MONASH University

M8 Alliance

Medicine, Nursing and Health Sciences

Postgraduate and Honours

Research projects

School of Clinical Sciences at Monash Health

- PhD
- Masters
- Honours
- BMedSc (Hons)

MHTP Monash Health Translation Precinct

Why do Graduate research at the School of Clinical Sciences at Monash Health?

1. **Ignite passion:** Forever change the way you perceive the process of how medical knowledge is advanced. In some of you it will ignite the passion for a career in biomedical research.
2. **Work with the best:** Supervisors at SCS have international reputations for excellence in their field.
3. **Size is important:** A large number of research students have been successfully guided to completion, with a well-established infrastructure conducive to success.
4. **A clinical flavour:** Many of the projects at SCS relate to clinical topics and are supervised by clinician-scientists. However there is also plenty of opportunity for important basic science projects, studying fundamental mechanisms of disease.

Next Steps

1. Make the decision to do a research project.
2. Make contact with a potential supervisor or the head of the unit you may be interested in.
3. Decide on a topic.
4. For research degree applications (PhD and Masters) go to Monash University Institute of Graduate Research - **www.monash.edu/migr**

   For Bachelor of Medical Science (Honours) applications go to - **www.med.monash.edu.au/bmedsci/**

   For Honours degree applications go to - **monash.edu/study/coursefinder/**

Overview

The School of Clinical Sciences (SCS) is a health professional school and research centre of excellence based at campuses of Monash Health; Victoria's largest hospital network. SCS is at the forefront of clinical translational research with demonstrated research strengths in cardiovascular disease, inflammatory diseases, nutrition, women's and children's health and neurosciences. Our senior academic staff are mostly health professionals who work closely with colleagues in Monash Health, translating scientific discoveries into clinical practice in an innovative and collaborative environment. The Monash Health Translation Precinct (MHTP) consists of SCS, the MIMR-PHI Institute, and Monash Health, and provides exceptional collaboration opportunities.

A Message from the Head of School, **Professor Eric Morand**

The School of Clinical Sciences of the Faculty of Medicine, Nursing & Health Sciences comprises the Faculty's academic departments based at Monash Health. It is the Faculty's largest medical clinical school and also hosts its Nutrition & Dietetics department (based at Notting Hill). There is close integration between Monash Health clinical services and the departments including Medicine, Psychiatry, Surgery, Paediatrics, Obstetrics & Gynaecology and Nutrition and Dietetics. Moreover, the School has extensive laboratory based research programs that are integrated with clinical research activities across multiple disciplines, and also hosts three major University Centres of Excellence, the Centre for Inflammatory Diseases, Ritchie Centre for Baby Health Research (jointly with MIMR-PHI Institute), and the Monash Cardiovascular Research Centre. Many group leaders are recognised as international leaders in their areas of expertise.

There is a strong focus on both basic and translational research with real clinical issues driving research questions addressed in the laboratories. Similarly, laboratory derived discoveries can be rapidly tested in relevant clinical settings.

The School has a strong track record of welcoming and supporting research students in productive graduate (honours and doctoral) programs within the School. A growing number of gifted students have progressed from Honours or BMedSci through successful PhDs and postdocs to become successful, independent researchers and biomedical professionals in the School and beyond.

Scholarships

The School of Clinical Sciences at Monash Health can offer scholarships to exceptional Honours, BMedSci and PhD students.

The Main Research Themes in which to complete an Honours project at the School of Clinical Sciences Precinct

Medicine

The Monash University Department of Medicine at Monash Medical Centre is a centre for research and biomedical education and provides the essential interface between research and clinical medicine. Monash Medical Centre is a major tertiary referral hospital serving a population of over 1 million people. Activities of the Department include undergraduate education in Medicine and Biomedical Sciences, a well-established postgraduate program and major research programs.

Professor Peter Ebeling is Head of the Department of Medicine in the School of Clinical Sciences at Monash Health.

His research interests include musculoskeletal health and diseases; public health aspects of vitamin D; post-transplantation osteoporosis; osteoporosis in men; and biochemical bone turnover markers.

Professor Peter Ebeling

peter.ebeling@monash.edu

Surgery

The Department of Surgery (Monash Medical Centre) offers research projects centred around both the laboratory and clinical domains, which ultimately aim to improve our understanding and the practice of surgery. Students with special surgical interests are invited to discuss these with Professor Julian Smith.

