David Watters

Transanal Endoscopic Microsurgery (TEMS)
Jennifer Chang, Glenn Guest

Vomiting after elective colorectal surgery “which patients tolerate early enteral feeding?”
Divya Kishan, Eileen Moore, Glenn Guest, Douglas Stupart, David Watters

Barwon Health HREC Ref: 16/167

Botulinum toxin for the treatment of anal fistulae - a pilot study
Douglas Stupart, Glenn Guest, Eileen Moore, David Watters

Barwon Health HREC Ref: 16/148

Survey of diverticular disease in Victoria
Mark Boydell, David Watters et al.

Ten Years of State Major Trauma Audit (2006-2016)
Stephanie Kempton, Glenn Guest, David Watters, Bruce Bartley

Do metastatic colorectal cancer patients leak more?
Suat Ng, Glenn Guest, Douglas Stupart, David Watters

ANZ Emergency Laparotomy Audit Quality Improvement
David Watters

Thyroid Audit: examining postoperative complications and indicators of thyroid surgery
Jazmine Fisher, David Watters, Michael Borschmann

Measuring outcomes of clinical care: Victorian Emergency Laparotomy Audit using Quality Investigator
Claire Stevens, David Watters

TATME – Initial Audit
Glenn Guest

Colorectal Database Audit
Dominic Flanders, Andrew Holmes, Douglas Stupart

Colorectal Database Audit
Arie Sebastian, Douglas Stupart, Glenn Guest, David Watters

Dr Foster – Colorectal Surgery Mortality in Victoria
Ian Faragher, Glenn Guest, David Watters

Assessing the Surgical Burden of Disease in Victoria
Trafford Fehlberg & John Rose, David Watters

Barwon Health HREC Ref: 17/102

Association between serum iron levels and Surgical Outcomes: Do patients with low iron levels have worse surgical outcomes?
Eileen Moore, Glenn Guest, Douglas Stupart, David Watters

Unplanned Return to Theatre
Sonal Nagra, David Watters

Fistula Registry
Pia Bernardi, David Zula, Glenn Guest

Multi-Disciplinary Meeting Outcomes
June Oo, et al.

Perioperative Mortality Rate (POMR)
Glenn Guest, David Watters
A prospective, double blind, placebo controlled randomised trial of oestrogen hormone replacement therapy for faecal incontinence in post-menopausal women
Douglas Stupart, Glenn Guest, David Watters, Eileen Moore
Barwon Health HREC Ref: 16/149

Does the Alexis Wound Retractor increase the risk of conjunctival contamination from blood splashes during surgery?
Sally Ooi, Eileen Moore, Douglas Stupart
Barwon Health HREC Ref: 15/162

Facial Trauma
Kai Lee, et al.

Evaluating the clinical decision making course
Wendy Crebbin, Kyleigh Smith, David Watters
Barwon Health HREC Ref: 17/1

Vitamin D & Melatonin Levels and Incidence of Surgical Complications
Eileen Moore, David Watters

Reporting Research at University Hospital Geelong: utilising online resources
Anne Vandewater, Eileen Moore, Glenn Guest, Douglas Stupart, David Watters

Institute for Intelligent Systems Research and Innovation (IISRI) – How Surgeons View Teaching
Glenn Guest

Epidemiology of appendectomy and cholecystectomy
Syma Iqbal

Institute for Intelligent Systems Research and Innovation (IISRI) – Suture Biomechanical Parameters
Glenn Guest

Institute for Intelligent Systems Research and Innovation (IISRI) – U/S Relations
Glenn Guest

Collaborations with Department of Surgery

Department of Psychiatry

Effect of bowel prep for colonoscopy on intestinal microbiota (Micro-’scope)
Amelia McGuinness, Eileen Moore, Douglas Stupart, Glenn Guest, Christopher Hair, Michael Berk, Brisa Fernandez, Karsten Kristiansen, Felice Jacka, David Watters
Barwon Health HREC Ref: 15/129

Department of Radiology

Anatomical variation of the location of the appendix on computed tomography: is a focused abdominal pelvic CT scan feasible for the investigation of acute appendicitis?
Behdin Abed, Eileen Moore, Kevin Shaw

The University of Melbourne

Can the faecal microbiome influence food preferences in mice?
Douglas Stupart, Leni Rivera

St John of God Pathology

BRCA1 Immunohistochemistry in colorectal cancer
Douglas Stupart, Jordanco Nizamovski
Barwon Health HREC Ref: 17/84

Department of Anaesthesia, Perioperative Medicine & Pain Management

The Perioperative Administration of Dexamethasone and Infection in diabetic and non-diabetic surgical patients - The PADDI Trial
Andrew Iliov, Andrew Marriott, Kathryn Ives, Eileen Moore, Nicole Duggan, Tomas Corcoran
Trial ID: ACTRN12614001226695

Department of Anaesthesia, Perioperative Medicine & Pain Management

The effect of Peri-Operative Ondansetron on Bowel Recovery and Ileus after Colorectal and Small-intestinal surgery Trial
Andrew Tung, Douglas Stupart, Greg Weeks, Eileen Moore, Mohammadreza Mohebbi, Andrew Marriott
Barwon Health HREC Ref: 16/199
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
Over 6000 total joint replacement patients.

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

Joint Review Clinic Project
Establishing a remote model of care to enhance outpatient capacity utilising PROMs.

Biokin Study
Collaborative study with Deakin Faculty of Science Engineering and Built Environment (SEBE) biomechanics lab to assess normal shoulder function and range of motion pre and post-surgery.

Prosthetic Joint Infections
Clinical Biofilm and Patient Factor Analysis.

Health Pathways
Orthopaedic Simple Fractures in Practice Project (OrSiP).

AFL Shoulder Study
Outcomes following shoulder instability in elite players.

Research with National and International Collaborators
- ReSHAPE – Dr. Geoffrey Smith, St George and Sutherland Hospitals (National)
- CROSSFIRE - Whitlam Orthopaedic Research Centre (National)
- ANZHFR – Professor Ian Harris (National)
- The burden of shoulder pain in younger people presenting to orthopaedic outpatient clinics - Ilana Ackerman – Prof Richard Page Co-PI and Lead Centre
- HEALTH Study – McMaster University – (International)
- Pyrotitan shoulder arthroplasty study – Integra Health (International)
- Shoulder Replacement outcomes for Osteoarthritis, a Cross Registry Analysis – Kaiser Permanente (International).

Major Achievements – Highlights from the past 12 Months

The past year has seen Barwon Orthopaedic Research Unit (BORU) formally integrate into the Barwon Centre for Orthopaedic Research and Education (B-CORE). This incorporates the clinical research group and Barwon Joint Registry at Barwon Heath and the Academic Research Centre at the newly opened Education and Research Centre in the Bridget Clancy Wing at St John of God Hospital. Clinical and Laboratory-based research activity has increased at these sites and incorporates the Prosthetic Joint Infection (PJI) Laboratory based within the HERB level 3. The Ad-CaB patient recruitment and tissue sampling is reaching the final stage of collection before analysis can commence.

Other highlights include:
- Research Fellow commencement (Dr Stephen Gill)
- Move towards expanding musculoskeletal tissue banking
- Professor Andrew Carr, NDORMS, Oxford University - Visiting Professor - November 2017
– Publication output – 14 publications to date 2017, 17 publications in 2016
– Presentations - 31 National, 21 International and six poster presentations
– Prizes – short list AAOS Poster Presentation, San Diego
– Future Trial Site for Vic DHS and AOA NJRR Patient Reposted Outcomes (PROMS) Projects.

Looking Forward – Anticipated Highlights in the next 12 Months

The establishment of a research hub within St John of God Hospital will enable B-CORE to leverage clinical and potential tissue sampling from a wider patient cohort, as well as expand the BJR data cohort. A summary of emerging highlights include:

– Grant success to develop host tissue investigation into prosthetic joint infections
– Developing the CuBB (Cuff Biopsy and Biology) Study
– Expanding the Remote Joint Review Clinic Model of Care to other health centres
– Musculoskeletal Tissue around osteoarthritis
– Rotator Cuff Tendon metabolomics analysis
– Musculoskeletal Tissue Banking

Current Pathologies Collected

– Adhesive capsulitis
– Shoulder Instability
– Interim analysis of the Total Knee Replacement Tourniquet Trial (TKR-T study) RCT

Staff

Professor Richard Page BMedSci, MB, BS, FRACS (Orth), FAOrthA
Orthopaedic Shoulder and Upper Limb Surgeon, St John of God and Barwon Health Chair of Orthopaedic Surgery, Deakin University, Director of Orthopaedics, Barwon Health

Mr B Miller
Orthopaedic Lower Limb Surgeon

Mr S Williams
Orthopaedic Lower Limb Surgeon, Clinical Director Surgical and Critical Care Directorate

Mr R Angliss
Paediatric Orthopaedic Surgeon

Mr Chatar Goyal
Orthopaedic Lower Limb Surgeon

Stephen Gill
SJOG Orthopaedic Research Fellow

Mr D Bowyer
Orthopaedic Lower Limb Surgeon

Mr Kevin Eng
Orthopaedic Shoulder and Upper Limb Surgeon

Mr Graeme Brown
Orthopaedic Surgeon

Mr Andrew Thomson
Orthopaedic Lower Limb Surgeon

Mr Nathan Donovan
Orthopaedic Lower Limb surgeon

Samantha Watts
Orthopaedic Paediatric Co-ordinator
Students

Current PhD Candidates

Darcie Cooper
Biofilms and Prosthetic Joint Infections

Grants

<table>
<thead>
<tr>
<th>Grant Name</th>
<th>Project Title</th>
<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CIHR Foundation</td>
<td>Advancing the Care of Patients with Musculoskeletal Injuries Worldwide through Multi-National Research Initiatives</td>
<td>Professor Richard Page (Program Expert) Professor Mohit Bhandari (PI - McMaster University)</td>
<td>2016-2024</td>
<td>CDN $6,943,280</td>
</tr>
<tr>
<td>Industry: De Puy-Synthes</td>
<td>Suture Anchor Abrasion Analysis</td>
<td>Professor Richard Page Dr Chris Hurren Mr Adam Watson</td>
<td>2016-2017</td>
<td>$122,500</td>
</tr>
<tr>
<td>Barwon Health Education, Training and Research Profile Fund (ETRPF)</td>
<td>Adhesive Capsulitis Biopsy study - Ad-Cab Study</td>
<td>Professor Richard Page Associate Professor Sean McGee Mr Kevin Eng Mr Graeme Brown Dr Fiona Collier Sally Beattie</td>
<td>2015-2017</td>
<td>$31,875</td>
</tr>
<tr>
<td>Western Alliance Academic Health Science Centre</td>
<td>Chronic disease, injury and ageing in Western Victoria: opportunities to improve health delivery.</td>
<td>Pasco JA, Kotowicz MA, Livingston T, Khasraw M, Hakkennes S, Dunning T, Brumby S, Page R, Pedler D, Sutherland A, Venkatesh S</td>
<td>2015-2016</td>
<td>$100,000</td>
</tr>
<tr>
<td>Annual PhD candidate Support</td>
<td>B-CORE Barwon Health Prosthetic Joint Infection Project</td>
<td>Darcie Cooper</td>
<td></td>
<td>$12,924</td>
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<tr>
<td>Research Fellow Grant</td>
<td>St John of God Hospital</td>
<td>Prof Richard Page Dr Stephen Gill</td>
<td>2017-2018</td>
<td>$75,000</td>
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<tr>
<td>Australian Orthopaedic Association Research Foundation</td>
<td>Optimising Biofilm Analysis in Prosthetic Joint Infections</td>
<td>Prof Richard Page Prof Eugene Athan Darcie Cooper</td>
<td>2017-2018</td>
<td>$30,000</td>
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<tr>
<td>Industry Funding - Fellowship Education Support</td>
<td>De Puy-Synthes</td>
<td>Prof Richard Page</td>
<td>2016-2018</td>
<td>$160,000</td>
</tr>
</tbody>
</table>
Miscellaneous/Scholarship/Esteem

- Co-Chair - International Shoulder Arthroplasty Consortium (ISAC)
- Associate Editor – International Journal of Shoulder Surgery
- Editor – AOA National Joint Replacement Registry Annual Shoulder Report – 2009 to 2017
- Key Collaborations – McMaster University, Canada; Kaiser-Permanente, California; Ortopedkliniken-Danderyds sjukhus, Sweden; Whitlam Orthopaedic Research Institute, University of NSW.
- Australian Orthopaedic Association National Research Advisory Committee and AOA National Orthopaedic Academic Centre (NOAD)
- Co-Convener - Asia Pacific Orthopaedic Association (APOA) Meeting, Melbourne, 2016
- Co-Convener – AO Trauma Foundation, Hand and Wrist Cadaveric Course, Melbourne, 2016
- Faculty AO Trauma Foundation Upper Limb Faculty, Davos, Switzerland
- Co-Convener – International Reverse Shoulder Arthroplasty Symposium, Melbourne, 2017
Research Focus
The key focus of research undertaken at the Centre for Quality and Patient Safety Research (QPS) Barwon Health Partnership (formerly the Centre for Nursing and Allied Health Research), 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.

We are currently monitoring the outcomes and impact of the Guidelines on care planning for people with diabetes.

- Quality Use of Glucose Lowering Medicines: The Q-Med Study
Developing a suite of information about glucose lowering medicines for use by older people with diabetes, their family/carers and healthcare staff.

- Personalised Diabetes-specific Discharge Care Planning for Older People with Diabetes.
Developing diabetes – specific discharge planning information for older people with diabetes and their family/carers to support management of diabetes after a hospital admission.

- Revising of the Guidelines for Managing Diabetes at the End of Life.
Improving Clinician and Older People with Diabetes Communication and Decisions about Integrating Palliative and End of Life Care into Usual Diabetes Care.

Major Achievements – Highlights from the past 12 Months
Key highlights were:

- Outcomes and Impact of The McKellar Guidelines for Managing Older People with Diabetes in Residential and Other Care Settings Include:
  - The Guidelines were cited in the Australian National Diabetes Strategy 2016-2020.
  - Winning a Barwon Health Quality Award 2016 (Pillar 4: Research, Education and Training Excellence).
  - Finalist in the 2016 Victorian Public Healthcare Awards (Category: Excellence in Public Sector Aged Care).

- Quality Use of Glucose Lowering Medicines: Q-Med Study: Completed the project and the suite of information about glucose lowering medicines for use by older people with diabetes, their family/carers and healthcare staff.

- Personalised Diabetes-specific discharge care planning for older people with Diabetes Study: Completed the project and the diabetes -specific discharge planning information brochure for implementation with older people with diabetes after a hospital admission.

- Three presentations at peer review conferences.

- Winning a Barwon Health Quality Award 2016 (Pillar 1: Our Consumers at the Forefront).

- Quantifying the risk of unplanned transfer from subacute to acute care: using a horizon scan and prospective nested cohort study to develop a predictive model: Completed the regional arm of the study which is a multisite project undertaken by Deakin University’s Centre for Quality and Patient Safety Research and Partner hospitals.

- One peer review publication accepted to date.

- Awarded a Diabetes Australia Research Program grant for $59,896 in the 2017 grant round for the Project: Improving Clinician and Older People with Diabetes Communication and Decisions about Integrating Palliative and End of Life Care into Usual Diabetes Care.
– Published eight peer-reviewed papers, six book chapters, three other publications, delivered three peer-reviewed conference oral presentations and 14 invited presentations.

– Delivered five research and writing professional development workshops which are open to Barwon Health and Deakin University staff and students within nursing, allied health and medicine.

– Professor Dunning delivered the Annual World Diabetes Day Professorial Address (2016), *Personalising care for older people with diabetes: myth, mantra or reality?*

– Professor Dunning’s nomination to be inducted into the Sigma Theta Tau International Honour Society of Nursing International Nurse Researcher Hall of Fame in July 2017 was accepted.

– Professor Dunning was a Finalist for Victorian Senior Australian of the Year.

**Looking Forward – Anticipated Highlights in the next 12 Months**

– **The McKellar Guidelines for Managing Older People with Diabetes in Residential and Other Care Settings.** Commence revising the Guidelines in October 2017.

– **Launching and disseminating the Q-Med suite of information.** On 17 November, 2017 we will launch the Q-Med 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.

– **Improving Clinician and Older People with Diabetes Communication and Decisions about Integrating Palliative and End of Life Care into Usual Diabetes Care.** The project will be completed in December 2017. Information developed will be available for use by clinicians and older people with diabetes. The information will also be incorporated into the revision of the Guidelines for Managing Diabetes at the End of Life.

– **Revising, launching and disseminating the Guidelines for Managing Diabetes at the End of Life.** 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.

– Professor Dunning will be inducted into the Sigma Theta Tau International Honour Society of Nursing International Nurse Researcher Hall of Fame in July 2017.

– Professor Dunning will deliver the completed manuscript of her book about personalised care with older people with diabetes to publishers, Springer Verlag by the end of 2017.

**Staff**

**Professor Trisha Dunning AM, RN**

Credentialled Diabetes Educator, MEd, PhD.

Chair in Nursing – Barwon Health and Deakin University, Executive Director and member of the Centre for Quality and Patient Safety Research (QPS) Barwon Health Partnership. Principal Investigator for the Q-Med Study, McKellar Guidelines Project and the *Improving Clinician and Older People with Diabetes Communication and Decisions about Integrating Palliative and End of Life Care into Usual Diabetes Care* Study. Professor Dunning is an internationally recognised expert in diabetes care, author of numerous books, papers and chapters, and member of key local, national and International bodies.

**Dr Sally Savage BA (Hons), DipEd, PhD.**

Research Fellow

Investigator, Q-Med Study and Discharge Planning project. Dr. Savage resigned her position from the Centre for Quality and Patient Safety Research (QPS) Barwon Health Partnership in October 2016.
Ms Susan Streat RN, BA.
Research Assistant
Involved in many aspects of the Centre for Quality and Patient Safety Research (QPS) Barwon Health Partnership research projects and other activities, including 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.
Ms Duggan completed her project work at the Centre for Quality and Patient Safety Research (QPS) Barwon Health Partnership in November 2016.

Ms Clare Bennett RN
Volunteer Research Assistant. Completed research assistance with the Q-Med project in November 2016.

Ms Bernadette Unmack RN, Grad Cert Diabetes ED.
Completed project work with the Diabetes-Specific Discharge Planning for Older People with diabetes project in 2016.

