Bachelor of Medical Science (Honours) 2016 Projects
Central Clinical School
Bachelor of Medical Science (Honours) through Central Clinical School

Monash University's Central Clinical School (CCS) undertakes translational research – developing insights from laboratory bench research for use in therapies and treatments. Our departments and research affiliates have strong links with health care providers, ensuring that our research rapidly translates to clinical practice.

Undertaking an Honours year with us will give you a wide range of opportunities to continue your studies and develop your career path into many areas of medical and clinical research.

CCS is co-located with a number of world renowned research and clinical teams from Monash University, Alfred Health, The Baker Heart and Diabetes Research Institute and the Burnet Institute, collectively known as the Alfred Medical Research and Education Precinct (AMREP). This consortium offers a unique range of research strengths and interests for improving human health. AMREP is also very convenient for public transport and has great amenities, being close to the heart of Prahran.

How to use this index booklet

This index booklet lists the BMedSc(Hons) projects on offer for 2016. For further information about a particular research project, see the project description in the online database, [http://bmedscirp.med.monash.edu.au/](http://bmedscirp.med.monash.edu.au/). Students are also strongly encouraged to approach the laboratory head or nominated researcher associated with the project.

For general information regarding the CCS BMedSc(Hons) program and courses:

- Professor Jenny Hoy, CCS BMedSc(Hons) Coordinator: [Jennifer.Hoy@monash.edu](mailto:Jennifer.Hoy@monash.edu)
- Ms Laisa Tigarea, CCS Student Services Officer: [Laisa.Tigarea@monash.edu](mailto:Laisa.Tigarea@monash.edu) ph +61 3 99030027

The projects are listed under the following headings

- Department of Allergy, Immunology and Respiratory medicine (AIRmed)
- Australian Centre for Blood Diseases (ACBD)
- Baker IDI Heart and Diabetes Institute
- Cabrini Monash University Department of Medicine
- Department of Immunology
- Department of Infectious Diseases
- Department of Medicine
- Melbourne Sexual Health Centre (MSHC)
- Monash Alfred Psychiatry research centre (MAPrc)
- Department of Surgery

Making your application

Applications are completed centrally through Monash University. Prospective applicants should complete an application form, which can be downloaded or obtained from the Faculty Office. See further information, entry requirements and to download application forms for the BMedSc(Hons) at [http://www.med.monash.edu.au/bmedsci/how-to-apply.html](http://www.med.monash.edu.au/bmedsci/how-to-apply.html)

AMREP Honours scholarships – apply for $6,000 scholarships to study at AMREP: [http://www.monash.edu.au/study/scholarships/honours/amrep.html](http://www.monash.edu.au/study/scholarships/honours/amrep.html)
Department of Allergy, Immunology and Respiratory medicine (AIRmed)

The Department of Allergy, Immunology and Respiratory Medicine (AIRMed) has a comprehensive spectrum of expertise in advanced lung diseases including asthma, lung transplantation, cystic fibrosis, pulmonary hypertension, COPD and sleep disordered breathing, allergy and clinical immunology. The Department integrates clinical services with extensive human and experimental research programs, linking senior clinician scientists, bench scientists, allied health professionals, primary care physicians and the community. The clinical and academic base of AIRMed is located at the Alfred Hospital, with experimental and clinical research laboratories located both within the hospital and in the laboratories of related Departments within Central Clinical School.

Projects available:

Defining the role of B cells in chronic allograft dysfunction following lung transplantation
Supervisors: A/Prof Glen Westall and Prof Greg Snell
Email: G.Westall@alfred.org.au

Social Media in Lung Transplantation
Supervisors: A/Prof Glen Westall and Dr Miranda Paraskeva
Email: G.Westall@alfred.org.au

The Clinical Utility of Biomarkers of Immune Function following Lung Transplantation
Supervisors: A/Prof Glen Westall and Prof Anton Peleg
Email: G.Westall@alfred.org.au

The molecular immunology of penicillin allergy
Supervisors: Dr Nicole Mifsud, Dr Patricia Illing, Prof Robyn O’Hehir and Prof Anthony Purcell
Email: nicole.mifsud@monash.edu

www.med.monash.edu/cecs/education
Australian Centre for Blood Diseases (ACBD)

The Australian Centre for Blood Diseases (ACBD) is a leading national and international blood diseases centre with recognised research, treatment, and educational programs for blood diseases.