Project areas include:

- Cardiothoracic Surgery
- Dental and oral maxillofacial surgery
- Intensive Care Unit
- Orthopaedic Surgery
- Plastic Surgery

Professor Julian Smith

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Stroke and Ageing Research Group

The Stroke and Ageing Research Centre consists of internationally recognised experts in clinical medicine, brain imaging, epidemiology and public health. The group has four divisions, dealing with research into stroke, dementia and other neurological phenotypes of brain ageing. The projects available may involve existing large datasets, as well as novel topics. Significant emphasis is placed on learning new skills and working towards publishable work.

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Prof. Thanh Phan

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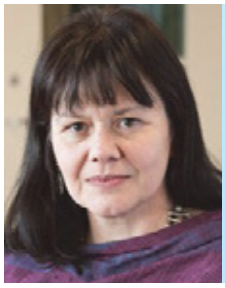

Prof. Amanda Thrift

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Phone: +613 9594 7567

A/Prof. Dominique Cadilhac

Dominique.Cadilhac@monash.edu

Dr. Monique Kilkenny

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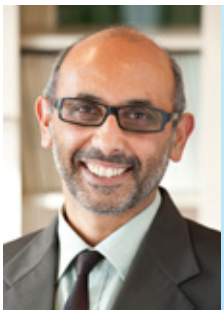
Neurosciences

Professor Thyagarajan's laboratory interest is in the molecular genetics of mitochondrial disease. He has established the only Adult Mitochondrial Disease Clinic in Victoria, to foster research into the genetics of mitochondrial disease. His clinical research area is Parkinson's disease.



Professor Dominic Thyagarajan

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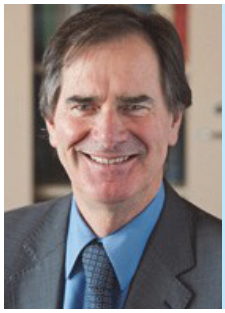
Centre for Inflammatory Diseases

The Centre for Inflammatory Diseases (CID) is a large organisational grouping of research areas at SCS, covering a variety of inflammatory diseases.

Mechanisms of immune injury in vasculitis and glomerulonephritis

The most severe and acute forms of kidney disease are rapidly progressive glomerulonephritis and acute kidney injury. Our research aims to define key events in leukocytes that control how these diseases develop. Understanding the fundamental elements of disease pathogenesis may lead to better treatments for these severe and difficult to treat conditions.



Prof. Stephen Holdsworth

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Phone: +613 9594 6361

Prof. Richard Kitching

(Director, Centre for Inflammatory Diseases)

Richard.Kitching@monash.edu

Phone: +613 9594 5520

Lupus and Rheumatic Diseases: Molecular and Clinical Studies

Systemic lupus erythematosus (SLE, or lupus) is the archetypal serious multisystem autoimmune disease. Monash hosts Australia's only multidisciplinary research-centred clinic for SLE, now Australia's largest longitudinal disease status, outcome and biomarker study. The centre also includes a basic laboratory research group studying fundamental mechanisms of rheumatic diseases.

Prof. Eric Morand

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Control of leukocyte recruitment during inflammation

Leukocytes play critical roles in protective responses to infection and injury. However, these same cells are also major contributors to inappropriate, injurious responses in inflammatory diseases. Our laboratory studies the actions of leukocytes in models of inflammatory disease, using state of the art imaging systems to directly visualise leukocytes *in vivo* during their recruitment from the bloodstream, and following their entry into tissues.

Prof. Michael Hickey

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Mechanisms of liver fibrosis

Liver fibrosis and cirrhosis is the common end stage to all liver diseases in humans. We study mechanisms of liver fibrosis and factors that determine its progression to cirrhosis.

Prof. William Sievert

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Phone: +613 9594 3177

Atherosclerotic vascular disease: Role of the immune system

Our studies are directed towards a precise understanding of the role of the innate and adaptive immune system in the initiation and progression of atherosclerosis.

Professor Ban Hock Toh

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Respiratory infection

The outcome in respiratory infection is primarily determined by the interaction between the bacterial pathogen and host immune response. We have a longstanding research interest in assessing the immune response to common bacteria. Our work has concentrated on clinical samples from patients and cell lines.