Mrs Jo-Ann Stafford RN
Casual Research Assistant.
Completed project work for the Q-Med project in November 2016 and the Quantifying the risk of unplanned transfer from subacute to acute care: using a horizon scan and prospective nested cohort study to develop a predictive model, project in January 2017.

Students

Current PhD Students
Roslyn Gillies, supervised by Professor S Groves and Professor Trisha Dunning, will submit her thesis in April, 2017. Roslyn’s project is entitled, Measuring medicine doses; learned or invented: nurses’ strategies for calculating and measuring medicine doses.

Lisa-Jane Moody, supervised by Professor Trisha Dunning and Dr Sally Savage, submitted her thesis in December 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 Dr 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 until December 2016 then Professor Frances Quirk. Commenced her candidature in 2015. Sharyn’s project is entitled, How do health professionals consider and practice patient-centred care?

Giuliana Murfett, supervised by Professor Trisha Dunning and/or Rhonda Brown commenced her candidature in August 2016. Giuliana’s project is entitled, A competency based approach to Expanding the Diabetes Care Workforce. Confirmation of her candidature took place in May 2017.
## Grants

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<thead>
<tr>
<th>Grant Name</th>
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<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commonwealth Department of Health and Ageing (now the Department of Social Services) Aged Care Services Improvement Healthy Ageing Grant (ACSIHAG)</td>
<td>The Quality Use of Medicines (QUM) and Glucose Lowering Medicines (GLM) in Aged Care (the Q-Med study.</td>
<td>Professor Trisha Dunning, Dr Sally Savage, Ms Anne Hague</td>
<td>2013-2016</td>
<td>$600,000</td>
</tr>
<tr>
<td>Nurses Board of Victoria Legacy Limited Major Grant</td>
<td>Personalised diabetes-specific discharge care planning for older people with diabetes.</td>
<td>Ms Nicole Duggan, Professor Trisha Dunning, Dr Sally Savage</td>
<td>2015-2016</td>
<td>$20,000</td>
</tr>
<tr>
<td>Diabetes Australia Research Program 2017 General Grant</td>
<td>Improving clinician and older people with diabetes communication and decisions about integrating palliative and end of life care into usual diabetes care.</td>
<td>Professor Trisha Dunning</td>
<td>2017</td>
<td>$59,896</td>
</tr>
</tbody>
</table>

## 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 Healthcare, National insulin Inpatient chart pilot test advisory group 2013–
- Australian College of Nursing Aged Care Expert Advisory Group
- 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 and External Member Board of Studies 2016–
- Sanofi Advisory Group on safe informed use of Complementary and Alternative Medicines
- i-Validate Advisory Group – ICU End of Life Research Program Barwon Health 2016–
- Eli Lilly: Video interview with international visiting diabetes expert Professor David Strain 2016
International Committees

- Member International Diabetes Federation (IDF) Organising Committee Abstract Selection Committee, Western Pacific Region 2014-2016
- Co-Chair, Writing Group to develop IDF Global Guideline for Managing Older Adults with Type 1 Diabetes with a Focus on Older People, 2015-2016. Submitted to the IDF in December 2016.
- Member, IDF Nominating Committee 2015-2017.
- Member, IDF Organising Committee to develop and deliver the Inaugural (WPR) Diabetes Train the Trainer Program for Health Professionals, 2016.

Barwon Health

- Member, Research Review Committee (Professor Dunning 2007-, Susan Streat 2012–2016.
- Member, Barwon Health Human Research Ethics Committee, 2016.
- Member, Research Professoriate Committee 2012.
- Member, Deakin University and Barwon Health Research Committee 2013.
- Member, Teaching, Training and Research Governance Committee 2014.
- Member, Barwon Health and Deakin University Research Week Reviewing/Judging Panel 2016.
- Member, Barwon Health, Health Literacy Committee, Leading the Research Component 2016.

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, Faculty of Health, Faculty Grant Review Panel 2016.

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
- ADEA member, Research Foundation, 2016.
- ADEA Chair, Research Council, 2016
- ADEA member, Endorsement Committee 2016

National and State Committees

- Member, Diabetes Australia International Affairs Committee 2009–2017
- Member, Board of Management Diabetes Victoria 2011
- Member, Diabetes Australia – Victoria Clinical Advisory Committee 2014
- Member, Diabetes Australia Policies and Programs Committee 2014
- Member, Diabetes Australia Research Grant Program Assessment Committee 2014

Grant and Conference Abstract Assessment Panel – Grants

- Australian Diabetes Educators Association
- Deakin University Internal Grant Review Panel
- 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 Grant and Abstract Review Panel 2016
- Diabetes UK External Grants Reviews 2015
- NHMRC panel: Translational Research in Low and Middle Income Countries 2015-2016

*Professor Dunning unless otherwise stated
Barwon Health Research Roundups
Research

The Research Unit of the Department of Anaesthesia, Perioperative and Pain Medicine recruits more than 200 patients a year to Interventional Clinical Trials.

Local investigator-initiated randomised controlled trials are run in collaboration with researchers from Deakin University’s School of Medicine and IMPACT Strategic Research Centre, Monash University and the Florey Institute. Areas of research include post-operative cognitive decline, antiemetic therapy and perioperative 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, depth of anaesthesia monitoring, and fluid therapy in major abdominal surgery.

Major Achievements – Highlights from the past 12 Months
– Presentations to Association of Paediatric Anaesthetists of Great Britain & Ireland, Irish Association of Anaesthetists and the Quality Symposium at Colchester & Ipswich Hospitals.
– Clinical audit activity has revealed excellent local perioperative outcomes, specifically addressing areas such as post-operative delirium, nausea and pain management. Results of audit activity continue to inform clinical practice and guidelines, with demonstrable improvements in transfusion practice and adult and paediatric perioperative fluid management.
– Our senior research coordinator has been awarded a Master’s Degree.
– Our first clinical conference was a success, with attendees from around Victoria providing excellent feedback.
– Our publication track record continues to grow. A list of our unit’s recent publications is available at [www.garesearch.net](http://www.garesearch.net)
– The RELIEF and TRICS Multicentre Clinical Trials have been completed, with a significant proportion of participants recruited at Barwon Health
– The PADDI multicentre clinical trial is actively recruiting.
  • The locally-led PANACEA trial, funded cooperatively by an NHMRC CRC Grant, a Barwon Health scholarship grant, and Department of Anaesthesia research funds, has passed the halfway point for participant recruitment, with preliminary results presented at International Meetings. We have recently been awarded funding by the Deakin Medical and Molecular Research SRC to conduct exploratory biomarker analyses on plasma samples.
  • 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 250 participants expected to be recruited in the 2017 calendar year.

Looking Forward – Anticipated Highlights in the next 12 Months
– We anticipate the graduation of our first PhD Candidate, due to represent both Deakin University and Barwon Health at the upcoming 2017 Nobel Laureates Meeting.
– A second research coordinator to be awarded a Master’s Degree.
– Active contribution to research capacity generation at Barwon Health via new collaborations with the Austin Hospital and the formation of a Surgical and Critical Care Research Directorate.
**Staff**

Dr Andrew Marriott  
Staff Specialist Anaesthetist  
Principal Investigator, PANACEA Trial; Research Unit Supervisor

Adjunct Professor Steve Bolsin  
Staff Specialist Anaesthetist  
Expert in Quality Assurance, delivering invited lectures at international meetings and symposia

Dr Eileen Moore  
Research Fellow

Ms Kathryn Ives  
Research Coordinator

Ms Nicole Duggan  
Research Coordinator

**Students**

Mr David Skvarc, PhD candidate  
Cognitive outcomes in elderly patients undergoing major non-cardiac surgery

**Grants**

<table>
<thead>
<tr>
<th>Grant Name</th>
<th>Project Title</th>
<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sydney Parker Smith bequest, NHMRC CRC, Deakin MMR SRC, Deakin SOP PhD fund</td>
<td>PANACEA</td>
<td>Marriott, Skvarc et al</td>
<td>2015-2017</td>
<td>$115,000</td>
</tr>
</tbody>
</table>

**Miscellaneous/Scholarship/Esteem**

- Deakin University School of Medicine, IMPACT SRC, School of Psychology
- Monash University
- Austin Hospital
- Florey Institute
Barwon Medical Imaging (BMI) is the Medical Imaging Service for Barwon Health and provides high quality accessible imaging services and interventional radiology services for Geelong and the surrounding region. BMI provides imaging services and expertise for a large number of research studies, particularly in the area of Oncology. We are currently involved in providing the medical imaging and the specialist reporting required for more than 50 trials. This involves a huge amount of co-ordination, planning and resources.

BMI’s main research focus is in the area of new applications for interventional radiology. The primary research project currently being undertaken is a randomised controlled trial assessing the efficacy of endovascular embolisation of abnormal neovascularity associated with osteoarthritis as a pain relieving treatment for osteoarthritis, particularly when total knee joint replacement is not possible or is best delayed.

A detailed Retrospective audit of Ultrasound for query appendicitis has recently been completed and will be presented shortly. A number of other registrar research projects and audits are currently ongoing.

Major Achievements – Highlights from the past 12 Months

Publications

Publication of protocol for transcatheter arterial embolisation of abnormal knee neovascularity (EIEIO trial) in BMJ Open and commencement of this single-centre, parallel-arm randomised controlled superiority trial evaluating the effects of transcatheter arterial embolisation of abnormal knee neovascularity on pain, function and quality of life in people with knee osteoarthritis. Successful pilot project completed and study starting to recruit.

Presentations


Examining Clinical Utility of Imaging for inpatient Palliative Care. Presented at the 2017 RANZCR annual scientific meeting in October 2017 by Dr Anthony Cardin.


Computed Tomography (CT) for Acute Appendicitis and Correlation with Alvarado Score. Presented at the 2017 RANZCR annual scientific meeting in October 2017 by Dr Anthony Cardin. This study also won “Most Outstanding Health Outcomes/Clinical Practice Research Poster” and the Barwon Health/Deakin University Research week 2016.

Looking Forward – Anticipated Highlights in the next 12 Months

Clinical Research

Significant recruitment for the EIEIO trial.

Planning for other therapeutic trials using arterial embolisation procedures.

Staff

Dr Steve Landers
Interventional Radiologist – Project Lead for EIEIO Study

Dr Andrew Healy
Radiology Registrar - EIEIO Study

Dr Ben Harrison
Radiology Registrar – EIEIO Study

Dr Dickson Ma
Director of Nuclear Medicine - Nuclear Medicine Research
Research Focus

The Research endeavours of Cancer Services at Barwon Health include recruitment to a large number of International and National Clinical trials with an aim to improve the health and wellbeing of Western Victorian cancer patients. We collaborate with Deakin University, Peter MacCallum Cancer Centre and Barwon South Western Regional Integrated Cancer (BSWRICS) across different areas of research which include cancer outcomes, Areas of research include:

- Cancer 2015 Project- a Victorian, whole-of-system, large-scale (Framingham-type), prospective, longitudinal, epidemiologic study of genetic sequencing to screen for cancer genes that may either predict response to molecularly targeted therapeutics or predict resistance.
- Translational research focuses on genomic and epigenetic predictive biomarkers in malignant brain tumours.
- A study trialling an innovative approach to streamlining best practice in cancer management through the use of Smartphone technology. Given the reach of Smartphones, should this trial prove successful, it will provide the basis for additional modules supporting specific areas of care such as management of chemotherapy side effects and treatment compliance.
- In collaboration with the Pattern Recognition and Data Analytics (PRaDA) at Deakin University is undertaking large-scale pattern recognition utilising a number of healthcare data repositories for the optimisation, machine learning and feature extraction of cancer related patients outcomes enabling cross-disciplinary teams to collaborate and generate cancer related research outcomes.
- Investigating disparities in cancer outcomes across Western Victoria using the Evaluation of Cancer Outcomes Barwon South West (ECOBSW) Clinical Quality Registry facilitated by BSWRICS.
- Discrete choice experiment examining the preferences of people with cancer in regional areas.

Major Achievements – Highlights from the past 12 Months

Clinical Research

- Cancer 2015 Study has reached a recruitment of 2996 patients in April 2017 - close to the goal of 3000! Barwon Health recruited 483 patients in the total cohort more than any metropolitan hospitals. Further funding to allow follow-ups till March 2018.
- NABNEC feasibility pilot study completed with the activation of the phase II study.
- Over the past 12 months we have continued to expand the research portfolio of early phase studies. We currently have five active and open to accrual Phase 1b studies with several others in the pipeline.

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.

Health Services Research (BSWRICS)

- The 2009–2013 Evaluation of Cancer Outcomes Barwon South West (ECOBSW) Registry Quality Report was released showcasing five years’ of data and achievements.
- Clinical Quality Indicators across breast, colorectal and lung cancer were endorsed and finalised via the Indicator Working Groups comprising Clinicians from across the region. Indicators were shortlisted based on data available in the ECOBSW Registry, common presentations, evidence and importance on safety and quality.
– Epworth Geelong and South West Regional Cancer Centre
- Epworth Radiation Oncology were added to the ECOBSW Registry - HREC approval obtained March 2017.
– Published data on comparison of outcomes for cancer patients discussed and not discussed at a multidisciplinary meetings.

Population and Data Research
– The ACE Smartphone app was developed, tested, and successfully implemented at all participating health services across Geelong and metropolitan Melbourne including Barwon Health.
– Recruitment and data collection has commenced.
– Published Toxicity prediction in cancer using multiple instance learning in a multi-task framework.

Looking Forward – Anticipated Highlights in the next 12 Months

Clinical Research
– Implementation of a Clinical Trial Management System (CTMS) and to ensure all “Open to Accrual” studies are set up in the CTMS to allow robust financial tracking and workload planning for beginning of financial year 2018.
– Roll out of web-based portal to streamline document management.
– Finalise and implement full set of updated Clinical Trial departmental SOPs to conform with current guidelines and practice.
– Approval and Activation of at least one Phase 1a Study within our Department.
– Investigate the feasibility of using patient reported outcome measures (PROMs) for Cancer Services patients

Health Services Research (BSWRICS)
– Develop an online interactive data portal for health services across the BSW region to access specific cancer data to assist with service planning and quality improvement initiatives. This will include improving timely access to clinical indicator data.
– Expand the existing suite of clinical indicators to include additional tumour streams.
– Commence data collection at Epworth Geelong and South West Regional Cancer Centre ensuring all Health Services in the region providing cancer care are contributing to the ECOBSW Registry.
– Enhance collection and analysis of digital medical histories for Cancer Services patients assessing features that impact care and influence outcomes.

Translational Laboratory Research
– Completing projects on the epigenetics of malignant glioma and atypical teratoid rhabdoid tumors.
– Completing work on genomic and epigenomic predictive biomarkers in aza treated MDS Victorian Epigenetics Group (VEG).

Population and Data Research
– Completion of recruitment at all participating health services.
– Completion of follow-up data collection.
**Staff**

**Clinical Staff**

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

**Dr Michael Francis** MBBS FRACR  
Radiation Oncology

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

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

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

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

**Dr David Campbell** MBBS FRACP  
Medical Oncology

**Dr Shu Fen Wong** MBBS, FRACO, MAppSc  
Medical Oncology

**Dr Adam Broad** MBBS FRACP  
Medical Oncology

**Dr Lea-Anne Harrison** BSc (Hons), PhD  
Clinical Trials Manager

**Dr Adam Friebe** MBBS  
Haematology

**Ms Elesha Parigi** BSc (Hons)  
Clinical Trial Coordinator

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

**Ms Sharon Jones** BSc (Hons) MSc  
Clinical Trial Coordinator

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

**Ms Sonja Gauci** BSc  
Clinical Trial Coordinator

**Dr Hannah Rose** MBBS FRACP  
Haematology

**Ms Tina Smith** BSc  
Clinical Trial Coordinator

**Dr Helen Fairweather** FRACP FRCPA  
Haematology

**Ms Adele Stronach** BSc Hons  
Clinical Trial Coordinator

**Dr Sumita Ratnasingam** MBBS  
Haematology

**Dr Scott Betteridge** BSc, MSc, Phd  
Clinical Trial Coordinator

**Dr David Routledge** BSc Hons, MBChB, MSc  
Haematology

**Mr Seamus Wilson** RN, Diploma of Higher Education Adult Nursing, Grad Cert Teaching and Facilitating in Clinical Practice  
Clinical Trial Coordinator

**Dr Inger Olesen** MBBS FRACP  
Haematology

**Ms Melainie Giddings** RN, Bachelor of Nursing, Graduate Certificate in Cancer Care  
Clinical Trial Coordinator

**Ms Amy Dang** BSc (Hons), Postgraduate Diploma in Computer Science  
Data Manager

**Dr Madhu Singh** MBBS FRACP  
Medical Oncology

**Dr Violet Mukaro** B.LabMed (Hons), PhD, Grad Cert Pub Health  
Project Officer
Dr Maitham Mathlum  MBChB FRANZCR  
Radiation Oncology

Ms Andrea Dozzi  Grad Cert Clinical Trials Management  
Clinical Trials Assistant

Health Services Research  
(BSWRICS Data and Quality Unit) - Staff

Prof David Ashley  MBBS, FRACP, PhD  
Clinical Director

Ms Leigh Matheson  B HIM, B. Hsc, B Ed  
Health Information Manager

Dr Graham Pitson  MBBS, Grad Dip Computing Studies, FRACR  
Clinical Lead

Ms Andrea Muscat  BSc (Hons)  
Ms Melissa Ferguson  BSc (Hons)  
Dr Rasika Samarasinghe  BSc(Hons), PhD

Population and Data Research - Staff

Ms Dallas Byron  
Cancer Nurse Triage Coordinator, Andrew Love Cancer Centre

Ms Julie Ryan  
Cancer Nurse Triage Coordinator, Andrew Love Cancer Centre

Students

Current Students

Dr Caitlin Murphy  
Masters Student (Deakin University) - “Clinical and molecular analyses of NEDNAB: A phase II trial of tailored neoadjuvant therapy for Breast Cancer”
### Grants