The ACBD is affiliated with Monash University, The Alfred hospital, Eastern Health and Southern Health, and is organised into three integrated divisions:

- Clinical and Diagnostic Haematology/Oncology
- Clinical and Basic Research Programs
- Teaching and Education

The ACBD’s research falls into two main areas, Non-Malignant Haematology, and Malignant Haematology & Stem Cell Transplantation.
Projects available:

**Bromodomain inhibitors: novel therapeutic targets for multiple myeloma**  
Supervisors: Prof Andrew Spencer and Dr Tiffany Khong  
Email: aspencer@netspace.net.au

**The role of the tumour microenvironment in conferring drug resistance in multiple myeloma**  
Supervisors: Prof Andrew Spencer and Dr Sridurga Mithraprabhu  
Email: aspencer@netspace.net.au

**Targeting Ras/Raf/MAPK and PI3K/Akt pathways as potential therapeutic targets in multiple myeloma**  
Supervisors: Prof Andrew Spencer and Dr Tiffany Khong  
Email: aspencer@netspace.net.au

**Developing humanized models of hematopoiesis and leukaemia**  
Supervisor: A/Prof Andrew Wei  
Email: a.wei@alfred.org.au

**Cytokine signalling in myeloid leukaemia**  
Supervisors: Dr Anissa Jabbour and Dr Mark Guthridge  
Email: anissa.jabbour@monash.edu

**Defining the pathogenic role of the B-cell survival factor BAFF in chronic graft versus host disease**  
Supervisors: A/Prof David Curtis, Prof Fabienne MacKay and Dr Sush Patil  
Email: david.curtis@monash.edu

**Identifying the substrates of the methyltransferase PRMT5 in stem cells**  
Supervisors: A/Prof David Curtis, Dr Stefan Sonderegger and Dr Emma Toulmin  
Email: david.curtis@monash.edu

**Investigating the Effects of Aberrant Expression of Prmt5 in haematopoiesis**  
Supervisors: A/Prof David Curtis, Dr Stefan Sonderegger and Dr Emma Toulmin  
Email: david.curtis@monash.edu

**Targeting Protein arginine methyltransferase 5 (PRMT5) in Acute Myeloid Leukaemia**  
Supervisors: A/Prof David Curtis, Dr Stefan Sonderegger and Dr Emma Toulmin  
Email: david.curtis@monash.edu

**The role of TET2 in cancer stem cells**  
Supervisors: A/Prof David Curtis and Dr Cedric Tremblay  
Email: david.curtis@monash.edu

**Targeting the Immediate Early Gene Response to Sensitize Leukemic Cells to Chemotherapy**  
Supervisors: A/Prof David Curtis and Dr Cedric Tremblay  
Email: david.curtis@monash.edu

**Metalloproteases in thrombosis and Alzheimer's disease**  
Supervisors: Dr Elizabeth Gardiner, A/Prof Robert Andrews, Dr Justin Hamilton and Dr Jane Arthur  
Email: elizabeth.gardiner@monash.edu
Metalloproteolysis of activation receptors from the platelet surface in disease
Supervisors: Dr Elizabeth Gardiner, A/Prof Robert Andrews, A/Prof Huyen Tran and Dr Jane Arthur
Email: elizabeth.gardiner@monash.edu

Targeted inhibition of chaperones as therapy in myeloma
Supervisors: Prof Harshal Nandurkar and Dr Hang Quach
Email: harshal.nandurkar@monash.edu

Development of a new endothelial targeted antithrombotic to preserve organ function after ischaemic injury
Supervisors: Prof Harshal Nandurkar, Prof Peter Cowan and Prof Karlheinz Peter
Email: harshal.nandurkar@monash.edu

Role of purinergic nucleotides in thrombosis associated with antiphospholipid syndrome
Supervisors: Prof Harshal Nandurkar, Prof Peter Cowan and Dr Warwick Nesbitt
Email: harshal.nandurkar@monash.edu

Improving diagnosis in patients with unexplained clinical bleeding
Supervisors: A/Prof Huyen Tran, Dr Justin Hamilton and A/Prof Robert Andrews
Email: huyen.tran@monash.edu

Identification and Characterisation of Genes Involved in Haematopoiesis and Leukaemic Transformation
Supervisors: A/Prof Jody Haigh, Dr Magdaline Costa and Dr Catherine Carmichael
Email: jody.haigh@monash.edu

Understanding the role of Snai1 in hematopoiesis and leukemic transformation
Supervisors: A/Prof Jody Haigh and Dr Catherine Carmichael
Email: jody.haigh@monash.edu

Characterizing the role of Zeb2 in B/T cell leukemia
Supervisors: A/Prof Jody Haigh and Dr Catherine Carmichael
Email: jody.haigh@monash.edu