Dr. Paul King

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Inflammation in Type 2 diabetes and its complications

Type 2 diabetes is a metabolic syndrome is caused by the development of insulin resistance, which is normally a consequence of chronic obesity. Diabetes enhances the inflammatory response, causing additional tissue damage to a number of organs including the heart, kidney, eye and nervous system. We aim for a greater understanding of the inflammatory process during type 2 diabetes, and its complications.

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Dr. Greg Tesch

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Systemic Immunity & Stroke

Current work focuses on the mechanisms of immune suppression after stroke and the role of dietary fibre in the modulation of immunity following infection.

Dr Connie Wong

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Psychiatry

The Department of Psychiatry offers research projects based at the Monash Health Mental Health Program sites (Monash Medical Centre, Dandenong Hospital and Kingston Centre) and in conjunction with its research centres and units.

The Department offers a wide range of research projects in the areas of clinical research and mental health services research within the five main research groups:

Adult Psychiatry and Molecular Pharmacology Unit

Pharmacology studies of clozapine, signal transduction and the EGF receptor.

Researchers/supervisors include Professor Vaughan Carr (vaughan.carr@monash.edu).

Aged Mental Health Research Unit

Studies of depression. anxiety and dementia in aged patients, both in the community and in residential aged care facilities.

Researchers/supervisors include Drs Chris Plakiotis (chris.plakiotis@monash.edu), Tanya Davison (tanya.davison@monash.edu) and Emeritus Prof Daniel O'Connor (daniel.oconnor@monash.edu).

Centre for Developmental Psychiatry and Psychology (CDPP)

Studies of autism and developmental disability; depression in childhood and adolescence; school refusal; personality disorder; and transcranial magnetic stimulation in adolescents with depression.

Researchers/supervisors include A/Prof Michael Gordon (michael.gordon@monash.edu)and A/Prof Kylie Gray (kylie.gray@monash.edu), Dr Glenn Melvin (glenn.melvin@monash.edu) and Emeritus Prof Bruce Tonge (bruce.tonge@monash.edu)

Psycho-Oncology, Palliative Care and Consultation Liaison Psychiatry

Studies of group, couple and family therapy in the cancer and palliative care setting; measures of demoralisation and existential distress at the end-of-life; bereavement studies; trials of meaning and purpose therapy; studies of communication skills training within oncology and palliative care; and imaging studies of patients with degenerative neurological disorders.

Researchers/supervisors include Professor David Kissane (david.kissane@monash.edu) and Professor David Clarke (david.clarke@monash.edu), Dr Phyllis Chua (phyllis.chua@monash.edu) Dr Joanne Brooker (Joanne.Brooker@monash.edu) and Dr Carrie Lethborg (carolyn.lethborg@monash.edu).

Southern Synergy

Projects include the epidemiology of mental disorders; recovery practice after psychotic illness; studies of mindfulness; and the needs of refugees.

Researchers/supervisors include Professor Graham Meadows (graham.meadows@monash.edu), Dr Joanne Enticott (joanne.enticott@monash.edu) and Dr Frances Shawyer (Frances.Shawyer@monash.edu).

Psychiatry BMedSci (Hons) coordinator

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Prof. David Kissane

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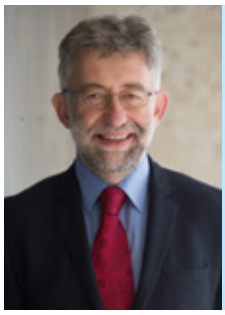

Prof. Graham Meadows

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Prof. David Clarke

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Monash Emergency

Gain broad research and clinical skills, cradle to tomb

The Monash Health Emergency Medicine Research Group offers clinical research projects based at all of the Monash Health Emergency Departments. Research interests of the group are wide-ranging both in the areas of clinical research in emergency medicine, and toxicology as well as applied basic-science research in various aspects of clinical toxicology. The projects encompass the diverse range of clinical problems that confront emergency medicine.

Our clinical research focuses on **pragmatic patient centred research** that is aimed at driving innovation and change. A recent student project was headlined on Medscape Time to Rethink ED IV Insertion Standing Protocols? Our students have regular clinical shifts in the adult and paediatric Emergency Department (ED) with senior medical staff that ensures their **clinical skills accelerate** during their research year. Students have an opportunity to run multicentre trial across our three ED and access to about a third of the ED patients in Melbourne. Monash Emergency research offers a rare opportunity for adult and paediatric projects or combined across all ages. We are open to new ideas that students have about novel projects.