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<th>Funding Amount ($)</th>
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</thead>
<tbody>
<tr>
<td>DHHS</td>
<td>What Matters Most Study</td>
<td>David Ashley, Charlie Corke, Renee Otmar</td>
<td>2016-2018</td>
<td>$132,000</td>
</tr>
<tr>
<td>Victorian Cancer Agency</td>
<td>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.</td>
<td>Miles Prince, Andrew Spencer, David M. Ashley</td>
<td>2014 – 2017</td>
<td>$2,996,569</td>
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<tr>
<td>Cure Brain Cancer Foundation</td>
<td>The VERTU Clinical Trial in Brain Tumours</td>
<td>Mustafa Khasraw</td>
<td>2015 – 2017</td>
<td>$500,000</td>
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<tr>
<td>Specialised Therapeutics Australia</td>
<td>NABNEC Clinical Trial – Neuroendocrine Cancer</td>
<td>Mustafa Khasraw</td>
<td>2015-2017</td>
<td>$50,000</td>
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<tr>
<td>UNICORN Foundation</td>
<td>NABNEC Clinical Trial – Neuroendocrine Cancer</td>
<td>Mustafa Khasraw</td>
<td>2015-2017</td>
<td>$31,000</td>
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<tr>
<td>NHMRC Partnership Grant</td>
<td>M-Health: Efficacy and Cost-effectiveness of a smartphone app to reduce unmet needs and distress in people with cancer (ACE): a randomised controlled trial</td>
<td>David M. Ashley, Patricia Livingston, Suzanne Chambers, Victoria White, Jacqueline Chirgwin, Meinir Krishnasamy, Catherine Mihalopoulou, John Reynolds, Mari Botti</td>
<td>2015-2018</td>
<td>$376,398</td>
</tr>
<tr>
<td>Cancer Council Grant</td>
<td>VERTU - Veliparib, Radiotherapy and Temozolomide trial in Unmethylated MGMT Glioblastoma</td>
<td>Mustafa Khasraw, John Simes, Mark Rosenthal, Kerrie McDonald, Eng-Siew Koh, David M. Ashley, Michael Buckland, Elizabeth Barnes, Christine Goh, Sonia Yip</td>
<td>2016-2018</td>
<td>$359,000</td>
</tr>
</tbody>
</table>

### Clinical Trials Income

- Collaborative Group Trial Income $117,362
- Sponsored Trial Income $1,140,603
- Grant Income $6000
- **Total Income for 2016/2017** $1,263,965

### Miscellaneous/Scholarship/Esteem

- **Professor David M. Ashley**
  - Executive Director Western Alliance
  - NHMRC – Academy Member
  - Victorian Cancer Agency- Council Member, Chair Clinical Trials Working Group
Members of the Haematology Oncology Trials Team are associated with a number of professional bodies including:

- 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 (Australia and New Zealand Melanoma Trials Group)
- ANZUP (ANZ Urogenital and Prostate Cancer Trials Group)
- ARCS (Association of Regulatory and Clinical Scientists)
- AYA (Adolescent and Young Adult) program
- COGNO (The Cooperative Trials Group for Neuro-Oncology)
- COSA (Clinical Oncology Society of Australia)
- MOGA (Medical Oncology Group of Australia)
- SCRS (Society for Clinical Research Sites)
- TROG (Trans-Tasman Radiation Oncology Group)

Key Collaborations include investigators at:

- Dana Faber Cancer Institute
- Deakin University
- Harvard University
- Monash Comprehensive Cancer Centre
- Monash University
- NSW Cancer Institute
- Peter Mc Callum Cancer centre
- Victorian Comprehensive Cancer Centre (VCCC) Alliance
- Victorian Cancer Council
- Western Alliance AHSC and partners
- Eastern Health
- Epworth HealthCare
- Griffith University
- Cancer Council Victoria
- University of Melbourne
- ACRESTA
- OPTUS
- North Eastern Metropolitan Integrated Cancer Service (NEMICS)
- Barwon South Western Regional Integrated Cancer Service (BSWRICS)
- Western & Central Melbourne Integrated Cancer Service (WCMICS)
**Research Focus**

The Department of Endocrinology and Diabetes is actively involved in the Geelong Osteoporosis Study (GOS), the Ageing Chronic Disease and Injury Study and the Geelong Frailty Studies examining the epidemiology of osteoporosis, diabetes and musculoskeletal deterioration in the Barwon Statistical Division and Western Victoria Primary Health Network. In collaboration with the Intensive Care Unit, we are examining the skeletal impact of critical illness and have examined the impact of glucose control on outcomes. The Diabetes Referral Centre is participating in recruitment of participants for the ENDIA (Environmental Determinants of Islet Autoimmunity). New collaborations have been initiated with the Centre for Eye Research Australia examining artificial-intelligence assisted diagnosis of diabetic retinopathy, Professor Paul Yieder and Professor Jon Watson, Deakin University examining liver fat content in pre-diabetes states and the Baker IDI examining bone health in diabetes.

The Endocrinology Clinical Trial Unit (CTU) undertakes clinical trials in disorders of bone and calcium, for which it is the Australian lead site for two studies of Romosozumab in the treatment of osteoporosis and a study of early intervention in Paget’s disease of bone. The CTU also undertakes clinical trials in the management and cardiovascular outcomes in diabetes and obesity. The CTU supports trials in Infectious Diseases and Paediatrics, including a phase 1b study of treatment of RSV in children.

**Major Achievements – Highlights from the past 12 Months**

- Recent analyses have focused on Trabecular Bone Score (TBS) and its ability to add to fracture prediction in diabetes and examination of bone microindentation, as well as its association with age, bone mineral density and fracture.

- GOS participants have been classified into categories of normoglycaemia, impaired fasting glycaemia and diabetes, based on fasting plasma glucose, use of antihyperglycaemic medication and self-report to examine the effect of abnormal glucose tolerance on bone mineral density, trabecular bone score, fracture, mortality and hospital admissions.

- In collaboration with the Metabolic Research Strategic Research Centre and Cardiology Department, we have described the impact of obesity and Type 2 Diabetes on cardiac structure and function.

- In collaboration with the Intensive Care Unit, we have provided evidence that critical care is associated with accelerated bone loss.

- The Barwon Health Personalised Healthcare project has been completed.

- 24 Abstracts have been presented or accepted for Local/National (8) and International Scientific Meetings (16).

- Associate Professor Kotowicz presented “Osteoporosis Risk Management” at Osteoporosis in Profile, Sydney July 24, 2016.

**Invited Faculty**

**Statistics Workshops**

- Dr Helen Barraclough (Senior Clinical Research Scientist, Eli Lilly Australia): Real World Evidence 21 September 2016.

**Diabetes**

- Associate Professor Wendy Davis (Western Australia University): Series Endpoints and Analytical Methods.

- Professor Tadej Battelino, Head of Department of Paediatrics and Adolescent Endocrinology, UMC Ljubljana and University of Ljubljana: Continuous Glucose Monitoring (CGM) New Breakthroughs: What’s next for CGM? 18 July 2016.

**Osteoporosis**

Looking Forward – Anticipated Highlights in the next 12 Months

- Three abstracts submitted to the combined meetings of the Australian & New Zealand Bone & Mineral Society, the International Federation of Musculoskeletal Research Societies and Japanese Bone & Mineral Society have been selected for oral presentation.

- An investigator-initiated randomised, placebo-controlled pilot study of denosumab to prevent critical illness-related bone loss is planned to commence in late 2017.

- A preliminary analysis of the Geelong Osteoporosis study examining the prevalence of frailty in the population is planned to provide preliminary data to support funding applications for the Geelong Frailty Study.

- The Artificial-intelligence assisted diagnosis of diabetic retinopathy for endocrinology outpatient clinics is planned to commence in the last quarter of 2017.

- NHMRC applications have been submitted for Project Grants to evaluate the Clinical utility of bone microindentation and Antipsychotics and Osteoporosis: Mechanisms and Clinical Consequences. Additional funding has been sought from Osteoporosis Australia to purchase additional Osteoprobe tips to continue the evaluation of the clinical utility of bone microindentation in men.

Staff

Associate Professor Mark Kotowicz
Associate Professor in Medicine: Barwon Health, Deakin University School of Medicine, Faculty of Health
Director, Department of Endocrinology and Diabetes, Barwon Health

Principal investigator Geelong Osteoporosis Study (GOS), Ageing Chronic Disease and Injury Study and the Geelong Frailty Studies
Director, Endocrinology Clinical Trials Unit

Interests: Epidemiology, disorders of bone and calcium, diabetes, dyslipidaemias

Professor Trisha Dunning
Professor Nursing Deakin University, Interests: Diabetes, management of diabetes in the elderly, frailty

Dr Adam Roberts
Visiting Medical Officer (VMO), Principal Investigator in Clinical Trials Unit, Interests: Diabetes, obesity, management of diabetes foot ulcers

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

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

Alana Sarah
Manager, Endocrinology Clinical Trial

Bree Sarah
Senior Clinical Trial Coordinator

Jo Chambers
Clinical Trial Coordinator and Diabetes Educator

Susan Lamb
Clinical Trial Coordinator

Kate Ellis
Clinical Trial Coordinator
Students

Trainees and Fellows

Dr. Elizabeth George, Advanced Trainee
Dr. Florene Ganawan, Advanced Trainee
Dr. Daniela Chan, Endocrine Fellow

RHD Students

Dr. Neil Orford, Monash University 2012 – PhD
Supervisors: Professor Jamie Cooper, Associate Professor Mark Kotowicz

Leilia Lelis Ferreira de Abreu, Deakin University 2014 – PhD
Supervisors: Professor Julie Pasco, Associate Professor Mark Kotowicz

Muhammad Amber Sajjad, Deakin University 2015 – PhD
Supervisors: Professor Julie Pasco, Associate Professor Mark Kotowicz, Dr. Kara Holloway, Dr. Neil Orford, Monash University

Pamela Rufus, Deakin University 2015
Supervisors: Professor Julie Pasco, Associate Professor Mark Kotowicz, Dr. Kara Holloway, Dr. Peter Burks

Monica Tembo 2017
Supervisors: Professor Julie Pasco, Associate Professor Mark Kotowicz, A/Prof Lara Williams, Dr. Kara Holloway.

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Miscellaneous/Scholarship/Esteem

External Professional Appointments - Associate Professor Mark Kotowicz

Associate Professor of Medicine, Deakin University, School of Medicine
Deakin University Course Standards Committee
Deakin University Faculty of Health Board
Principal Research Fellow, Associate Professor Melbourne Clinical School-Western Campus, Department of Medicine, The University of Melbourne, St Albans, Victoria, Australia
Chair, Therapeutic Committee, ANZBMS 2014 –
Steering Committee SOS Fracture Alliance
Endocrine Society of Australia nominee for Governance Council
Epworth Healthcare
Internal Medicine Clinical Institute
General Medical Advisory Council

Editorial Boards - Associate Professor Mark Kotowicz

Clinical Drug Safety
External Reviewer for NHMR
Research Focus

Current Areas of research focus include:

- Healthcare 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 past 12 Months

Professor Eugene Athan

- Invited speaker at Pathology Conference 2017 Infective Endocarditis in the 21st Century.
- Orthopaedic Prosthesis Meeting 2017 - Shoulder joint infections
- ISCVID 2017 Dublin.
- Co-Chair of two writing groups:
  - GESA Endoscopy Infection control Guidelines underway
  - CARI Hemodialysis Infection Control Guidelines in Draft form
- Chair of HICSIG of ASID.
- Member of HAI Subcommittee of ACSQHC.
- More than 40 publications in peer reviewed journals, including Zoster vaccine clinical trial published NEJM 2016.
- Associate Professor Daniel O’Brien co-opted onto the Vic. DoHHS TB Committee.
- Associate Professor Deb Friedman co-opted onto HICSIG of ASID.

Conference Presentations

- External Funding
  - Western Alliance - Dr Amanda Wade on Hepatitis Eradication in BSW region
  - Alicia Neels for Anti Microbial Stewardship in General Practice
  - NHMRC Fellowship Amanda Wade
  - Sarah Huffam Masters in BioEthics
  - Presentation at BH Grand Round AMS May 2017
  - James Pollard presented at HITH Society

Looking Forward – Anticipated Highlights in the next 12 Months

- Commencement of funded research projects
- Publications in Peer reviewed Journals, more than 40 per annum.
- Phase 3 Clostridium difficile vaccine trial lead site for Australia.
Staff

Professor Eugene Athan
Director, Department ID - Healthcare Infections, Endocarditis, Co-supervisor, six PhD and two Honours Students. Deakin University, University of Melbourne.

Associate Professor Daniel O’Brien
Deputy Director - Mycobacteria ulcerans program, University of Melbourne.

Dr Amanda Wade
Head Hepatitis Program - Hepatitis C PI Prime Study Burnet Institute.

Associate Professor Deborah Friedman
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 Alex Tai
ID Research Fellow - Mycobacteria ulcerans program, Spine Infections, PJI cohort study

Dr Ohide Otome
Infectious Diseases Research Fellow – Cost of Infective Endocarditis

Dr Eddie Chan
Infectious Disease Research Fellow – Blood stream infections in Hematology/Oncology.

Penny Radlj
CNC IPS - Hand Hygiene evaluation, School of Nursing, Deakin University

Alicia Neels
Senior Pharmacist - antimicrobial stewardship in GP

Rochelle Hamilton
CNC - Sexual Health – HIV and Contraception La Trobe 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
PhD Staph. Aureus virulence factors.

Rochelle Hamilton
PhD HIV and contraception.

Bilal Ahmad
Honours, Fitness cost of Biofilm production in Staph aureus

Ivana Cabiltes
Honours, Enterococcal bacteremia and Endocarditis
Grants

<table>
<thead>
<tr>
<th>Grant Name</th>
<th>Project Title</th>
<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Western Alliance</td>
<td>Hepatitis C regional model of care</td>
<td>Amanda Wade, E Athan</td>
<td>2017-2018</td>
<td>$80,000</td>
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<tr>
<td>NHMRC Fellow</td>
<td>Hepatitis C Fellow</td>
<td>Amanda Wade</td>
<td>2015-2017</td>
<td>$50,000</td>
</tr>
<tr>
<td>Western Alliance</td>
<td>AMS in GP</td>
<td>Eugene Athan</td>
<td>2016-2018</td>
<td>$50,000</td>
</tr>
<tr>
<td>Medtronic pacemaker infections project</td>
<td>Pacemaker infections project</td>
<td>E Athan</td>
<td>2017-2018</td>
<td>$50,000</td>
</tr>
</tbody>
</table>

Miscellaneous/Scholarship/Esteem

**National Affiliates/Committees:**
- AQSHC HAI Advisory Group
- ASHM
- ASID HICSIG
- HITH Society

**International Affiliates:**
- IDSA
- HIVMA
- MSF
- 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.
Research Focus

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

- Extended hour haemodialysis (home nocturnal haemodialysis)
- The effect of ultrafiltration rate on morbidity and mortality in haemodialysis
- "Green" Dialysis
- Participation in PDOPPS a world-wide multi-centre study of practices and outcomes in peritoneal dialysis
- Participation in clinical trials through the Australian Kidney Trials Network (AKTN)
- Participation in REDUCCTION a multi-site Australian study (Reducing the burden of dialysis catheter complications)
- Use of plastic cannulas to optimise successful early utilisation of AV fistulas in haemodialysis
- Empowering home haemodialysis patients with vascular access ultrasound
- Retrospective study to examine clinicopathological correlation of ANCA-associated GN
- Standardised Outcomes in Nephrology – Hemodialysis (SONG-HD) initiative

Major Achievements – Highlights from the past 12 Months

Awards/Honours

At the ADC in March 2017, Professor John Agar was awarded the American Dialysis Conference Lifetime Achievement Award in recognition of his immense contribution to Nephrology Medicine. This is only the third time (in 37 years) the recognition has been awarded to a non-American.

Local Meetings

- Victorian Home Therapies Education Day 1st December 2016 held in HERB, coordinated by Ms Rosie Simmonds
- Satellite Hemodialysis Education Day 15th December 2016 held in KHERB, coordinated by Ms Rosie Simmonds
- Vascular Access Workshop, November 2016 coordinated by Ms Vicki Smith
- Renal Study Day, May 2016, coordinated by Ms Leanne Sharples
- Renal Study Day, October 2016, coordinated by Ms Leanne Sharples

Looking Forward – Anticipated Highlights in the next 12 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, the effect of ultrafiltration on dialysis outcomes, and green nephrology. He is a contributor to the SONG-HD initiative (Standardised Outcomes in Nephrology – Haemodialysis).

**Dr Susan Blair**  
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

**Ms Leanne Sharples**  
Clinical Staff Specialist, Dialysis, Renal Services

**Dr. Shi Zhou Choo**  
Advanced Trainee in Nephrology, undertaking a further study: Individualised Fluid Allowance Calculator for Haemodialysis Patients, to be presented at ANZSN, Darwin 2017

**Ms. Rosemary Simmonds**  
NUM Home Dialysis Unit

**Ms. Vicki Smith**  
Vascular Access Nurse

**Associate Professor Christine Somerville**  
Nephrologist  
The entire renal team, including dialysis nurses and senior and junior medical staff contribute to this research.

**Grants**

<table>
<thead>
<tr>
<th>Grant Name</th>
<th>Project Title</th>
<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VRCN (DHHS) grant</td>
<td>Empowering the home haemodialysis patient with the use of portable hand held ultrasound</td>
<td>Rosemary Simmonds, Hannah Millier</td>
<td>2016-2017</td>
<td>$41,614</td>
</tr>
</tbody>
</table>

**Miscellaneous/Scholarship/Esteem**

**Professor 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**  
Member of the following DHHS Committee  
Victorian Renal Hub Reference Group (VRCHN)

**Ms Rosemary Simmonds**  
Member of the Home Dialysis Network Nationwide (under auspices of Renal Society of Australasia)

**Associate Professor Christine Somerville**  
Member of the following DHHS Committees  
Victorian Renal Clinical Health Network Leadership Group (VRCHN)  
Victorian and Tasmanian Renal Transplant Advisory Committee (VTRTAC)
Research Focus

The Occupational Therapy Service at Barwon Health has 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 2
- Student Volunteers supporting the GEM Breakfast Group
- Stress and Anxiety Management Group for GEM Inpatient Rehabilitation
- Defining the Role of an Allied Health Assistant in Hand Therapy

Data Analysis
- Occupational Therapy pathway in GEM

Data Collection
- SENSe Project

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

In 2016, Deakin University introduced a fourth year research placement and Barwon Health participated in nine research projects in the areas of student education, mental health, hand therapy, primary care, health promotion and rehabilitation. These projects were presented at a number of conferences. Thirty-eight topics have been presented to Deakin University for fourth year research projects in 2017. This indicates an interest in more clinicians participating in research.

Major Achievements – Highlights from the past 12 Months

Research Outcomes

Saebo: Patient and therapist experiences of the SaeboFlex: A pilot study, has been completed involving 12 clients and with upper limb hemiplegia. This study was published in 2017.

Fieldwork: A research project evaluating student and clinician satisfaction of new models of fieldwork. Data analysis. A paper has been submitted for publication in May 2017.