Prof. Andis Graudins

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Dr Diana Egerton-Warburton

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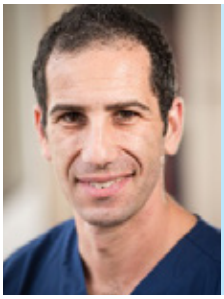

Dr Gabriel Blecher

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Paediatric Emergency Medicine

Over 50,000 children are seen across the three Monash Health emergency departments each year. Our paediatric emergency medicine group has wide interest in all aspects of the emergency care of children, including critical care and resuscitation, common illnesses and clinical procedures, diagnostic testing, pain management, and clinical decision rules. We have strong links with all Monash Children's inpatient units, as well as the Royal Children's Hospital ED, and other paediatric EDs across Australia and New Zealand.

Dr Adam West

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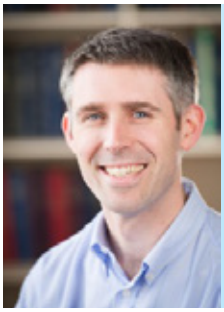

Dr Simon Craig

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Dr Bob Seith

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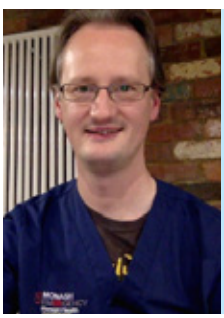

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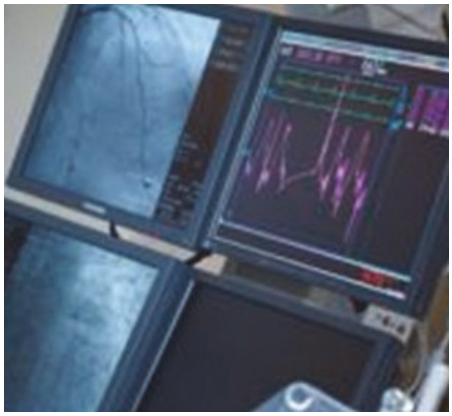
Monash Cardiovascular Research Centre



Monash Cardiovascular Research Centre (MCRC) researches a wide variety of cardiac disease and is located at Monash Medical Centre. The Centre has an international reputation for excellence and achievement in basic and translational research, supporting the uptake of state-of-the-art cardiovascular treatments into clinical service. Research projects are available in several areas, including echocardiography, CT coronary imaging and the genetic disease, familial hypercholesterolaemia.

For more information please visit:
www.monashheart.org.au/page/Research_and_Education/LabClinical_Research/

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Assoc. Prof. Phil Mottram

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Dr Tony White

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Nutrition, Dietetics and Sleep

The Be Active Eat and Sleep (BASE) facility is a leading research facility in the Faculty of Medicine. (www.med.monash.edu.au/base) It provides facilities for a multidisciplinary group of academics who conduct research across a wide range of areas that will educate the community with emphasis on the prevention of disease and maintenance of optimum health. With state of the art research equipment and facilities and highly qualified and experienced investigators, BASE is applying the integration of nutrition, sleep and exercise physiology research to address the needs of individuals, corporations, health professionals and the community at large.

Project areas include:

- Clinical dietetics including paediatrics
- Community and population nutrition
- Sport and exercise nutrition
- Sleep, nutrition and metabolism

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Dr Maxine Bonham

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Dr. Cate Huggins

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Dr. Karen Walker

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Monash Children's Hospital / Paediatrics

Monash Children's is the third largest children's hospital in Australia, with the new Monash Children's build commenced in July 2014. Research at MCH occurs across multiple groups in different child health disciplines, often in collaboration with the Ritchie Centre/MIMR-PHI Institute as well as the Murdoch Children's Research Institute. International projects are also available including developed and developing settings.

Clinical, laboratory, epidemiological and child health informatics projects are available across many child health specialties including:

- Children's cancer
- Paediatric surgery
- Neonatology
- Neurology
- Emergency medicine
- Respiratory and sleep medicine
- Genetics
- Infectious diseases and vaccinology.

Contact:

MCH Research Director, A/Prof Jim Buttery.

Jim.Buttery@monash.edu

Obstetrics and Gynaecology / The Ritchie Centre

The Ritchie Centre is a research centre within MIMR-PHI Institute and is affiliated with the Monash University School of Clinical Sciences through the Department of Obstetrics and Gynaecology, and the Department of Paediatrics. The Ritchie Centre has over 150 research staff and students, including fetal physiologists, immunologists, stem cell biologists, neonatologists, paediatricians, obstetricians, gynaecologists, and radiologists.

There are four Research Themes in The Ritchie Centre:

- Women's Health
- Fetal and Neonatal Health
- Infant and Child Health
- Cell Therapy and Regenerative Medicine

Prof. Stuart Hooper

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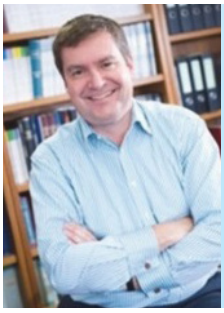

Prof. Euan Wallace

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Prof. Rosemary Horne

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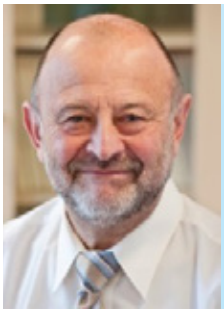

Prof. Graham Jenkin

Graham.Jenkin@monash.edu

Recent successful projects at The Ritchie Centre

Alannah Kavanagh

Exploring a physiological definition of bronchopulmonary dysplasia.

Alannah worked with Dr Kenneth Tan to quantify shunt and reduced VA:Q in infants with BPD still requiring positive pressure respiratory support.

Chun Wang Jason Lao

Shedding light on Preterm Neonatal Immunity.

Jason worked with Drs Claudia & Marcel Nold to study the immune system of preterm babies and its relevance to bronchopulmonary dysplasia.

Grace Davies

The impact of dopamine on preterm brain injury.

Grace worked with Dr Flora Wong and found a trend that dopamine may reduce inflammation, apoptosis and oligodendrocyte proliferation in the preterm brain exposed to severe hypoxia.

Department of Molecular and Translational Sciences

mimr-phi institute

MIMR-PHI Institute officially launched in January 2014, with the joining of two of the most trusted names in medical research, Prince Henry's Institute (PHI) and the Monash Institute of Medical Research (MIMR).

With a combined 75 years of research experience, more than 400 leading research experts and postgraduate students and state-of-the-art research platforms and facilities, the Institute has taken its place as a leader in improving global wellbeing through excellence in medical research and clinical application.

As one of Melbourne's top medical research institutes and the research hub of the Monash Health Translation Precinct (MHTP), MIMR-PHI scientists and clinicians are at the forefront of discovery and translational research. Our partnerships with Monash Health and Monash University have uniquely positioned the Institute to directly translate our discoveries into patient treatments and to research those issues identified in the clinic.

An $84 million state-of-the-art Translational Research Facility (TRF) is currently under construction at this site, due for completion in 2015. The TRF will co-locate research, clinical and technological platforms to facilitate the collaboration of our researchers and clinical partners to accelerate and coordinate the translation of scientific breakthroughs.

Under the guidance of CEO and Director, Professor Bryan Williams, and Board Chair, Dr Robert Edgar and the MIMR-PHI Board, the Institute drives the innovative, cutting-edge research programs long associated with MIMR and PHI.

The Institute's specialist Research Centres tackle key health priorities in the following areas:

- Cancer
- Genetic Disease
- Immunity, Inflammation and Infectious Diseases
- Reproductive Health
- Fetal, Neonatal and Children's Health
- Endocrinology and Metabolism

Honours coordinator,
Assoc Prof Mark Hedger

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Head of Postgraduate Studies
Prof Kate Loveland

Kate.Loveland@monash.edu

MIMR-PHI Institute is also a Department in the School of Clinical Sciences at Monash Health, further strengthening the partnership and opportunities for collaboration.

Please refer to The Ritchie Centre and MIMR-PHI Institute booklets for details of their available projects.

Medicine

Current definitions of sarcopenia: Associations with indicators of falls and fracture risk in older adults

Research Leader/s: Prof Peter Ebeling
Email: peter.ebeling@monash.edu

The metabolic syndrome and musculoskeletal health in older adults

Research Leader/s: Prof Peter Ebeling
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Investigating the interaction between skeletal muscle and bone

Research Leader/s: Prof Peter Ebeling
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Developing New Therapies for Musculoskeletal Disease – Investigating the Fundamental Mechanisms of Osteocyte Mechanosensing

Research Leader/s: Prof Peter Ebeling
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Investigating the role of Vitamin D in cortical bone remodelling

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Role of vitamin D and exercise on age-related sarcopenia and intramuscular fat

Research Leader/s: Prof Peter Ebeling
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Using new mechanical sensing devices to monitoring physical activity and forces on the skeleton (with Faculty of Engineering).