Looking Forward – Anticipated Highlights in the next 12 Months

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 10 clinical trial sites in this study, led by the Florey Institute of Neuroscience and Mental Health and La Trobe University. Fourteen staff have been trained from subacute programs. Data collection with clients has commenced.

Conference Presentations

Student Volunteers supporting the GEM Breakfast Group: A mixed methods evaluation

Stress and Anxiety Management Group for GEM Inpatient Rehabilitation: A pilot study
Melissa Mew, James Naismith, Taylor Crotch & Danielle Hitch 2017 Victorian Allied Health Research Conference

Translating practice into research: Outcomes from a successful health service/university partnership
Dani Hitch, Genevieve Pepin, Sue Rowan, 2017 Victorian Allied Health Research Conference
Defining the Role of an Allied Health Assistant in Hand Therapy.
Laura Isherwood 2017 Victorian Allied Health Research Conference

Creating Quality Practice Education Experiences: Impact of Barwon Health’s Occupational Therapy Practice Education Program 2017 Victorian Allied Health Research Conference
Sue Rowan; Kelli Nicola-Richmond; Curtin, Michael; Nikki Lyons, Nicole Shaw

What skills and attributes do Health Professionals need when working in the home to provide rehabilitation.
Nicole Shaw 2017 Victorian Allied Health Research Conference

Creating Quality Practice Education Experiences: Evaluation of a Large Regional Network’s Occupational Therapy Practice Education Program. Sue Rowan; Kelli Nicola-Richmond; Curtin, Michael; Nikki Lyons, Nicole Shaw, 2017 OT Australia National Conference.
E poster

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

Over the next 12 months, the Occupational Therapy service will continue to formalise a research plan aligned with the Barwon Health research plan focusing on building capability and capacity, and promoting a culture of research and innovation through partnerships with universities and other health agencies.

To focus on research that benefits consumers and Occupational Therapy practice as a whole across Barwon Health, specifically in the areas of assistive technology, mental health, cognition, pressure care, hand therapy, health promotion and utilisation of groups in rehabilitation.

The following research projects should have progressed as follows:

Publication
– Student Education Model

Conference Presentations
– Assistive technology
– Student Education Model 2
– Occupational Therapy pathway in GEM

Data Analysis
– SENSE project
– Horticulture as a medium for therapy
– Guiding practice – dementia
– Developing a concussion clinic
– Therapy groups in inpatient rehabilitation
– Distal radial fractures- clinical practice guidelines/patient experience
– Community mobility – scooter use

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

Barwon Health
Staff

Larissa Andriske
Grade 3 - Clinical Lead, Occupational Therapy, Neurology, Subacute Program
Completed NAB Community Grant for assistive technology.

Kate Ingwersen
Grade 3 - Occupational Therapy, Primary Care Program
Participated in research and presentations related to student education and grant applications for primary care OT’s working with clients with a mental disorder.

Laura Isherwood
Grade 1 - Occupational Therapist, Hand therapy
Participated in research and presentations related to use of Allied Health Assistants in hand therapy practice.

Nikki Lyons
Grade 3 - Occupational Therapy Student Coordinator
Participated in research and presentations related to student education.

Melissa Mew
GH Grade 4 - Occupational Therapy, Site Manager, Subacute Program
Lead SENSE research project at Barwon Health. Participated in research and presentations related to groups in inpatient rehabilitation.

James Naismith
Grade 2 - Occupational Therapist, GEM
Participated in research and presentations related to groups in inpatient rehabilitation.

Erin OShanassy
Grade 3 - Clinical Lead, Occupational Therapy, Inpatient Rehabilitation
Participate in research and presentations related to student volunteers supporting inpatient rehabilitation.

Robert Pereira
Grade 3 - Team Leader, Hospital Admission Risk Program (HARP)
Leading Interdisciplinary research at HARP into care coordination and the client and clinician experience. Published book chapters and a peer-reviewed journal article based on his PhD research on social inclusion and inclusive occupational therapy.

Sue Rowan
Manager, Occupational Therapy
Participated in research and presentations related to student education.

Nicole Shaw
Grade 3 - Occupational Therapy Student Coordinator/ Grade 2 - Occupational Therapist, HBRP
Participated in research and presentations related to student education and working in a HBRP.

Debbie Verikios
Grade 3 - Clinical Lead, Occupational Therapy, Trauma, Subacute Program
Participated in publications and presentations upper limb rehabilitation.

Students

Monique Walsh
Current Study - Masters of Public Health (Cancer Prevention), Flinders University

Sarah Tomlinson
Current Study - Masters of Clinical Leadership, Deakin University
Florey Institute of Neuroscience and Mental Health

Miscellaneous/Scholarship/Esteem

Sue Rowan

Committees

Deakin University, Occupational Therapy Advisory Board
Key Collaborations with named Organisations:
Charles Sturt University
Deakin University
La Trobe University
Florey Institute of Neuroscience and Mental Health
Research Focus

WIDE Smiles

The focus for research at the Oral Health Services is to provide the evidence-based data to guide improvements to the model of care for oral health. These improvements have included treatment such as minimal intervention dentistry and a holistic approach to treatment. The WIDE Smiles program reported using minimal intervention dentistry to implement a positive change in the oral health of children by applying fluoride directly to affected tooth surfaces. This was measured by screening and recording International Caries and Detection System (ICDAS-II) scores for children aged 3-7 years throughout the Geelong and Colac-Otway region. At a follow-up visit, scores were measured and found to be stable or improved in 92 per cent of tooth surfaces. A similar program was run for adolescents in the Colac region.

Diabetes Screening in the Community Dental Clinic

A novel setting for screening for diabetes in the dental setting is being piloted at Colac and Belmont Community Dental Clinics. 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 encourages inter-professional collaboration to facilitate a model whereby healthcare professionals and research teams work together for patient care.

Major Achievements – Highlights from the past 12 Months

- 13,537 children in the Barwon South West Region have received dental screening at their Early Learning Centre, Kindergarten or School
- 13,537 children’s condition of their teeth have been recorded in a research database that allows for changes and patterns to be analysed over time
- 67 Kindergartens, 28 Schools and 34 Early Learning Centres have collaborated in the project
- 39,646 tooth surfaces have received topical fluoride application
- 92 per cent of tooth surfaces remained stable or improved
- 36,474 tooth surfaces averted from further decay

Conference Presentations

2nd Victorian Allied Health Future Directions Conference

Embracing change in the dental practice to deliver better health outcomes—a type 2 diabetes screening program.

M. Smith, M. Rogers, J. Pawlak, T. Dunning

15th World Congress on Public Health

Assessing the barriers for improvement to oral health behaviour for adolescents in the Colac-Otway region.

M. Smith, L. Mayze, J. Pawlak,

A pilot study for screening diabetes in the oral health setting

M. Smith, S. Sharp, M. Rogers, S. Kellett, J. Pawlak, T. Dunning

A preventative approach to oral health for children in a regional/rural community in Victoria

A. Mason, L. Mayze, J. Pawlak, M. Rogers, S. Sharp, M. Smith

12th National Allied Health Conference

Embracing change in dentistry to deliver better health outcomes—diabetes screening an oral health pilot project.

M. Smith, S. Sharp, L. Carroll, M. Rogers, S. Law, J. Pawlak, T. Dunning
Looking Forward – Anticipated Highlights in the next 12 Months

WIDE Smiles

2017 Geelong Region: Dental screening at 31 Early Learning Centres, 18 Schools and 62 Kindergartens.

2017 Colac Otway Region: Dental screening at 2 Early Learning Centres, 6 Schools and 7 Kindergartens.

Publication of Wide Smiles book: a four year summary from 2013 to 2016

Diabetes Screening

– 2017 Diabetes Screening: Colac and Belmont Community Dental Clinics. To date 678 patients have been screened.


Conference Presentations for 2017

Embracing Change in dental practice to deliver better health outcomes:


– 6th APAC Forum, Gold Coast.

– The Health Roundtable, Brisbane.

Staff

Dr Michael Smith
Director of Oral Health Services, Research Interest: Oral Health, Leadership/innovator for the changes to the model of care in Regional Victoria.

Ms Sharon Sharp
Coordinator of Oral Health Services, Research Interest: Oral Health and management of changes to the model of care for both Health Service staff and patients.

Mrs Lindy Carroll
Administration Manager of Oral Health Services, Research Interest: Oral Health and Administration of changes to the model of care.

Associate Professor Margaret Rogers
Writer, statistician and data analyst, Research Interest: Evidence based data that supports a positive change to Health Services in Regional Victoria.

Dr Jacqueline Pawlak
Ethics Submission Coordinator, Research Interest: Collaborative, ethical ways to address public health issues with research.

Oral Health Services
Administrative Staff, Dentists, Dental Prosthetists, Oral Health Therapists, Dental Assistants.

Students

Ms Lara Mayze
Masters of Public Health (University of Melbourne)

Mrs Stacey Law
Masters of Public Health (University of Melbourne)

Miscellaneous/Scholarship/Esteem/Key Collaborations

The research program investigating strategies for remineralisation of children’s carious lesions could not proceed without the collaborative effort of the 32 Early Learning Centres, 70 Kindergarten's and Pre-School, 26 Primary Schools and 4 Secondary Schools throughout Geelong and the Colac Region who supported this program.
**Research Focus**

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 past 12 Months**

Palliative Care Research Group have monthly meetings which are attended by many disciplines. We currently have 8 research projects underway within the Palliative Care Program.

**Looking Forward – Anticipated Highlights in the next 12 Months**

- Presentation of results of ‘The evaluation of the multidisciplinary Cachexia and Nutrition Support Clinic—the patient and carers perspective’ at International conference and dissemination of results
- Evaluation, manuscript preparation and dissemination of results from research project ‘Evaluating the Life Stories program for Community Palliative Care from a patient and carer perspective’
- Evaluation, manuscript preparation and dissemination of results from research project ‘An ongoing research initiative of the Cachexia and Nutrition Support Service data’
- Evaluation, manuscript preparation and dissemination of results from research project ‘Palliative Radiotherapy Utilisation within a Palliative Care Unit’
- Evaluation, manuscript preparation and dissemination of results from research project ‘Understanding Health Literacy in Community Palliative Care Setting—Does Teachback training change practice related to information transfer—The clinicians’ perspective’
- Data collection, Evaluation, manuscript preparation and dissemination of results from 3 research projects currently in protocol development stage in the Palliative care program

1. Outcomes in palliative glioblastoma - a retrospective comparison of patients with glioblastoma and non small cell lung cancer admitted to the palliative care unit
2. Palliative Care patients and Emergency Department presentations
3. Community Palliative Care patients—dying at home—the enablers and the barriers
- Recruitment to ALTG trial PEARL: A randomised phase 3 trial of Palliative care Early in Advanced Lung Cancers
Staff

Professor Peter Martin
Special Interest Cachexia Research
Principle Investigator and Co-investigator for PaCCSC Trials

Dr Ian Grant
Co-investigator for PaCCSC Trials

Dr Peter Eastman
Principle Investigator and Co-investigator for PaCCSC Trials

Meg Harrison
Palliative Care Nurse Practitioner
Co-investigator for PaCCSC Trials

Dr Helen Farrell
Co-investigator for PaCCSC Trials

Michelle Wilson
Research Nurse-Palliative Care

Anna Dowd
Clinical Trial Coordinator-Palliative Care

Jacqui White
Manager, Palliative Care

Dr Buddika Mudugamuwa
Palliative Care Registrar

Matthew Ely
Physiotherapist

Melanie Davies
Palliative Care CNC/education Coordinator

Jennifer Walsh
Volunteer Coordinator

Miriam Ferres
Palliative Care Registrar

Lisha Kuruvilla
Pharmacist

Jenny Tresize
CNC-Acute Consult Team

Sue Berry
Nurse practitioner

Acute Consult Team

Jill Carter
CNC-Community Palliative Care

Ruth Morrison
Community Palliative Care Nurse

Cheryl Spiller
Community Palliative Care Nurse

Sarah Short
Community Palliative Care Nurse
## Qualitative and Quantitative Research

<table>
<thead>
<tr>
<th>Trial No.</th>
<th>Short Name</th>
<th>Disciplines Involved</th>
<th>Status</th>
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</thead>
<tbody>
<tr>
<td>15/202</td>
<td>The evaluation of the multidisciplinary Cachexia and Nutrition Support Clinic - the patient and carers perspective</td>
<td>Nurse practitioner, research coordinator, Deakin rep, Palliative care consultant, Medical student</td>
<td>Data analysis</td>
</tr>
<tr>
<td></td>
<td>Computed tomography (CT) scan-guided assessment of sarcopenia as a marker for cancer cachexia: a feasibility study</td>
<td>Palliative care registrar</td>
<td>Submitted for poster presentation</td>
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<tr>
<td>16/107</td>
<td>An ongoing research initiative of the Cachexia and Nutrition Support Service data</td>
<td>Palliative care registrars, Research coordinator, Nurse practitioner, Physiotherapist, dietician</td>
<td>Data collection</td>
</tr>
<tr>
<td>16/190</td>
<td>Palliative Radiotherapy Utilisation within a Palliative Care Unit</td>
<td>Palliative care Consultant, Research coordinator, Medical student, Radiation Oncologist</td>
<td>Data collection</td>
</tr>
<tr>
<td>16/207</td>
<td>Understanding Health Literacy in Community Palliative Care Setting - Does Teachback training change practice related to information transfer - The clinicians' perspective</td>
<td>Research nurse, Research Coordinator, Palliative care manager, Palliative care CNS</td>
<td>Data analysis</td>
</tr>
<tr>
<td>16/228</td>
<td>Evaluating the Life Stories program for Community Palliative Care from a patient and carer perspective</td>
<td>Palliative care manager, Volunteer Coordinator, Clinical trial Coordinator, Palliative care volunteer</td>
<td>HREC approved-to commence data collection in September</td>
</tr>
<tr>
<td>17/62</td>
<td>Outcomes in palliative glioblastoma - a retrospective comparison of patients with glioblastoma and non-small cell lung cancer admitted to the palliative care unit</td>
<td>Palliative care consultant, Palliative care registrar (volunteer), Clinical Trial coordinator</td>
<td>Protocol development</td>
</tr>
<tr>
<td></td>
<td>Regional Community Palliative Care Partnerships: A pharmacy outreach program. Aim: Evaluate the impact of pharmacist interventions in improving the outcomes for palliative care patients treated in the community by optimisation of therapy, reduction in medication misadventures and improved access to information for clinicians, patients and care givers.</td>
<td>Pharmacist</td>
<td>Manuscript submitted for publication</td>
</tr>
<tr>
<td>TBC</td>
<td>Palliative care patients and Emergency Department presentations</td>
<td>CNC-ACT, Nurse practitioner-ACT, Trial Coordinator, Rest of project team TBC</td>
<td>Protocol development</td>
</tr>
<tr>
<td>TBC</td>
<td>Community Palliative Care patients-dying at home - the enablers and the barriers</td>
<td>CPCN x 3, CNC-CPC, CPC-CNC &amp; education coordinator, Pall care consultant, Research Coordinator</td>
<td>Protocol development</td>
</tr>
</tbody>
</table>
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 more than 100 investigator-led or industry-sponsored clinical trials within Barwon Health.

Major Achievements – Highlights from the past 12 Months

Ongoing studies
- Partnered Pharmacist Medication Charting for general medicine patients (G Weeks, J Polmear – multi-site study)
- Regional Community Palliative Care Partnerships: A Pharmacy outreach program (L Kuruvilla, G Weeks)
- A Post-Hospital Discharge Pharmacist Medication Management Service for High Risk Patients using Telehealth (D Bortoletto)
- Towards improving Medication Safety: Development and validation of screening tools for patients at risk of medicine-related problems at presentation and after discharge from the Emergency Department. (L Abbott - multi-site study)
- Antimicrobial Stewardship in General Practice (A Neels, E Athan)

Research Collaboration

Pharmacy Master’s Students from the University of Utrecht, Netherlands through links with Monash University have undertaken research projects jointly supervised by the Director of Pharmacy.

Completed Projects
- Inappropriate prescribing among elderly admitted patients in a tertiary regional Australian hospital according to STOPP/START criteria
- An evaluation of the management of asthma and patients adherence to treatment recommendations in a tertiary care hospital

Ongoing Project
- Direct acting Antiviral agents (DAA) and Pharmaceutical care for Hepatitis C in a regional Australian setting

Conference Presentations

- Advancing Clinical Pharmacy practice through Radiopharmacy
- Exploring Patients’ Perception of Post-Hospital Discharge Follow-Up by a Pharmacist Using Telehealth

Clinical Trials

Paul Muir and Pene Nevett continued support for over one hundred clinical trials through management of the Pharmacy Department Clinical Trials Unit covering sponsor and investigator initiated trials in areas including Cardiology, Endocrinology, Mental Health, Anaesthetics and Oncology.
Looking Forward – Anticipated Highlights in the next 12 Months

The outcomes of an NHMRC collaborative grant application entitled ‘Varenicline and Nicotine replacement therapy for Smokers admitted to Hospitals (VANISH)’.