Research Leader/s: Prof Peter Ebeling
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Pathophysiological mechanisms of pregnancy and lactation-induced osteoporosis.

Research Leader/s: Prof Peter Ebeling
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Centre for Inflammatory Diseases

Treating Autoimmune Anti-Myeloperoxidase (MPO) ANCA Associated Glomerulonephritis (GN) by Inducing Nasal Tolerance

Research Leader/s:
Prof Stephen Holdsworth, Dr Joshua Ooi
Email: stephen.holdsworth@monash.edu

Developing Mast Cell (MC) Based Treatments for Autoimmune anti Myeloperoxidase (MPO) ANCA associated Glomerulonephritis (GN)

Research Leader/s:
Prof Stephen Holdsworth, Dr Poh Yi Gan
Email: stephen.holdsworth@monash.edu

The role of T cells in experimental crescentic glomerulonephritis

Research Leader/s:
Prof Stephen Holdsworth, Dr Poh Yi Gan
Email: stephen.holdsworth@monash.edu

Mechanisms of CD8+ cell mediated involvement in autoimmune vasculitis

Research Leader/s:
Prof Richard Kitching, Dr Joshua Ooi
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Do microvascular endothelial cells present autoantigens in the glomerulus?

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The role of BAFF in the production of anti-neutrophil cytoplasmic antibodies and autoimmune vasculitis

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The role of human MHC II molecules in shaping the autoreactive T-cell repertoire

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Email: joshua.ooi@monash.edu

The role of autoantigen specific T regulatory cells in suppressing autoreactive T effector cells

Research Leader/s: Dr Joshua Ooi
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The Role of Myeloperoxidase in Acute Kidney Injury

Research Leader/s: Dr Dragana Odobasic
Email: dragana.odobasic@monash.edu

The role of neutrophils in experimental crescentic glomerulonephritis

Research Leader/s: Dr Dragana Odobasic
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Targeting the mechanisms of action of GILZ to design novel therapeutics for inflammatory disease

Research Leader/s:
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The role of GILZ in adaptive immunity and autoimmunity

Research Leader/s:
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Role of Autophagy in Autoimmune Diseases

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Role of Annexin AI in the Autophagic Regulation of Inflammation

Research Leader/s:
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Role of Annexin A1 in Regulation of Regulatory T Cells in Inflammatory Diseases

Research Leader/s:
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Role of the TLR adaptor molecule MAL in the Regulation of Inflammation

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Role of MIF in Inflamation

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Autophagy and the Control of Intestinal Inflammation

Research Leader/s:
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Mechanisms of regulatory T cell recruitment and migration

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Control of leukocyte-endothelial cell interactions in glomerular injury

Research Leader/s:
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Tetraspanins as regulators of leukocyte migratory function

Research Leader/s:
Prof Michael Hickey & A/Prof Mark Wright
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Activin A as a marker for liver fibrosis and cirrhosis in humans

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The coagulation pathway in liver fibrosis and cirrhosis

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The effect of hepatitis C virus viral replication on hepatic stellate cell biology

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Mechanisms of alcohol related hepatocyte apoptosis in patients infected with viral hepatitis C

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Defining intracellular behaviour of nontypeable Haemophilus influenza

Research Leader/s: Dr Paul King
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Lung immune responses to bacteria in COPD

Research Leader/s: Dr Paul King and Professor Stephen Holdsworth
Email: paul.king@monash.edu

The role of JNK signalling in macrophage-mediated tissue injury in type 2 diabetes

Research Leader/s: A/Prof David Nikolic-Paterson, Dr Greg Tesch
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Atherosclerotic vascular disease: Role of the immune system

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Stroke and Ageing Research Centre

The role of T-cells in acute stroke

Research Leader/s:
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Email: velandai.srikanth@monash.edu

Measuring ischemic stroke penumbra with high-resolution CT imaging

Research Leader/s:
Prof Thanh Phan, A/Prof Velandai Srikanth, Dr Henry Ma
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Imaging approach to phenotyping lacunar stroke