Outcomes of projects undertaken by pharmacy interns as part of the Monash University Foundation Program. Projects being undertaken in 2017 are:

- Nine or more prescribed medications. Potential for inappropriate prescribing and influence of pharmacist medication reviews in an Aged Care Lodge
- Rational Prescribing of Direct Acting Oral Anticoagulants
- Assessing Ketamine in the Emergency Department
- Patient Experience of Inpatient Medicines Information
- Appropriateness of antimicrobial prescribing in admitted patients with diagnosed Community Acquired Pneumonia (CAP)

Staff

Dr Greg Weeks
Director of Pharmacy
Advanced Pharmacy Practice, Workforce Redesign, Pharmacy Practice, Academic Supervisor

Dr Diana Bortoletto
Education and Training Pharmacist
Pharmacy Practice, Lead for Pharmacy Intern Projects, Telehealth Project

Alicia Neels
Antimicrobial Stewardship
Antimicrobial Stewardship Projects

Lisha Kuruvilla
McKellar Centre Pharmacy Manager and Palliative Care Pharmacist
Community Palliative Care Research Project

Garth Birdsey
Specialist Cardiac Pharmacist
Cardiology related Projects

Leonie Abbott
Emergency Pharmacist
Emergency Department Projects

Paul Muir
Clinical Trials Pharmacist
Clinical Trials Management and Data Safety Monitoring

Students

Current

Claire Jones
Masters of Health Administration (Latrobe University)

Sinead O’Toole
Masters of Clinical Pharmacy (Monash University)

Claire Passlow
Masters of Quality Services (Health and Safety) (UTAS)

Tenay Rankin
Masters of Clinical Pharmacy (Monash University)

Jess Rhodes
Masters of Clinical Pharmacy (Monash University)
## Grants

<table>
<thead>
<tr>
<th>Grant Name</th>
<th>Project Title</th>
<th>Names of Team Members</th>
<th>Period From - To</th>
<th>Funding Amount ($)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Workforce Innovation Grant (DHHS)</td>
<td>A Multi-Site Study, Partnered Pharmacist medication charting for general medicine</td>
<td>Greg Weeks, James Polmear, Deb Friedman, Adrian Low</td>
<td>2015-2017</td>
<td>$75,000</td>
</tr>
<tr>
<td>Advanced Practice in Allied Health Workforce Grant (DHHS)</td>
<td>Regional Community Palliative Care Partnerships: A pharmacy outreach program</td>
<td>Greg Weeks, Lisha Kuruvilla, Peter Martin</td>
<td>2016-2017</td>
<td>$135,000</td>
</tr>
<tr>
<td>Western Alliance</td>
<td>A Post-Hospital Discharge Pharmacist Medication Management Service for High Risk Patients Using Telehealth</td>
<td>Diana Bortoletto, Adrian Low, Kevin McNamara, Vincent Versace, Greg Weeks, Rachel Fyfe, Alice King, Michelle Wilson</td>
<td>2017</td>
<td>$35,000</td>
</tr>
</tbody>
</table>

## Miscellaneous/Scholarship/Esteem

- Monash University Faulty of Pharmacy and Pharmaceutical Sciences, Centre for Medication Use and Safety
- University of Utrecht
- Deakin University Faculty of Health, School of Medicine
Research Focus

The current areas of research focus include:

**Evaluating transcatheter arterial embolisation for improvement of pain in Osteoarthritis of the knee.**

Coordinating Principal Investigator: Dr Steve Landers.
Associate Investigators: Dr Andrew Hely, Dr Benjamin Harrison, Dr Stephen Gill.

Collaborators: Mr Peter Schoch, Ms Rachael Hely. The protocol for this study has been published: [http://bmjopen.bmj.com/content/bmjopen/7/5/e014266.full.pdf](http://bmjopen.bmj.com/content/bmjopen/7/5/e014266.full.pdf)

Two pilots have been completed and the RCT will commence in June / July 2017.

**SENSE Upper Limb Study**

Multicenter, multi discipline research project. Three therapists training in SENSE upper limb Ax.

Currently recruiting and assessing for the Sense research OT/PT combined international controlled trial and feasibility study.

**Evaluation of a Physiotherapist Led Arthroplasty Review Service in a large regional Hospital.**

Principal Investigator: Bill Reynolds
Associate Investigators: Peter Schoch, Professor Richard Page, Nic Maister

**The burden of shoulder pain in younger people presenting to orthopaedic outpatient clinics.**

Principal Researchers: Professor Richard Page
Investigators: Dr Ilana Ackerman, Peter Schoch, Kathy Fotis
Collaborators: Sally Beattie

**ICU Mobility Study**

Tom Crawford and the ICU research team.

In conjunction with the Alfred Hospital, Ballarat Hospital and Monash University.

This study is looking at the mobilisation of patients in the intensive care unit.

Activity Focused Environment Enrichment to Optimise Functional Outcome for Stroke Survivors.

Natasha Selenitsch, Dr Stephen Gill, David Meade, Dr Michael Bennett, Heather Smith

- Benchmarking with 26 rehabilitation services to determine activity levels has been completed
- Barriers to participation in activity have been identified
- Strategies to address barriers have been implemented

**Major Achievements – Highlights from the past 12 Months**

- Submission to Joanna Briggs Institute updated evidence summary and development of Recommended Practice Guidelines: Post Traumatic Amnesia Management guidelines for Adults following Head Injury
- Conference presentation: Transition Care Forum “Diversity” – Ballarat 24/11/16. Nicola Lloyd co-presented a case study on NDIS
- Poster presentation: “Patient values towards the discharge process” – Dr James Roth and Nicola Lloyd.

**Looking Forward – Anticipated Highlights in the next 12 Months**

- Completion of “Activity focused Environment Enrichment to Optimise Functional Outcomes for Stroke Survivors” project
- Complete SENSE UL AX on suitable clients
- Commence research project “What strategies can clinical partners and universities implement to enhance student engagement in non-metropolitan clinical placements?” This is a joint project between Monash University and Barwon 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.

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 Healthcare Practice (Paediatric Physiotherapy) (commenced)

Sarah Tinitali  
Masters of Physiotherapy by Research (commenced)

Nicola Lloyd  
Master of Applied Science (Research) (commenced)

Matthew Thackeray  
Master of Philosophy (Research) (applied, awaiting confirmation): Changes in muscle mass in ICU survivors.

Miscellaneous/Scholarship/Esteem

Sue Rowan

Committees:
– Deakin University, Occupational Therapy Advisory Board

Key Collaborations with named Organisations:
– Charles Sturt University
– Deakin University
– La Trobe University
– Florey Institute of Neuroscience and Mental Health
Other Research Groups
Research Focus

1. Surfboard related injuries presenting to University hospital Geelong especially head neck and ocular and the mechanisms associated with globe injury and methods of harm reduction

2. Changes in optic nerve parameters after vitrectomy surgery focusing on the role of induction of vitreous detachment

3. Indigenous access to eye services in the Barwon region.

Miscellaneous/Scholarship/Esteem

- Geelong Region Aboriginal Eye Health Project Advisory Group
- Deakin University School of Optometry
Clinical Trials at Barwon Health

(Industry Sponsored and Investigator Initiated)
Therapeutic Area Focus

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 1, completed its final 12-month participant follow-up earlier in 2016; and we have recently received authorisation to participate in both the PADDI trial2 and the TRICS III trial3. The PANACEA trial 4, 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.

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 CTs 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 CTs in Anaesthesia

Number of feasibilities conducted

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

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
Therapeutic Area Focus

The Geelong Cardiology Research Unit, located at Barwon Health University Hospital Geelong, has been at the forefront of cardiovascular research in Australia since opening in June 2000. The research unit is dedicated to providing the Geelong and the wider community with access to specialised services and developing new treatments, through its conduct of both outpatient and in-patient trials under the direction of Associate Professor John Amerena.

A dedicated team of healthcare professionals make up the research unit, including a number of highly experienced clinical trial registered nurses, a medical research fellow, and an administrative clinical trials assistant. The team is also supported by a number of experienced Cardiologists who perform the role of sub-investigators.

The unit participates in large scale global research trials in cardiovascular disease including heart disease, heart failure, hypertension, cholesterol, atrial fibrillation and Type 2 Diabetes.

Whilst the research team members are essential to facilitate the running of a clinical trial, the research would not be possible without the patient volunteers who give their time so willingly to be involved in the projects being conducted.

Typically a patient is invited to participate in a trial by a member of the research team, or a patient may make an enquiry after seeing a newspaper advertisement or hearing an advertisement on the radio. It is fabulous that many research participants are so generous with their time, and find their research experience so positive, that they return to participate in further studies following the completion of their initial trial.

Participation in a study begins with a detailed discussion with Associate Professor Amerena or another Research team Doctor, and if happy to proceed, a consent form that outlines all facets of the trial will be signed.

For the research participant, involvement in a clinical trial will generally involve collection of the participant’s demographics, past medical history and current medications, as well as the performance of several screening procedures including:

- Physical assessment, Blood Pressure taken, Weight/Height, Pulse, ECG’s & Blood and urine tests.

Eligibility for the study will be based on these assessments, which are performed at no cost to study participants. Study length can vary in duration from six months to more than five years, with the participant being carefully monitored throughout the course of the study.

Over the years, many of the studies conducted by the Cardiology Research Unit have resulted in the development of new therapies, treatment options and interventional procedures; that are now considered global standard of care for cardiovascular disease.

Particular highlights of the research conducted in 2016/2017 include being amongst the highest recruiting sites in Australia for the majority our involved studies. Less glamorous, but no less important to us, we have also been frequently complimented on the quality of data collected, and the promptness with which required ethics reports have been completed, particularly when we have assumed the responsibility for being a lead co-ordinating site for Australia. Team members have also been invited and accepted invitations to speak at meetings with their peers.

A highlight every year is the annual research participant Christmas party, an event which provides us with the opportunity to thank research participants for their invaluable contribution to research and support. This event was well attended on 16 December, with approximately 180 research participants being involved in the singing, dancing and other festivities. As a department, we are always well-supported by the local Geelong and greater western district GP network, which is so pivotal to the successful conduct of any trial. We would like to thank them and the many participants who have helped support our department over the past 17 years and we look forward to continued support in the future.
Number of Industry Sponsored Clinical Trials Feasibilities and Start-Ups

Currently participating in 18 different clinical trials, mostly phase two and three pharmaceutical sponsored trials.

We have had five new sponsored studies begin in the past 12 months and currently have about 300 participants involved in research. The number of participants recruited in the past 12 months is difficult to determine, as we have had studies start and stop. Estimation would be approximately 65. We have reviewed approximately six study feasibilities, some of which we are now participating in.

Number of Investigator Initiated Clinical Trials feasibilities and Start-Ups

Currently we are involved four in investigator-initiated trials. One investigator-initiated feasibility was reviewed this year. We have recruited about 40 participants into investigator initiated studies in the past 12 months.

We are continually amongst the top recruiting sites in Australia. We also had a senior manager from a pharmaceutical company come to co-monitor one of our studies, who gave us a rave review. Her comments were that our site was the best site she had seen in Australia, we were organised, professional, and our site files and systems for tracking were second to none. She particularly loved our source documentation their detail and systems involved.

Looking Forward – Anticipated Highlights in the next 12 Months

We hope to continue to be amongst the top Australian recruiting sites and maintain our high standard of participant care. We want our participants to feel important, well cared for and have no lost to follow-ups.
Therapeutic Area Focus

The Clinical Trial Unit (CTU) commenced five new projects in the 2016/2017 year, with several projects finishing. There are currently nine projects open in CTU and 234 active participants. The total funding is a cost recovery model and for the 2016/2017 year approximately $500,000 was attracted to the unit by these projects. CTU has 4.8 FTE with two Division 1 nurses (One is a Diabetes Educator), Two Medical Scientists and One Nuclear Med Tech / Scientist qualified in Bone Densitometry. The unit’s broad range of skill sets allows for the diversity of research and therapeutic areas to be appropriately managed with regards to patient care.

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

Number of Industry Sponsored Clinical Trials Feasibilities and Start-Ups

Below is a current summary of the activity in the CTU for 2016/2017.

Table 1. Summary of CTU research projects for 2016/2017

<table>
<thead>
<tr>
<th>BH Project No.</th>
<th>Short Title</th>
<th>Site Type</th>
<th>No. of Patient Enrolled</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>12/28</td>
<td>ARCH</td>
<td>Lead Site (Endo)</td>
<td>7</td>
<td>Waiting for Close Out Visit</td>
</tr>
<tr>
<td>13/17</td>
<td>Frame</td>
<td>Lead Site (Endo)</td>
<td>12</td>
<td>Closed out in May 2017</td>
</tr>
<tr>
<td>16/49</td>
<td>Zoster 056</td>
<td>Lead Site (ID)</td>
<td>31</td>
<td>Ongoing</td>
</tr>
<tr>
<td>16/50</td>
<td>Zoster 049</td>
<td>Lead Site (ID)</td>
<td>27</td>
<td>Ongoing</td>
</tr>
<tr>
<td>09/27</td>
<td>ZiPP</td>
<td>Single Site (Endo)</td>
<td>8 Interventional</td>
<td>Ongoing, National Lead for 7 Australian Sites</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>4 observational</td>
<td></td>
</tr>
<tr>
<td>14/104</td>
<td>Ertu</td>
<td>Participating Site (Endo)</td>
<td>9</td>
<td>Ongoing</td>
</tr>
<tr>
<td>14/18</td>
<td>C.diff</td>
<td>Lead Site (ID)</td>
<td>6</td>
<td>Completed waiting on COV–highest recruiter in Australia</td>
</tr>
<tr>
<td>13/76</td>
<td>DECLARE</td>
<td>Collaboration with CRU (Endo)</td>
<td>36</td>
<td>Ongoing (highest recruiter 70pts total with CRU)</td>
</tr>
<tr>
<td>15/79</td>
<td>DELIGHT</td>
<td>Collaboration with CRU (Endo)</td>
<td>1</td>
<td>Added as rescue site April 2017</td>
</tr>
<tr>
<td>16/3</td>
<td>Regeneron</td>
<td>Lead site (Paeds / ID)</td>
<td>0</td>
<td>Closed (6 weeks recruitment)</td>
</tr>
<tr>
<td>16/4</td>
<td>JNJ RSV</td>
<td>Lead Site (Paeds / ID)</td>
<td>1</td>
<td>Currently on hold at sponsor request</td>
</tr>
<tr>
<td>16/121</td>
<td>RESP16001/ Elume</td>
<td>Participating Site (ID)</td>
<td>111</td>
<td>One month recruitment</td>
</tr>
<tr>
<td>16/208</td>
<td>JNJ Adult RSV</td>
<td>Participating Site (ID)</td>
<td>0</td>
<td>Recruitment open</td>
</tr>
<tr>
<td>17/66</td>
<td>Rainbow</td>
<td>Participating Site (endo)</td>
<td>0</td>
<td>Recruitment Open</td>
</tr>
</tbody>
</table>

Note: Total number of participants in CTU trials for 2016/17 was 234.
Significant Achievements in the past 12 Months

– CTU conducted their first device trial investigating a hand held diagnostic for influenza, recruiting 111 patients during the one month recruitment period.

– Dr James Pollard has now been involved as Principal Investigator on two clinical trials and is also being approached for ID studies, in addition to Professor Eugene Athan. This has expanded the capacity and interest in areas of ID trials.

Looking Forward – Anticipated Highlights in the next 12 Months

There are currently eight projects in start-up within CTU. Four in Endocrinology and three in Infectious Disease (ID) and as an ID one as a Paediatrics and ID collaborative project. The key highlight for these coming projects include:

– Ongoing involvement in Phase 1b paediatric RSV studies with ID and paeds team.

– Support from the JDRF network has led to our site being approached to be involved with a Baker IDI IIS Phase 2 study in T1DM

– C.diff vaccine study has broadened our scope of collaboration across the organisation to involvement of the McKellar Centre, having obtained the support from Dr Rob Malon to involve McKellar patients in the trial.
Therapeutic Area Focus

The Haematology Oncology Trials Team would like to highlight the following clinical trial departmental achievements that have taken place during the 2016/2017 financial year:

Over the past 12 months, we have continued to expand the research portfolio of early phase studies. This ongoing 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 five active and open to accrual Phase Ib studies with several others in the pipeline.

Number of Investigator Initiated Clinical Trials Feasibilities and Start-Ups

- Nine Investigator Initiated Haematology/Oncology Clinical trials were opened during the 2016/2017 financial year
- Thirteen Investigator Initiated Haematology/Oncology Clinical trials remain open to accrual and are still looking for patients
- Seventy-six total patients were recruited to Haematology/Oncology clinical trials during the 2016/2017 financial year
- Approximately eighty Haematology/Oncology feasibilities were conducted during the 2016/2017 financial year

Number of Industry Sponsored Clinical Trials Feasibilities and Start-Ups

- Nine Industry Sponsored Haematology/Oncology Clinical trials were opened during the 2016/2017 financial year
- Eighteen Industry Sponsored Haematology/Oncology Clinical trials remain open to accrual and are still looking for patients

Significant Achievements in the past 12 Months

- Recruitment targets have been reached, or even exceeded, on several studies and we have been able to recruit either the first patient globally or within Australia on a number of studies which we are involved in
- As a result of our ongoing growth and increased trial portfolio, we have successfully secured approval for a business case to increase the staffing levels within our team to include an additional 2.0 FTE study coordinators and a 0.5 FTE dedicated clinical trials pharmacist
- Collaboration with the day oncology unit in the ALCC to provide a dedicated Clinical Trials clinical space
- Roll out of voluntary placements within our department in collaboration with Deakin University medical students
- The celebration of International Clinical Trials Day in May 2017 was a wonderful opportunity to engage the public on the importance of clinical trials with support and organisation this year from the Research Directorate. We conducted a Double Blind Randomised Control Trial (RCT) to test the hypothesis that sugar free cakes taste as good as cakes made with sugar. 115 patients were recruited to taste either “traditional” or “sugar free” cakes to determine if there was a discernible taste difference, assessed by a subjective score out of 10. In conflict with current health promotion messages, our RCT suggests that cakes made with sugar taste significantly better than sugar free cakes and the hypothesis is not supported
Looking Forward – Anticipated Highlights in the next 12 Months

- Implementation of a Clinical Trial Management System (CTMS) and to ensure all “Open to Accrual” studies are set up in the CTMS to allow robust financial tracking and workload planning for beginning of financial year 2018

- Roll out of web based portal to streamline document management

- Finalise and implement full set of updated Clinical Trial departmental SOPs to conform with current guidelines and practice

- Approval and Activation of at least one Phase 1a study within our department
Dr Olivia Dean BSc (Hons) PhD. Director of the IMPACT TRIALS, a 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.

Using an integrated series of approaches, IMPACT research addresses both mental and physical health. The psychiatric arm of IMPACT aims to develop novel therapies for the treatment of major psychiatric disorders. In tandem, we research the biochemical underpinnings of these disorders including alterations in oxidative biology, inflammation, neurogenesis and mitochondrial dysfunction as well as lifestyle risk factors such as diet. IMPACT’s treatment developments have had both national and international exposure.

Summary of clinical trials at IMPACT

Proposed trials (pending funding)
- Minocycline for depression (large scale)
- Mangosteen for bipolar depression (large scale)
- Angiotensin inhibitors and depression
- Methamp. cessation
- Tobacco smoking cessation

Staff
- Alyna Turner
- Lesley Berk
- Ellie Brown
- Adam Walker
- Kay Hasebe
- Bianca Kavanagh
- Melanie Ashton
- Georgia Caruana

Students (All in Deakin, School of Psychology)
- David Skvarc
- Declan Bourke
- David Camfield
Therapeutic Area Focus

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.

Intensive Care Unit (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. Eighty-two intensive care patients were enrolled in Clinical Trials in the 2016 calendar year and multiple observational audits were also undertaken.

Trials Income

- ANZICS – CTG/Collaborative Trials Income (2016 calendar year) - $28,000
- Commercial trial income (2016 calendar year) - $2500

Grant Funding

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

Current projects (2016-2017)

ASPECT

A Prospective, Randomised, 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.

- No patients recruited in 2016
- Revenue $2500

Feasibility Assessments Conducted

- 1x Commercial Trial

Number of Industry Sponsored Clinical Trials Feasibilities and Start-Ups

ANZICS Clinical Trials Group projects (2016)

<table>
<thead>
<tr>
<th>Study</th>
<th>Patients Enrolled (2016 Calendar Year)</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>ADRENAL - Adjunctive corticosteroid treatment in critically ill patients with septic shock</td>
<td>7</td>
<td>$3950</td>
</tr>
<tr>
<td>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</td>
<td>3</td>
<td>$1400</td>
</tr>
<tr>
<td>SPICE III - Sedation Practices in Intensive Care Evaluation Early Goal Directed Sedation Compared with Standard Care in Mechanically Ventilated Patients in Intensive Care</td>
<td>9</td>
<td>$8250</td>
</tr>
<tr>
<td>TRANSFUSE – Standard Issue Transfusion versus fresher red blood cell use in intensive care - a randomised controlled trial</td>
<td>12</td>
<td>$5500</td>
</tr>
<tr>
<td>TARGET – The Augmented versus Routine approach to Giving Energy Trial</td>
<td>46</td>
<td>$0 (to be paid in 2017)</td>
</tr>
</tbody>
</table>
Other Collaborative projects 2016

<table>
<thead>
<tr>
<th>Study</th>
<th>Patients Enrolled (2016 Calendar Year)</th>
<th>Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>Neb-Hep ALI - Nebulised Heparin for Lung Injury</td>
<td>4</td>
<td>$5340</td>
</tr>
<tr>
<td>PROTECTIN - PROspective TREatment to Counter the Systemic Inflammation Response Syndrome with AspirIN</td>
<td>1</td>
<td>$0 (to be paid in 2017)</td>
</tr>
<tr>
<td>REACT Shock - Relative Hypotension and Acute Kidney Injury in Patients with Shock</td>
<td>5</td>
<td>N/A</td>
</tr>
</tbody>
</table>

Barwon Health Investigator-initiated projects - 2016
- Long term outcomes in of ICU patients - 18 patients completed to date
- Red cell changes in septic shock
- iValidate research program - data from more than 500 patients collected

New/Pending Projects - 2017
Barwon Health Investigator-initiated
- Denosumab as a potential therapy to prevent bone loss in female ICU patients
- Continuous Renal Replacement Therapy audit
- Targeted Temperature Management audit
- Long term outcomes of patients who received renal replacement therapy
- Spinal injuries in trauma patients managed in a regional ICU
- Validation of a mobility score in ICU
- Predictors of platelet use in cardiac surgical patients

ANZICS-CTG / Collaborative Studies.
- STARRT-AKI - Standard vs Accelerated initiation of Renal Replacement Therapy in Acute Kidney Injury
- REMAP-CAP - Randomised Embedded Multifactorial Adaptive Platform Trial for Community-Acquired Pneumonia
- LUCID - Liberal glucose Control in critically ill patient with pre-existing type 2 Diabetes: a phase II multicentre randomised controlled trial
- REVISE - Re-EValuating the Inhibition of Stress Erosions: Gastrointestinal bleeding prophylaxis in ICU
- Beta-Lactam InfusioN Group (BLING) III Study
- PIPICU - Pressure Injury Prevention in the Intensive Care Unit

Number of Investigator Initiated Clinical Trials feasibilities and Start-Ups
- Australia and New Zealand cardiac arrest Outcome Determinants, and ECMO suitability study (ANZ-CODE)
- Validation of a mobility score in ICU

Significant Achievements in the past 12 Months.
Our unit has an established multi-disciplinary research group, which meets on a weekly basis to discuss the progress of current clinical trials, consider new clinical trials and provide a forum for the discussion of clinical audits and observational audits (BH Investigator Initiated and Collaborative).

We are one of the first sites to recruit patients in the TARGET study and have had a strong consistent recruitment over the past twelve months.

We have a strong commitment to observational audits to describe practice and act as a basis for new clinical trials.

Looking Forward – Anticipated Highlights in the next 12 Months
- Commencement of our first Local Investigator Initiated Interventional Trial (Orford)
- Development of a formalised Patient Outcome Follow-up program.
Clinical Trials for Symptom management in Palliative Care

Pain

Principle Investigator: Dr Peter Eastman

Breathlessness

BEAMS
A pragmatic, phase III, multi-site, double-blind, placebo controlled, parallel arm, dose increment randomised trial of regular, low dose extended release morphine for chronic refractory breathlessness.

Nausea

A randomised, controlled, double blind study of oral methotrimeprazine versus oral haloperidol in patients with cancer and nausea not related to anticancer therapy (Nausea study 3).
Section 3

Research Directorate and HREC
By promoting lifelong learning and a vibrant culture of education, training and research, Barwon Health maintains a position at the forefront of healthcare delivery and ensures the succession of a highly skilled workforce to address the health needs of our region.

Barwon Health has a broad range of expertise across the areas of mental health, population health, epidemiology, and growing capacity in aged care, rehabilitation, end of life, health service innovation and e-health. Developments in these areas are mirrored by the research activity of groups of clinicians, academics, research scientists and postgraduate students. Collaborative relationships with regional partners such as the Western Alliance and the CSIRO and higher education providers, including Deakin and La Trobe Universities, have also enhanced Barwon Health’s research, education and training capabilities across the health service.

The Research Directorate’s role is to enhance and support the academic activity of our workforce, to facilitate knowledge exchange between our consumers and peers and to ensure that our academic activities continue to exemplify the highest intellectual and ethical standards.

Barwon Health’s Academic Vision and Mission

Barwon Health provides academic support services across three main areas; Research, Clinical Education and Training, and Library and Literacy Services. Together these services share a vision: to embed a culture of inquiry within our service, which is translated to world-class evidence-based practice and innovative person-centred care. Our mission is to support the Barwon Health workforce to engage in life-long learning and to lead in health research and translation that enhance health outcomes.

Barwon Health’s strategies for realising these goals focus on promoting innovation to advance excellence in evidence-based healthcare and integrating our academic services to accelerate the translation and application of knowledge in to healthcare. Our academic pursuits will address real world problems by identifying the challenges and developing solutions for healthcare in our region and nation.

Some of Barwon Health’s initiatives in support of our academic vision include:

- Facilitating collaboration amongst academic and clinical services to embed academic activities in service delivery
- Collaborating with regional and national partners in data sharing and management, research, education and training initiatives
- Engaging with industry, higher education providers, research institutes and other health services as innovation partners
- Engaging communities and consumers in identification of health problems.

Research in Context

Academic engagement has many benefits for our health service, its health workforce, partners and the community, but the key benefits of research activity are in the development of better healthcare and improving health outcomes. Barwon Health has a number of research groups working in collaboration with Deakin University that have made significant impact on the health and wellbeing of our community. These include:

- The Epi-Centre for Healthy Ageing, which is undertaking the Geelong Osteoporosis Study (GOS), to understand the epidemiology of osteoporosis and identify risk factors for fracture
- The Geelong Centre for Emerging Infectious Diseases (GCEID), a collaborative, multidisciplinary research partnership between Deakin University, Barwon Health

Introduction

As a large teaching hospital and academic centre, Barwon Health is focused on the delivery of high quality healthcare, which is underpinned by robust scientific research and excellence in clinical training and education.
and CSIRO’s Australian Animal Health Laboratory (AAHL). GCEID is focused on understanding mitigating the risks and reducing the impact caused by emerging infectious diseases on human, livestock, pet and wildlife health.

- The Centre for Nursing and Allied Health Research (CNAHR), which undertakes research aimed at improving the personalised care of older people with diabetes and diabetes palliative and end of life care.

- The Child Health Research Unit (CHRU) is a partnership between Barwon Health, Deakin University and the Murdoch Children’s which conducts research focusing on the early life origins.

- The Centre for Innovation in Mental and Physical Health and Clinical Treatment Strategic Research (IMPACT), a multi-disciplinary collaboration that conducts clinical trials, epidemiological studies and laboratory based research aimed at developing novel therapies for the treatment of major psychiatric disorders.

Many other units within Barwon Health are research active, including Orthopaedics, Surgery, the Pharmacy Department, the Rehabilitation Service, the Neurology Department, the Gastroenterology Unit, Aged Care and the Cardiology Unit.

Barwon Health conducts numerous clinical trials across a number of research departments. Current projects include; research into bone fractures, studying the effectiveness of a clinical trial medication in patients who have previously suffered a heart attack or stroke, investigating the use of novel oral diabetes medication, and studying the effects of diet on mood disorders.

Our research addresses real world problems and makes a significant contribution to healthcare delivery, health outcomes and health policy for the Barwon South West Region and beyond.

Barwon Health Research Community

The research community at Barwon Health is extensive and diverse. Increasingly, our clinicians are taking up the national priority to practice evidenced-based healthcare and to embed research into clinical practice. Maintaining a vibrant research culture and developing a research willing and capable workforce requires institutional support. Along with the support of the Clinical Education and Training unit and Library Services, the Research Directorate provides support and advice for researchers, academics and clinical staff interested in research, and develops opportunities to build research capacity, facilitate research knowledge exchange, and promote knowledge transfer that engages consumers and the community.

The Research Directorate

The Barwon Health Research Directorate is responsible for the oversight of all research activities conducted under the auspices of Barwon Health and works to build research capacity and collaborations across the southwest region and with national peers.

The Research Directorate Staff

- **Professor Frances Quirk, Research Director**, 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 oversees the work of the Research Directorate, its two units and the research directorates’ 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.
Barwon Health’s research activity is managed by the two key units of the Research Directorate:

– The Research Ethics, Governance and Integrity Unit (REGI)
– The Research Support Unit (RSU)

REGI manages all research proposals and ensures all research activities undertaken by Barwon Health comply with national and international guidelines and legislation, exemplifying the highest standards of ethics and research practice. REGI also provides advice and support for Barwon Health staff and associates undertaking research or seeking to learn more about research processes.

– Dr Giuliana Fuscaldo, Manager, Research Ethics, Governance & Integrity (REGI) Unit. Giuliana and her team provide 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.

– Ms Lisa Fry, Research Governance Officer. One of REGIs roles is to facilitate collaborative research between Barwon Health and pharmaceutical companies, healthcare institutions and universities. Lisa’s role is to ensure patients at Barwon Health are offered participation in high quality, well-managed research projects.

– Mr Richard Larsen, Research Ethics Officer. Richard’s role is to support research conducted within the auspices of Barwon Health and to ensure research exemplifies rigorous standards of ethics and governance. Richard oversees the work of the Barwon Health Human Research Committee and the training and support of its members.

– Ms Kristin Wallis, Senior Administration Officer. Kristin is responsible for maintaining the day to day administrative tasks associated with managing and overseeing over 600 active research projects per year. Kristin is also developing the process for auditing of HREC approved projects.

– Mrs Donna Killeen, Personal Assistant to Director of Research. Donna provides administrative assistance to Prof Frances Quirk and is also responsible for coordinating the Research Directorate Newsletter, the Barwon Health Research Report and the annual Barwon –Deakin Research Week.

– Ms Benita Hughes, Trainee Research Administration Officer, REGI Unit. ‘Bonnie’ joined the REGI Unit as a trainee from Northern Futures and is learning to complete the administration tasks associated with REGIs work.

The Research Support Unit includes medical scientists providing laboratory science management, a biostatistical advisory service and clinical trial support. This team works to facilitate the translation of clinical needs into research investigations and research outcomes, while providing support for clinical staff in research design, data analysis and research publications.

– Dr Jason Hodge, Laboratory Manager/Senior Scientist. Jason is responsible for the efficient and compliant running of the GCEID Laboratory and undertakes research in the field of bone cell biology.

– Dr Fiona Collier, Senior Medical Scientist. Fiona heads a team of research scientists in the Barwon Health laboratories, based at GCEID. She and her team have expertise in molecular biology, cell culture, flow cytometry, and microbiome studies and support a range of research programs and departments within the University Hospital, Geelong.

– Ms Danielle Kennedy, Medical Scientist. Danielle is responsible for the processing and maintenance of more than 120,000 biosamples for the Barwon Infant Study and the biobank database. Danielle also works to support a range of Barwon Health research programs and studies.

– Ms Minh Bui, Medical Scientist. Minh contributes to the laboratory work associated with the Barwon Infant Study; completing the DNA extraction from over 2000 biosamples for microbiome research.

– Associate Professor Margaret Rogers, Statistician (November-July). Margaret is an experienced statistician and has provided support and advice to clinicians and researchers on research design and data analysis and assisted with the preparation of research manuscripts.
Clinical Trials Advisory Committee

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 required. This year has seen many NHMRC initiated national regulatory and guideline updates and the CTAC group has been instrumental in ensuring best practice implementation for Barwon Health.

CTAC’s achievement over the past year include:

- Appointment of Ms Alana Sarah to Deputy Chair and Ms Kristin Wallis to Secretary
- Collaborated on development of a rigorous governance process for Phase 1 Clinical Trials
- Enhancement of Barwon Health’s Clinical Trial profile
- Celebration of International Clinical Trials Day – CTAC ran a randomised double-blind clinical trial in the cafeteria to determine if sugar free cupcakes taste as good as cupcakes baked with sugar – conclusively sugar tastes better!
- Collaborated on development of streamlined research governance processes
- Provided consultation on the Barwon Health Academic Strategic Plan
- Reviewed clinical trial scanning and alerts within medical records
- Collaborated on development of a process for review and signoff of overarching Confidentiality and Disclosure agreements.
- Provided consultation on Barwon Health Safety Monitoring and Reporting Guidelines

CTAC Members

- Prof Frances Quirk
- Ms Lisa Fry
- Ms Alana Sarah
- Dr Lea-Anne Harrison
- Dr Giuliana Fuscaldo
- Dr Olivia Dean
- Ms Anna Dowd
- Ms Anita Long
- Ms Donna Campbell
- Ms Allison Bone
- Ms Tania Elderkin
- Ms Sally Beattie
- Ms Kathryn Ives
- Ms Kathryn Fogarty
- Ms Sharryn Savickas
- Ms Ellie Brown
- Ms Nakita Clements

I would like to thank all members for their contributions, and I hope we continue to work together to grow clinical trials capacity at Barwon Health, and maintain our position as an institution of integrity and excellence in the conduct of clinical trials.

CTAC Chair
Ms Lisa Fry
Barwon Health Research Review Committee

The Research Review Committee, (RRC), is a ‘Virtual’ standing sub-committee of the Human Research Ethics Committee (“HREC” or “The Committee”).

The RRC is a virtual committee and reviews all applications out of session.

At least two reviewers are allocated to the review of each Low and High risk application.

Where necessary a formal meeting can be scheduled. Items for the RRC are listed as item 4.3 on the monthly HREC agenda as a standing item.

The purpose of the RRC is:

1. To review all high risk research projects for scientific merit, methodological integrity and to make recommendations to the HREC.

2. To review low risk applications that apply for expedited review for both scientific merit and ethics standards.

Contributions from HREC Members

Simon French (Chairperson)

“Over the past 12 months, it has been my privilege to Chair the Barwon Health HREC, leading a diverse, dedicated and professional Committee members. It has been exciting to see a wide variety of research projects coming before the Committee for review and I am grateful for the enormous amount of work that Committee members have put into reviewing projects.

As always, we have been supported by excellent staff within the Barwon Health Research Ethics team. I am grateful for their attention to detail in preparing projects to come to the HREC and the collaborative way in which they have worked with research proponents to ensure concerns raised by the HREC are addressed with minimum disruption to the important research activity that we all want to encourage.

This has also been a time of change within the HREC committee. We have farewelled long-standing committee members and staff and we have taken that opportunity to thank them for their very significant contribution. This has also given us an opportunity to bring in new people, with new perspectives and expertise to contribute to our work, which is a very important part of keeping the workings of the HREC fresh and relevant.

The role continues to be a rewarding one and it is always an encouragement to see new research projects attesting to the vibrancy of the research community in our region. Over the coming year, we will continue to strive toward our goal of adding value to and facilitating the conduct of high quality research through Barwon Health.”
Sandeep Reddy

“Having chaired a large HREC prior to joining Barwon HREC, I was conversant with the processes involved in reviewing and approving ethics application. However, I was pleasantly surprised by the level of sophistry and organisation that went into organising the Barwon HREC meetings and also by the level of scrutiny that went into reviewing each application. While my past experience involved reviewing ethics application across a vast geographical area and involving several organisations, the Barwon HREC applications involve mainly one organisation. This allows more diligence in processing of applications including review and approval. While there are some processes that need to be refined and measures have to be undertaken to align the committee’s deliberations with the NHMRC guidelines for human studies ethics approval, I am very confident in the capable team, that supports the committee, in undertaking these changes.”

Renee Otmar

“As a researcher and advisor to other researchers, it is important to keep abreast of current research practices, relevant legislation and regulations, and new innovations in the health sector. Being a part of the Barwon Health research community has certainly helped me to do so, and over the past four years as a member of the Human Research Ethics Committee, I have enjoyed the opportunity to support high-quality research. It is inspiring to see Barwon Health researchers undertaking and leading a widely diverse range of research projects in our region.”