Research Leader/s:
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Imaging amyloid angiopathy

Research Leader/s:
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Introduction to health services research in stroke

Research Leader/s:
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Shared Team Approach between Nurses and Doctors For Improved Risk factor Management (STAND FIRM)

Research Leader/s:
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Identifying factors associated with hypertension, and barriers to the control of hypertension in the setting of poverty, overcrowding and infection

Research Leader/s:
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The Monash Cardiovascular Research Centre

(Retrospective) Assessment of radiation dose in diagnostic angiography and percutaneous coronary intervention in a tertiary referral centre

Research Leader/s:
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Assessment of degree of stenosis in coronary artery disease as assessed by 3D quantitative angiography

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Psychiatry

Effect of group-based mindfulness-based cognitive therapy (MBCT) on medication adherence in people with major depressive disorder

Research Leader/s:
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Medicare services for mental health care: An examination of horizontal and vertical comprehensiveness

Research Leader/s:
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Dr Joanne Enticott
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Mental health and Recovery-Oriented Practice: Are consumers' experiences of recovery aligned with recovery oriented practice across mental health service sectors?

Research Leader/s:
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Implementing recovery oriented mental health practices in the PULSAR intervention: A mixed-methods investigation of barriers and enablers in primary care settings

Research Leader/s:
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Demoralisation and depression in palliative care: meaning and purpose therapies. Implementation of family-centred care at the end of life.

Research leader/s:
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Surgery

Robotic cardiac surgery – clinical application, early follow-up of results; robotic, micromanipulation and nanotechnology research in association with the Department of Mechanical Engineering

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ASCTS Victorian Cardiac Surgery Database project – development of a risk adjustment model for outcomes of cardiac surgery and the assessment of other cardiac surgical outcomes.

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Markers and prediction of renal dysfunction after cardiac surgery

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A comparison of the outcomes of the surgical treatment of atrial fibrillation utilising radiofrequency, cryotherapy or high intensity focused ultrasound

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Primary Prevention of Perineal Problems: Elective Caesarean Section for the Primigravida: an Informed Choice

Research Leader/s:
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Communication Skills and Surgeons: Hand Over and Communications between Junior Medical Staff and Consultants

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Pruritus Ani and the Effect of Incomplete Wiping of the Anus after Defaecation

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Gender and Outcome of Surgery for Large Bowel Cancer

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The role of Simulated Patients as confederates in the teaching and assessment of competency based skills in General Surgery Trainees in SET

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An evaluation of the effectiveness of surgical skills workshops in the Skills and Education Centre at RACS

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E health and medical records

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The ageing surgeon and cognitive function

Research Leader/s:
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VP Shunt success : Does the accuracy of placement of the ventricular catheter predict shunt blockage rates ? Does stereotactic placement of the ventricular catheter improve the shunt survival ?

Research Leader/s:
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Mr Tony Goldschlager
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Trigeminal neuralgia – what are the short and long-term results of treatment of this condition in our service?

Research Leader/s:
Associate Professor Andrew Danks,
Mr Tony Goldschlager
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The role of mesenchymal stem cells in spinal surgery: what is the place of these cells in increasing the success of spinal fusion surgery? – phase 2 and 3 studies.

Research Leader/s:
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SAH and cerebral aneurysms – a detailed audit is being undertaken, and there will be opportunities to use this dataset for analysis and publication.

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Description of a patient with Antley-Bixler Syndrome and initial management of unusual premaxillary displacement

Research Leader/s: Mr William Besly
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A comparison of immediate and delayed dental implant placement in head and neck surgery patients

Research Leader/s: Mr Michael Schenberg
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Results of total shoulder arthroplasty using a short humeral stem and ceramic head prosthesis.

Research Leader/s:
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The long term results of acromioclavicular joint arthroscopy, with chondral and meniscal debridement.

Research Leader/s:
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Randomised controlled trial; Prospective comparison of intra-articular gleno-humeral joint cortisone injection with cortisone injection plus hydrodilatation in the management of shoulder capsulitis.

Research Leader/s:
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Early to middle-term radiographic and clinical results of a 2-pegged, biconcave, cemented, all polyethylene glenoid.

Research Leader/s:
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Postoperative pain, depression and the development of Post-operative Stiff Painful Shoulder after arthroscopic surgery.