Vincent Haveaux

“I really like being part of the committee and working through the many research proposals that come through. It is great to see the professionalism and rigour being applied that ensures patients and participants of research are considered in every way. Over my five years plus as a member, I have personally learned, and in turn extended my outlook, through the many robust discussions amongst all other committee members, professional and lay representatives. I continue looking forward to each review, knowing the committee is part of the ongoing evolution of the way our health system serves the community at large.”
The REGI Unit managed a total of 553 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 2016 to 30 June 2017**

<table>
<thead>
<tr>
<th>Research Type</th>
<th>No. of Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic Applied Research (e.g. Laboratory Work)</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Research</td>
<td>92</td>
</tr>
<tr>
<td>Clinical Trial Device</td>
<td>3</td>
</tr>
<tr>
<td>Clinical Trial under CTN/CTX Scheme</td>
<td>133</td>
</tr>
<tr>
<td>Data Access Request</td>
<td>1</td>
</tr>
<tr>
<td>Epidemiological Research</td>
<td>36</td>
</tr>
<tr>
<td>Register: Database</td>
<td>37</td>
</tr>
<tr>
<td>Review/QA</td>
<td>210</td>
</tr>
<tr>
<td>Section 19(5) (Authorised Prescriber)</td>
<td>5</td>
</tr>
<tr>
<td>Social Science</td>
<td>2</td>
</tr>
<tr>
<td>Qualitative Research</td>
<td>23</td>
</tr>
<tr>
<td>Public Health</td>
<td>8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>553</strong></td>
</tr>
</tbody>
</table>
Comparison of 2017 Ongoing Projects by Category with 2016

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

<table>
<thead>
<tr>
<th>Research Type</th>
<th>No. of Projects</th>
</tr>
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<tbody>
<tr>
<td>Basic Applied Research (e.g. Laboratory Work)</td>
<td>1</td>
</tr>
<tr>
<td>Clinical Research</td>
<td>144</td>
</tr>
<tr>
<td>Clinical Trial Device</td>
<td>0</td>
</tr>
<tr>
<td>Clinical Trial under CTN/CTX Scheme</td>
<td>155</td>
</tr>
<tr>
<td>Epidemiological Research</td>
<td>31</td>
</tr>
<tr>
<td>Register: Database</td>
<td>37</td>
</tr>
<tr>
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<tr>
<td>Public Health</td>
<td>2</td>
</tr>
<tr>
<td>Social Science</td>
<td>0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>617</strong></td>
</tr>
</tbody>
</table>

**Ongoing Research Projects for the Period 01 July 2016 to 30 June 2017**

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</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>553</strong></td>
</tr>
</tbody>
</table>
Barwon Health Ethics Committee Activity

HREC Membership Between 1 July 2016 and 30 June 2017
- Mr Simon French (Chair)
- Mr Richard Larsen (Ethics officer)
- Ms Jacqueline Barry
- Ms Catherine Birrell
- Mr Lynsey Blakston
- Professor Trisha Dunning
- Dr Rod Fawcett
- Mr John Hannagan
- Mr Vincent Haveaux
- A/Professor Debra Kerr
- Ms Samantha Lopez
- Ms Lauren Mahoney
- Dr Cameron Osborne
- Dr Renee Otmar
- Dr Sandeep Reddy
- Mr Darryl Towers
- Mr Greg Weeks

Incoming Appointments to the HREC
- Ms Jacqueline Barry
- A/Professor Debra Kerr
- Ms Samantha Lopez
- Ms Lauren Mahoney
- Dr Sandeep Reddy

Outgoing Resignations from the HREC
- Ms Gayle Newbury
- Ms Elizabeth Thomas
- Dr Cate Nagle

Meetings during the period of 01 July 2016 and 30 June 2017
- The HREC met 11 times during this period.
- The RRC now operates as a virtual committee with reviews conducted out of session.

Of the total number of open research projects during the reporting period, 157 of these were new projects approved by the REGI Unit.

Of these new projects:
- 60 projects were approved through the Single Ethical Review Process
- 11 projects were approved as greater than Low Risk
- Six projects were approved as Low Risk
- 80 projects were approved as Exempt/Negligible risk
Barwon Health Research Collaborations and Partnerships
Australian Collaborations and Partnerships

- Albert Road Clinic, Melbourne, Victoria
- Australian and New Zealand Bone and Mineral Society, Therapeutic Committee, (ANZBMS), Sydney, New South Wales, Australia
- Australian Catholic University, Melbourne, Victoria, Australia
- Australian Diabetes Educators Association (ADEA) - Research Council, Research Foundation, Endorsement Committee, Diabetes Education Advisory Committee (CASP), Research Advisory Group,
- Australian National University, Canberra, Australian Capital Territory, Australia
- Ballarat Hospital, Ballarat, Victoria, Australia
- Centre for Research on Ageing, Health & Wellbeing, Australian National University, Canberra, Australia
- Charles Sturt University, Australia
- Deakin University, Geelong, Waterfront and Burwood, Victoria, Australia
- Eastern Health, Box Hill, Victoria, Australia
- Eli Lilly, Melrose Park, NSW, Australia
- Epworth HealthCare, Geelong, South West Regional Cancer Centre, General Medical Advisory Council, Internal Medicine Clinical Institute, Radiation Oncology
- Florey Institute of Neuroscience and Mental Health, Melbourne, Victoria
- Griffith University, Brisbane, Queensland, Australia
- James Cook University, Townsville, Queensland, Australia
- Kardinia Health, Geelong, Victoria
- La Trobe University, Melbourne, Australia
- Menzies Research Institute, Hobart, Tasmania, Australia
- Monash Comprehensive Cancer Consortium, Clayton, Victoria, Australia
- Monash University, Clayton, Victoria, Faculty of Pharmacy and Pharmaceutical Sciences and Centre for Medication use and safety
- Murdoch Children’s Research Institute, Parkville, Victoria, Australia
- National Orthopaedic Academic Centre (NOAD)
- Newcomb Secondary College, Newcomb, Victoria, Australia
- NSW Cancer Institute, Alexandria, NSW, Australia
- Occupational Therapy Advisory Board, Fitzroy, Victoria, Australia
- Orygen - The National Centre of Excellence in Youth Mental Health, Parkville, Victoria, Australia
- Peter McCallum Cancer Centre, Melbourne, Victoria, Australia
- QIMR Berghofer Medical Research Institute, Brisbane, Queensland, Australia Queensland University of Technology, Brisbane, Queensland, Australia
- Royal Australasian College of Surgeons (RACS), East Melbourne, Victoria, Australia Royal Children's Hospital, Parkville, Melbourne, Australia
- Royal North Shore Hospital, New South Wales, Australia
- Sanofi Advisory Group, Macquarie Park, New South Wales, Australia
- Scientific Advisory Committee of the Cure Brain Cancer Foundation
- Sir Charles Gairdner Hospital, Nedlands, Western Australia
- Society for Clinical Research Sites (SCRS)
- Society of Hospital Pharmacists of Australia
- St George Hospital, New South Wales, Australia
- St John of God Pathology (SJOG)
- Steering Committee SOS Fracture Alliance
- Steno Diabetes Centre, Expert Advisory Group to Steno
International Collaborations and Partnerships

- Active Life about Scientific, Santa Barbara, CA, USA
- AGILE Group (USA, EU, AUS, China)
- AO Trauma Foundation Upper Limb Faculty, (Arbeitsgemeinschaft fur Osteosynthesefragen) Davos, Switzerland, 2016
- APC Microbiome Centre, University College Cork, Ireland
- Asia Pacific Orthopaedic Association (APOA), Malaysia
- Association of Paediatric Anaesthetists of Great Britain & Ireland
- Australia and New Zealand Intensive Care Society - Clinical Trials Group
- Autonomous University of Barcelona, Barcelona, Spain
- Bergen University College, Bergen University College, Norway
- BGI-Shenzhen, Shenzhen, China.
- Cancer Research UK, ORTC Review Panel
- Chulalongkorn University, Bangkok, Thailand
- Colchester Hospital, Colchester, UK
- Dana Farber Cancer Institute, Boston, USA
- Department of Epidemiology and Community Medicine, University of Ottawa, Canada
- Diabetes Frail, UK
- Diabetes UK External Grants Reviews
- East Central College of Surgeons
- Edinburgh University
- Edward Hines Jr VA Hospital, Hines, IL, USA
- EPICORE International Team
- Faculty AO Trauma Foundation Upper Limb Faculty, Davos, Switzerland 2016
- Glioma Longitudinal AnalySiS (GLASS) Consortium
- Guiyang Medical University, Guiyang, China
- Harvard Medical School, Cambridge, MA, USA
- Hong Kong College of Surgeons
- Hospital del Mar, Barcelona, Spain
- Hospital Santa Maria, Lisbon, Portugal
- Integra Health, Toronto, Ontario, Canada
- International Medical University, Malaysia
- International Diabetes Federation (IDF), Brussels, Belgium
- International Journal of Shoulder Surgery, Cape Town, South Africa
- International Shoulder Arthroplasty Consortium (ISAC)
- International Society for Nutritional Psychiatry Research (ISNPR)
- Ipswich Hospitals, Ipswich, UK
- Irish Association of Anaesthetists, Marylebone, London, UK
- Kaiser Permanente, Oakland, California, USA
- Lausanne University Hospital, Lausanne, Switzerland
- Loyola University Chicago, Maywood, IL, USA
- Massachusetts General Hospital, Boston, USA
- McGill University, Montreal, Quebec, Canada
- McMaster University, Hamilton, Ontario, Canada
- National Center for Global Health and Medicine Research, Tokyo, Japan
- National Centre for Neurology and Psychiatry, Tokyo, Japan
- National Research Council (CSIC), Valencia, Spain
- Northwest University, Kirkland, Washington, USA
- Norwegian Institute of Public Health, Nydalen, Oslo
- Norwegian Institute of Public Health, Oslo, Norway
- Norwegian University of Science and Technology, Trondheim, Norway
- Ortopedkliniken-Danderyds sjukhus, Sweden
- School of Medicine, Universidad Autónoma de Madrid, Spain
- Shiraz University of Medical Sciences, Shiraz, Iran
- Sigma Theta Tau International, Indianapolis, USA
- Southern African College of Surgeons, Rondebosch, South Africa
- Stanford University, Stanford, CA, USA
- Universidad Complutense, Madrid, Spain
- Universidad de Antioquia, Medellín, Colombia
- Universidad de las Palmas de Gran Canaria, Spain
- Universidade Estadual de Londrina, Paraná, Brazil
- Universidade Federal do Rio Grande do Sul, Porto Alegre, Brazil
- Université Paris-EST, Paris, France
- University College Cork, Cork, Ireland
- University of Barcelona, Barcelona, Spain
- University of Bergen, Bergen, Norway
- University of Cambridge, Cambridge, UK
- University of Cantabria, Santander, Spain
- University of Copenhagen, København, Denmark and Beijing Genomics Institute, Shenzhen, China [collaboration]
- University of Eastern Finland, Joensuu, Finland
- University of Exeter, UK
- University of Glasgow, Scotland, UK
- University of Lisbon, Lisbon, Portugal
- University of Manitoba, Winnipeg, Canada
- University of Oxford, Oxford, UK
- University of Southern Denmark, Odense M, Denmark
- University of Toronto, Ontario, Canada


A Snapshot of Australian and International Conferences

– Combining cytotoxic therapy or radiation therapy with histone deacetylase inhibitor (HDACi) treatment reduces cell proliferation in rhabdoid tumour (RT) cell lines to a greater degree than treatment with single agents alone. Melissa Ferguson, Andrea Muscat and David M. Ashley.

– Mutational analysis and methylation profiling reveal few consistent therapy-induced marks in primary glioblastoma. Andrea Muscat, Nicholas C. Wong, Katharine J. Drummond, Elizabeth M. Algar, Mustafa Khasraw, Kathryn Field, Mark A. Rosenthal and David M. Ashley.


Embracing change in dentistry to deliver better health outcomes—diabetes screening an oral health pilot project. M. Smith, S. Sharp, L. Carroll, M. Rogers, S. Law, J. Pawlak, T. Dunning.


2017 Australian Nuclear Medicine / PET Conference.

– Pre-Treatment staging FDG PET/CT assessment of mantle cell lymphoma: A comparison of visual assessment versus assessment by quantitative FDG parameters. Methodology and preliminary data, S Lee, C Styles, D Mo, H Rose


Personalising care of older people with diabetes: myth, mantra or reality? Dunning T.


Caring for older people in residential care facilities. Dunning T.

2nd Victorian Allied Health Future Directions Exhibition Centre, Melbourne, Australia. March 31 2017.

Embracing change in the dental practice to deliver better health outcomes—a type 2 diabetes screening program. M. Smith, M. Rogers, J. Pawlak, T. Dunning


Assessing the performance of prediction models: Development, internal validation, external validation and model updating. Mohebbi M.

Audit of the management of suspected seasonal influenza in a mixed adult/paediatric intensive care unit.


Personalising care for older people with diabetes: myth, mantra or reality? Dunning T.


The role of mitochondrial dysfunction in mental health and nutrient treatment options. Berk M.


– A retrospective evaluation of prevalence and management of hypokalaemia in a cohort of patients with diabetic ketoacidosis. Choy KH, Gunawan F, Kotowicz MA


Managing older people with diabetes. Dunning T. Overview of complementary therapies. Dunning T.


– A retrospective evaluation of prevalence and management of hypokalaemia in a cohort of patients with diabetic ketoacidosis. Choy KH, Gunawan F, Kotowicz MA.

AgriBio at La Trobe University, Melbourne, September 16, 2016.

Keeping an eye on animal viruses – global spread, evolution and zoonotic potential. Alexandersen S.

Annual World Diabetes Day Professorial Address 2016

Professor Dunning delivered the Personalising care for older people with diabetes: myth, mantra or reality?

Australian and New Zealand Society of Nephrology (ANZSN)/Asia Pacific Centre for Neuromodulation (APCN), Perth Convention and Exhibition Centre, Western Australia, September 17-21 2016.

Developing a set of core outcomes for trials in haemodialysis: an international Delphi study. Evangelidis N, Agar J et al.


Australian and New Zealand Society of Nephrology (ANZSN) ASM, Darwin, Australia Darwin Convention Centre, September 4-6, 2017.

– Individualised Fluid Allowance Calculator for Haemodialysis Patients, Shi Zhou Choo et al.


– A comparison of patient survival on haemodiafiltration and haemodialysis. See E, Agar J et al.

– The Victorian Greens Survey: gauging responses to environmental efficiencies in nephrology services. Barraclough KA, Gleeson A, Holt SG, Agar JWM.


Depression and anxiety following a transient ischemic attack. Turner A. POSTER PRESENTATION.
The Australian Society for Medical Research (ASMR) Student Research Symposium, Parkville, Victoria, June 1, 2017.


- Surgical Interventions: Topic Expert Group, Professor David Watters

Australian and New Zealand Bone and Mineral Society (ANZBMS), Brisbane, Australia, June 17-21, 2017.

- Relationship between lumbar spine BMD and trabecular bone score in men with and without soft tissue artefacts. Anderson K, Holloway KL, Kotowicz MA, Pasco JA. ORAL PRESENTATION.


- Bipolar disorder and bone health: a systematic review protocol. Chandrasekaran V, Brennan-Olsen SL, Stuart AL, Pasco JA, Berk M, Hodge JM, Williams LJ. ORAL PRESENTATION.

- Dietary tryptophan and bone: a cross-sectional study. Cleminson JR, Stuart AL, Pasco JA, Hodge JM, Williams LJ. ORAL PRESENTATION.

- Fracture risk in Australian women with dysglycaemia. De Abreu LLF, Holloway KL, Mohebbi M, Sajjad MA, Kotowicz MA, Pasco JA. ORAL PRESENTATION.


- Trabecular bone score in women with dysglycaemia and diabetes. Holloway KL, De Abreu LLF, Kotowicz MA, Sajjad MA, Pasco JA. ORAL PRESENTATION.


- Gestational Vitamin D and offspring bone measures; does maternal bone quality mediate the association? Hyde NK, Brennan-Olsen SL, Work JD, Hosking SM, Pasco JA. POSTER PRESENTATION.


- Pattern of osteoporosis prevalence and associated medication use among Australian women over two decades. Stuart AL, Pasco JA, Mohebbi M, Kotowicz MA, Williams LJ. POSTER PRESENTATION.

- Low hand grip strength as a marker of poor mobility and falls in older women. Sui SX, Holloway KL, Tembo M, Williams LJ, Leach S, Pasco JA. PLENARY POSTER.


- Relationship between Lumbar Spine BMD and Trabecular Bone Score in Men with and without soft tissue artefacts. Anderson K, Holloway KL, Kotowicz MA, Pasco JA.


- Trabecular Bone Score in Women with Dysglycaemia and Diabetes. Holloway KL, De Abreu LLF, Kotowicz MA, Sajjad MA, Pasco JA.

- Pattern of osteoporosis prevalence and associated medication use among Australian women over two decades. Stuart AL, Pasco JA, Mohebbi M, Kotowicz MA, Williams LJ.


- A preliminary investigation into the association between age and impact microindentation in men.

- Fracture risk in Australian women with dysglycaemia. de Abreu LLF, Holloway KL, Mohebbi M, Sajjad MA, Kotowicz MA, Pasco JA.

- Health literacy and the agreement between osteoporosis defined by self-report versus bone mineral density results in older women. Hosking SM, Buchbinder R, Stuart AL, Pasco JA, Hyde NK, Williams LJ, Brennan-Olsen SL.


- Dual energy x-ray absorptiometry scans among 70+ year olds: Do reductions in out-of-pocket expenses translate to reduced burden of disease? Stuart AL, Brennan-Olsen SL, Pasco JA, Morse AM, Holloway KL, Hosking SM, Pasco JA.


- Personality disorders and bone: Geelong Osteoporosis Study. Williams LJ, Quirk SE, Stuart AL, Berk M, Brennan-Olsen SL, Chandrasekaran B, Hodge JM, Pasco JA.

Australian Centre for Behavioural Research in Diabetes, Multicultural Hub, Melbourne. Australia. December 1, 2016.

Personalising care for older people with diabetes: myth, mantra or reality? Dunning T.

Australian Diabetes Society and the Australian Diabetes Educators Annual Scientific Meeting, Gold Coast Conference Centre, Australia. August 24-28, 2016.

- Research Workshop Presentation: Identifying transitional risks for older people with diabetes, a proactive, preventative approach. Dunning T.

- Research Workshop: Presentation - Come with an idea and leave with a study design. Dunning T.

- Informing older people with diabetes about glucose lowering medicines. Dunning T, Savage S, Duggan N. ORAL PRESENTATION.

- Who are older people with diabetes? Dunning T.

Australian Disease Management Association (ADMA), October 2016

Health Literacy Workshop. OPHELIA Optimising Health Literacy. Byrnes, J


Case Study on NDIS, Nicola Lloyd and Caitlyn Roberts


OPHELIA Optimising Health Literacy. Byrnes, J

Barwon Health International Nurses Day Address, May 12, 2017.

Lucy Osborne and her legacy to Australian Nursing. Dunning T.

Panel discussion entitled: Latest research for Diabetes Victoria. My topic concerns my DART Grant and is: Improving clinician and older people with diabetes communication about integrating palliative and end of life care into usual diabetes care. Dunning T.


Hospital Admission Risk Program: Care coordination for people living with HIV and complex needs. Fay, H.

International Congress of Behavioural Medicine (ICBM), Melbourne, Victoria, Australia, December 7-10, 2016.

– Subjective well-being, health behaviour and other health factors as predictors of falls in postmenopausal women. Williams L.I. POSTER PRESENTATION.