Research Leader/s:
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4D CT scans facilitate pre-operative planning in snapping scapula syndrome

Research Leader/s:
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The tight posterior capsule of the shoulder causing acromio-clavicular joint pain. Clinical study using the 4D CT scan.

Research Leader/s:
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Shoulder: Correlation and validation of shoulder scoring between medical practitioners, physiotherapists and patient self assessment.

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Establishing a modern algorithm for Dupuytrens disease – a new treatment paradigm

Research Leader/s:
Michael Chae, Alexandra Rizzitelli, Tanya Katz, WM Rozen, DJ Hunter-Smith
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The dose-response curve in children and young adults, vs adults and the elderly exposed to radiation: the life-span study

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Surgery

Pathology of the Dorsal Triangular Fibrocartilage in Rheumatoid Arthritis Affecting Metacarpophalageal Joints II-V- Structure, Function and Imaging Criteria in Joint Instability– a collaborative study with the department of Plastic Surgery, Stanford University, USA

Research Leader/s:
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Breast augmentation I – what are the benefits; a systematic review

Research Leader/s:
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Templating and 3D Modeling in Plastic and Reconstructive Surgery: Concepts and the Future

Research Leader/s:
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Consent and Privacy in Plastic Surgery: The Development of a Multimedia Mobile Phone Application

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3D Volumetric Analysis of the Breast for Correction of Asymmetry and Reconstruction

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Laparoscopic bile duct exploration compared to on table ERCP – a randomized trial

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The effect of Intraoperative cholangiography on post operative LFTs – a randomized trail

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An ERAS protocol for perforated duodenal ulcer. A prospective trial

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An audit of bile culture result from bile obtained at major HPB resections

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The MORPh trial. Monash Outpatients Review by Phone

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A review of the accuracy of EUS FNA in pancreatic tumours: comparing adenocarcinoma to neuroendocrine malignancy

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Review of staging prior to oesophagectomy – The Australian Experience

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The effect of the introduction of the Acute Surgical Unit on the treatment of patients with acute cholecystitis and biliary colic

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The expression of STAT3, IL6 and IL11 in patients with pancreatic cancer

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Hormonal Pathogenesis of BPH

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BPH/Bladder Dysfunction

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TOAD (Timing of Androgen Deprivation) Trial

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Epigenetics and Aberrant Prostate Growth

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Phenotype Characterisation and Physiological Stress Responses in Activin b C Mouse Models

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Regulation of Adult Prostate Cancer Stem Cells

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Hearing Preservation after Cochlear Implantation

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Nutrition and Dietetics

Examine the effect of macronutrient consumption on diet induced thermogenesis in overweight adults with sleep apnoea

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Validation of bioelectrical impedance as a measurement of body fat and muscle in children with PKU

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The effect of fat type and fatty acid chain length on lipid uptake and appetite in healthy men and women

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Do certain fruits and vegetables really result in a negative energy balance?

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The glycaemic and satiety effects of different Asian breakfasts

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The impact of sleep during the last trimester of pregnancy and birth weight

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The use of phytochemicals to increase the satiating effect of beverages

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Gut training: Can the gut cope with increased food intake during exercise in thermoneutral and extreme environmental conditions with exposure to repetitive gut challenge?

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Extent of disordered eating amongst male athletes: Is there cause for concern?

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Impact of exercise-induce dehydration on gastrointestinal symptoms, intestinal endotoxin leakage, and systemic endotoxaemia.

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Does milk as a recovery beverage after exercise prevent the post-exercise decrease in immune function?

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The effect of shift work on dietary patterns and quality of life

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Evaluate the Chinese diabetes support group using mixed methods

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Exploring nutrition in the neuromuscular disorders

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Exploring the use of a novel nutritional supplement in healthy males

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Weight loss using a modified fasting regimen and its effect on body composition

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Emergency Medicine

Current projects can be tailored to student needs;

The themes of research include:

- Public Health interface with Emergency Medicine;
- Epidemiology of misuse of alcohol and other drugs;
- Assessment of Clinical Care and Service delivery;
- Analgesia delivery and effectiveness in the ED; and
- Clinical Toxicology -> Epidemiology of poisoning. Assessment of novel treatments.

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Don't miss your opportunity to kick start your research career alongside nationally and internationally recognised professionals in a variety of areas.