International One Health Day, GCEID, Geelong.

One Health and Working across Disciplines in Geelong. Alexandersen S.


Older people with diabetes and complementary medicines and therapies. Dunning T.

Joint Clinical Oncology Society of Australia and the Australia and New Zealand Breast Cancer Trials Group Annual Scientific Meeting, Gold Coast, QLD, Australia, November 15-17, 2016.

– Breast Cancer Clinical Quality Indicators. Graham Pitson, Leigh Matheson, David Campbell, Brooke Garrard, Ian Collins, Violet R Mukaro, Greg Mitchell, Sue Riches, David Ashley and Margaret J Rogers.

– Multidisciplinary meetings in the treatment of breast cancer. Graham Pitson, Leigh Matheson, Brooke Garrard, Bianca Maher, Stephanie Cowdery, Wei Luo, Marita Reed, Sue Riches, David Ashley, Margaret J Rogers.

Lifestyle Medicine Conference. Melbourne, Victoria, Australia, November 4-6, 2016.

Diet and Mental Health. Accepted award of honorary fellowship with the Australasian Society for Lifestyle Medicine. Jacka FN.


– Planning palliative and end of life care for older people with diabetes. Dunning T.

– Older people with diabetes and complementary medicines and therapies. Dunning T.


Developing and evaluating a suite of information about glucose lowering medicines for older people with diabetes and families, nurses and personal care workers. Dunning T, Savage S, Duggan N. ORAL PRESENTATION.


Creating Quality Practice Education Experiences: Evaluation of a Large Regional Network’s Occupational Therapy Practice Education Program. Sue Rowan, Kelli Nicola-Richmond; Curtin, Michael; Nikki Lyons, Nicole Shaw.


The development of a risk index for depression using Stata’s GSEM with complex survey data. Dipnoll JF, Pasco JA, Berk M, Williams L.J, Dodd S, Jacka FN, Meyer D.


One Health Approach – The Way Forward to Mitigate Emergence and Re-emergence Of Bairnsdale Ulcer. Michael Selorm Avumegah. POSTER PRESENTATION.

Orthopaedic Prosthesis Meeting 2017

– Shoulder joint infections, Professor Eugene Athan

– Pathology Conference 2017, Orthopaedic prosthesis meeting - Invited Speaker - 2017 Infective Endocarditis in the 21st Century, Professor Eugene Athan
Osteoporosis in Profile, Sydney July 24, 2016 (Invited Presentation)

Osteoporosis Risk Management, Associate Professor Mark Kotowicz

Osteoporosis in Profile, July 29-30, 2017 (Invited Presentation)

– Secondary Osteoporosis, Associate Professor Mark Kotowicz
– Osteoporosis: How long to treat, Associate Professor Mark Kotowicz
– The Great Calcium Supplements Debate, Associate Professor Mark Kotowicz

Provincial Surgeons of Australia (PSA) ASC 2016 Albany WA. August 3-7, 2016

– Why the College requires ongoing education, Professor David Watters
– Global Partnerships in surgical training & Health Workforce, Professor David Watters
– Antibiotics Vs Percutaneous drain: what is the most effective way to manage a Diverticular abscess?, Henry Drysdale
– Long term survival after surgical resection for lung cancer in a regional centre, James Ross

Royal Australian College of Surgeons (RACS) ASC – 86th Congress, Adelaide May 8-12, 2017

– Indicators and Metrics from East Timor, Professor Glenn Guest
– OAAGB – How I prevent/treat bile reflux, Darrin Goodall-Wilson
– ANZES Presidential Debate
– That Thyroid Surgery should be performed by high volume surgeons - affirmative
– Stan Sidhu (Syd) vs, David Watters (Geel)
– Rural Surgery – when scope of practice must be extended whilst safety and quality are assured, Prof David Watters
– Appendicectomy – Surgery or no surgery?, Professor Glenn Guest
– Post Hoc Ergo Propter Hoc. Retrospective analysis of unplanned return to theatre from 2013-2015 at UHG, Mosoomeh Khajehnoori
– Nauru & the Royal Australasian College of Surgeons (RACS) Pacific Islands Project (PIP): A 10-year retrospective analysis on the delivery of vascular access surgery and survival outcomes, Matthew Stokes
– Furthering the evidence for the cost-effectiveness of visiting surgical services in the Pacific region: A retrospective review of urology services from the RACS Pacific Island Project, Dominic Bagguley
– Furthering the evidence for the cost-effectiveness of visiting surgical services in the Pacific region: A retrospective review of ENT and Maxillofacial services from the RACS Pacific Islands Project (Posters x 3 Viewed on screens in the Exhibition area and on Virtual Congress), Dominic Bagguley
– Furthering the evidence for the cost-effectiveness of visiting surgical services in the Pacific region: A retrospective review of cardiothoracic services from the RACS PIP, Morgan Short
– Furthering the evidence for the cost-effectiveness of visiting surgical services in the Pacific region: A retrospective review of ophthalmic services from the RACS PIP, Andrew Fordyce
– General Surgery, Professor David Watters
– Creating a good Surgical Culture, Professor David Watters
– Female Surgeons of the 17th and 18th centuries, Professor David Watters
– Rural Surgery: Where will the trainees be trained?, Professor Glenn Guest
– The influence of resection margin on survival outcomes in pancreatic cancer surgery: A systematic review and meta analysis, Naman Kohli
– Pancreatectoduodenectomy: Does it help in advanced pancreatic cancer? A systematic review and meta analysis, Naman Kohli
– Evaluating the Clinical Decision Making Course, Wendy Crebbin
– Treatment limitation and outcomes of the elderly patient in emergency general surgery, Su Mei Hoh
– Colorectal SSI – Geelong experience, Douglas Stupart

Royal Australian and New Zealand College of Psychiatrists (RANZCP), CME Workshop, Hobart, Tasmania, Australia, October 8, 2016.

Inflammatory and immune hypotheses in depression. Berk M
The Royal Australian and New Zealand College of Radiologists (RANZCR) Annual Scientific Meeting October, 2016.


Repeat of the 9th World Diabetes Day Annual Professorial Address for the Australian Centre for Behavioural Research in Diabetes. Multicultural Hub, Melbourne, Australia. December 1-2, 2016.

Personalising care for older people with diabetes: myth, mantra or reality? Dunning T.


– Personality disorder and physical health comorbidities: A link with bone health? Williams LJ.


– Muscle strength and cognitive decline: Data from the Geelong Osteoporosis Study of women. The Geelong Osteoporosis Study. Society for Mental Health Research. Sui SX, Stuart AL, Holloway KL, Williams LJ, Kotowicz MA, Leach S and Pasco JA.

– Common Mental Disorders and Cancer Onset: A Nested Case Control Study of Women. Cowdery SP, Stuart AL, Green D, Berk M, Ashley D, Pasco JA and Williams LJ. POSTER PRESENTATION.


– Minocycline as an adjunctive antidepressant – outcomes from a randomised controlled trial. Dean OM, Maes M, Berk L, Ashton M, Kanchanatatow B, Sughondhabiron A, Tangwongchai S, Ng C, Dowling N, Malhi GS, Berk M.

– Pattern of psychotropic medication use among Australian women over two decades. Stuart AL, Quirk SE, Brennan-Olsen SL, Pasco JA, Mohhebbi M, Berk M, Williams LJ.


– Exploring the 1% rule in online discussion forums for bipolar disorder. Giddon E, Lauder S, Berk L, Cosgrove V, Grimm D, Dodd S, Suppes T, Berk M. POSTER PRESENTATION.


Society of Hospital Pharmacists of Australia 42nd National Conference Medicines Management November 16, 2016 Perth, Australia.

– Exploring Patients’ Perception of Post-Hospital Discharge Follow-Up by a Pharmacist Using Telehealth.

– Advancing Clinical Pharmacy practice through Radiopharmacy.


Animal Surveillance and Surveillance at the Human-Animal Interface. Alexandersen S.
University of Melbourne, Department of Psychiatry Research Program. Melbourne, Victoria, Australia. August 18, 2016.

The efficacy of adjunctive Garcinia mangostana Linn pericarp for bipolar depression: a 24-week double-blind, randomised, placebo controlled trial. Ashton M, Berk M, Ng C, Hopwood M, Harvey B, Dean O.


– Translating practice into research: Outcomes from a successful health service/university partnership. Dani Hitch, Genevieve Pepin, Sue Rowan

– Defining the Role of an Allied Health Assistant in Hand Therapy. Laura Isherwood

– Student Volunteers supporting the GEM Breakfast Group: A mixed methods evaluation

– Creating Quality Practice Education Experiences: Impact of Barwon Health’s Occupational Therapy Practice Education Program. Sue Rowan; Kelli Nicola-Richmond; Curtin, Michael; Nikki Lyons

– Creating Quality Practice Education Experiences: Impact of Barwon Health’s Occupational Therapy Practice Education Program 2017

– What skills and attributes do Health Professionals need when working in the home to provide rehabilitation. Nicole Shaw.


Why So Virulent? Correlating Virulence Factors of S. aureus and disease prognosis. Carly Botheras


– Multidisciplinary meetings in the treatment of breast cancer. Graham Pitsom, Leigh Matheson, Brooke Garrard, Bianca Maher, Stephanie Cowdery, Wei Luo, Marita Reed, Sue Riches, David Ashley, Margaret J Rogers.


Re-using dialysis plastics. Agar J

Western Alliance, 2017

Hepatitis Eradication in BSW region, Dr. Amanda Wade

Western Alliance. Warrnambool, Victoria, Australia. September 8-9, 2016.


A Snapshot of International Conferences

11th International Diabetes Federation –Western Pacific Region Congress and 8th Scientific Meeting of the Asian Association for the Study of Diabetes, October 26–30, 2016, Taipei Conference Centre, Taiwan.

- Train the Trainer program - facilitator. Dunning T.
- Medicine-related factors that could impact on safety and outcomes of glucose lowering medicines in aged care facilities. Dunning T, Sovage S, Duggan N.
- Personalised diabetes care: what is it and does it work? Dunning T.
- Using styles and strategies to facilitate behaviour change in people with diabetes. Dunning T.

13th International Conference on Clinical Ethics Consultation (ICCEC), Singapore, May 2017.


13th World Congress of Biological Psychiatry, Copenhagen, Denmark, June 2017.

- Free Communication: The efficacy of minocycline as an adjunctive treatment for major depressive disorder: A double blind, randomised, placebo controlled trial. Dean O.
- Lithium compared to quetiapine in the maintenance phase after a first episode of mania. Berk M.
- Targeting inflammation to prevent depression. Berk M.
- Novel adjunctive therapy approaches for inflammatory disturbances in psychiatric disorders. Berk M.
- The use of machine learning and big data to predict suicide. Berk M.

18th Annual Conference of the International Society for Bipolar Disorders Held jointly with the 8th Biennial Conference of The International Society for Affective Disorders. Amsterdam, the Netherlands. July 13-16, 2016.

- Antibiotics in Psychiatry, Dean OM.
- Targeting inflammation to prevent depression. Berk M.
- Lithium or atypical antipsychotic for maintenance treatment after first episode mania? Berk M.
- Staging models in unipolar depression and bipolar disorder. Jacka FN.
- Diet and Mental Health. Enabling Precision Psychiatry through ‘omics’: from biomarkers to biological pathways. Fernandes B.
- C-Reactive Protein is increased in Bipolar Disorder: a systematic review and meta-analysis. Fernandes B.
- The efficacy of adjunctive Garcinia mangostana Linn pericarp for bipolar depression: a 24-week double-blind, randomised, placebo controlled trial. Ashton M, Berk M, Ng C, Hopwood M, Harvey B, Dean O.
- How do we overcome the barriers to integrating a staging approach into clinical practice? Dodd S.


- The role of discussion forum engagement within an online self-help program for bipolar disorder: Impacts on social support, stigma, quality of life and mood severity. Gliddon E, Berk L, Lauder S, Cosgrove V, Grimm D, Dodd S, Suppes T, Berk M.
- Oxidative and Inflammatory biomarkers as targets for novel therapies. Dodd S.
– Someone else, having a severe mental illness doesn’t have to mean dying young. Berk M. Randomised clinical trials of mitochondrial agents for the treatment of bipolar depression. Berk M.

– Outcomes following lithium versus quetiapine during one year treatment in early bipolar disorder. Berk M.


19th International Conference on Computational Statistics and Data Analysis; Rome, Italy July 17-18, 2017.

Developing and Evaluating Clinical Risk Prediction Models for Coronary Artery Bypass Graft Surgery. Mohebbi M.


Mapping the modified Rankin Scale (mRS) measurement to the Assessment of Quality of Life (AQoL) utility values. Mohebbi M.


A little deep sleep’ Film ‘Twenty Years on’ - The origins of clinical governance. Steve Bolsin.

5th World Annual Congress of Geriatrics and Gerontology, Fukuoka, Japan. December 4-6 2016.

Geriatric Palliative Medicine and End of Life Care. Dunning T.


– Clinical care for the older type 1 diabetes mellitus patient. Dunning T.

American Dialysis Conference, Long Beach, California, USA. March 2017.

– Key concepts in ultrafiltration during hemodialysis. Agar J.

– New home hemodialysis technology: does it matter? Agar J.

– A patient-centred approach: lessons from SONG-HD. Agar J.

– Clinical pearls for volume control in maintenance HD. Agar J.

American Society of Nephology, Chicago, USA, November 2016.

Machines, Water and Infrastructure for HD: alpha to omega. Agar J.


– Bone Turnover Markers in Men with Dysglycaemia. Holloway KL, De Abreu LLF, Kotowicz MA, Sajjad MA, Pasco JA.


Health literacy and the agreement between osteoporosis defined by self-report versus bone mineral density results in older women. Hosking SM, Buchbinder R, Stuart AL, Pasco JA, Hyde NK, Williams LJ, Brennan-Olsen SL. Poster Presentation

Bone Mineral density in diabetes and impaired fasting glucose. Marijanovic N, Holloway KL, de Abreu LLF, Pasco JA and Kotowicz MA.


Biotechnology and Biological Sciences Research Council (BBSRC), London, UK, March 30, 2017.
The next 10 years of virology. Alexandersen S

CINP, Symposium, Seoul, South Korea, July 6-8, 2016.
- Novel Therapies, Dean OM.
- A randomised controlled trial of the efficacy of lithium vs quetiapine on cognitive function in bipolar disorder. Berk M.
- A randomised controlled trial of the efficacy of mitochondrial agents in the treatment of depression in bipolar disorder. Berk M.
- The therapeutic potential of the gut microbiota in brain and behaviour. Jacka FN.

Mental health as an emerging public health problem. Berk M.

European Dialysis and Transplant Association (EDTA)-ERA Annual Scientific Meeting, Vienna, May 2016.
The killer long break: association between inter-dialytic weight gain, ultrafiltration rate and inter-dialytic interval (Abst). See EJ, Agar JWM.

Foundation of European Nurses in Diabetes (FEND) 22nd Annual Conference, Lisbon, Portugal. September 8-9, 2017. Dunning T.

Health Informatics Auckland New Zealand November 2, 2016. “Barwon Health’s Personalised Health Care an RCT Pilot for the delivery of Chronic Disease care with patients using a home monitoring tele-health solution."

Josephine STEVENS, Shalika Bohingamu Mudiyanselage, Jennifer Watts, Stephen E Lane, Robyn Hayles PAPER PRESENTED.
1. Barwon Health, Australia
2. Deakin University, Australia

Perinatal Determinants of Naive regulatory T cells (Treg) during the First Year of Life in Healthy and Food Allergic Infants. Fiona Collier.

International Congress of Behavioural Medicine (ICBM), Melbourne, VIC, December 7-12, 2016.

International Society for Cardiovascular Infectious Diseases (ISCVID), Dublin, Ireland, June 22-24, 2017.
- Economic Burden of Infective Endocarditis due to Injection Drug Use in Australia. A Single Centre Study, Geelong, Australia. Invited Speaker, Professor Eugene Athan, ORAL PRESENTATION.
- Predicting Staphylococcal aureus bacteraemia presentations using human biomarkers. Carly Botheras, Eugene Athan
- The cost and outcomes of infections of implantable cardiac electronic devices in an Australian cohort.
- Current Epidemiology of Injecting Drug Use-associated Infective Endocarditis in Victoria, Australia in the midst of increasing crystal methamphetamine use, Professor Eugene Athan

Professor Felice Jacka - Founder and President.


- Oxidative and inflammatory biomarkers as targets for novel nutraceutical therapies. Berk M.

- Can we prevent and treat depression by improving diet? Jacka FJ.

- Nutritional Psychiatry: Where to Next? Jacka FJ.


- Health literacy and uptake of dietary calcium recommendations in women. Hosking S.

International Osteoporosis Foundation (IOF) /ECCEO, Malaga, Spain, April 14-17, 2017.


- Keynote Speaker at opening, Professor David Watters

- Global health and Surgical Indicators, Professor David Watters

- Keynote: Surgical Indicators in the Pacific Region, Professor Glenn Guest


- How to maintain a Lifelong Surgical Career, Professor David Watters

- Progress with Global Surgery metrics and national surgical planning, Professor David Watters

- Rural Surgery in Australia and New Zealand, Professor David Watters


Inducted into the SITTI International Researcher Hall of Fame. Journey to the International Researcher Hall of Fame: One Nurse’s Story. Dunning T.


Women with polycystic ovary syndrome exhibit increased risk of left ventricular hypertrophy. De Jong KA, Naderpoor N, Apelbe A, Cukier K, Kotowicz MA, McGee, S.


- FRAX (Aus) scores in women with dysglycaemia. De Abreu LLF, Holloway KL, Kotowicz MA, Sajjad MA, Pasco JA. POSTER PRESENTATION.

- Is there an independent effect of muscle mass and strength on bone measures in school-aged children? The Vitamin D in Pregnancy study. Hyde NK, Hosking SM, Wark JD, Brennan-Olsen SL, Pasco JA. POSTER PRESENTATION.

- Trabecular bone score in men with dysglycaemia. Holloway KL, De Abreu LLF, Kotowicz MA, Sajjad MA, Pasco JA. POSTER PRESENTATION.


- Personality disorders and bone: Data from the Geelong Osteoporosis Study (GOS). Williams LJ, Stuart AL, Quirk SE, Berk M, Brennan-Olsen SL, Hodge JM, Chandrasekaran V, Cleminson J, Pasco JA. POSTER PRESENTATION.


- Can we prevent depression? Berk M.

- Something old, something new, something borrowed, not so blue? Berk M.