Use of iPS cell technologies to study leukemic transformation
Supervisors: A/Prof Jody Haigh and Dr Magdaline Costa
Email: jody.haigh@monash.edu

Role of the transcriptional modulators Zeb2 and Snai1 in Cellular Reprogramming and lineage directed differentiation
Supervisors: A/Prof Jody Haigh and Dr Thao Nguyen
Email: jody.haigh@monash.edu

Use of Rosa26-iPS mouse model to study molecular determinants of cellular reprogramming, memory and differentiation
Supervisors: A/Prof Jody Haigh and Dr Magdaline Costa
Email: jody.haigh@monash.edu

Targeting platelet thrombin receptors as a novel anti-thrombotic approach
Supervisors: Dr Justin Hamilton and A/Prof Robert Andrews
Email: Justin.Hamilton@monash.edu
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**Developing isoform-specific PI3K inhibitors as novel anti-platelet agents**
Supervisors: Dr Justin Hamilton and A/Prof Philip Thompson
Email: Justin.Hamilton@monash.edu

**Targeting the human platelet thrombin receptor, par4, as a novel anti-thrombotic therapy**
Supervisors: Dr Justin Hamilton and A/Prof Robert Andrews
Email: Justin.Hamilton@monash.edu

**Developing isoform-specific pi3k inhibitors as novel anti-platelet agents**
Supervisors: Dr Justin Hamilton and A/Prof Philip Thompson
Email: Justin.Hamilton@monash.edu

**Investigating the use of matrix metalloprotease inhibitors in preventing blood-brain barrier damage following traumatic brain injury**
Supervisors: Dr Maithili Sashindranath and Prof Robert Medcalf
Email: maithili.sashindranath@monash.edu

**Understanding the mechanism of tranexamic acid treatment for brain injury**
Supervisors: Dr Maithili Sashindranath and Prof Robert Medcalf
Email: maithili.sashindranath@monash.edu

**Targeting cell survival pathways in acute myeloid leukemia (AML)**
Supervisors: A/Prof Mark Guthridge and Dr Nhu-Y Nguyen
Email: mark.guthridge@monash.edu

**New therapeutic approaches for targeting cancer metabolism to overcome therapeutic resistance**
Supervisors: A/Prof Mark Guthridge and Dr Giovanni Monaco
Email: mark.guthridge@monash.edu

**A new screening platform for the identification of new treatments and therapies for the treatment of acute myeloid leukemia (AML)**
Supervisors: A/Prof Mark Guthridge, Dr Andrew Wei and Dr Donia Moujalled
Email: mark.guthridge@monash.edu

**Investigating Ap2a2 & Gpsm2 in leukemia stem cells**
Supervisors: Dr Stephen Ting and Dr Sara Rhost
Email: stephen.ting@monash.edu

**Linking endocytic Ap2a2 to haematopoietic stem cell metabolism**
Supervisors: Dr Stephen Ting and Dr Sara Rhost
Email: stephen.ting@monash.edu

**Development of a novel microfluidic system for the monitoring of antiplatelet therapies and assessment of platelet dysfunction**
Supervisors: Dr Warwick Nesbitt and Prof Harshal Nandurkar
Email: warwick.nesbitt@monash.edu

**Development of a novel shear micro-gradient system for the diagnosis of von Willebrands Disease**
Supervisors: Dr Warwick Nesbitt and Prof Harshal Nandurkar
Email: warwick.nesbitt@monash.edu
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Development of a novel microfluidic system for the investigation of platelet membrane tether function under haemodynamic shear and elongation forces
Supervisors: Dr Warwick Nesbitt and Dr Justin Hamilton
Email: warwick.nesbitt@monash.edu

Progranulin as a novel blood-brain barrier-protecting agent during ischaemic stroke; an in vitro study
Supervisors: Prof Robert Medcalf, Dr Be’eri Niego and Dr Katherine Jackman
Email: robert.medcalf@monash.edu

t-PA effects on the blood-brain barrier in a rat model of ischaemic stroke
Supervisors: Prof Robert Medcalf, Dr Be’eri Niego and A/Prof David Howells
Email: robert.medcalf@monash.edu

Rho-kinase and LDL-receptor inhibition as a novel strategy to protect the blood-brain barrier during ischaemic stroke; an in vitro study
Supervisors: Prof Robert Medcalf and Dr Be’eri Niego
Email: robert.medcalf@monash.edu

Reversible control of AML self-renewal and differentiation
Supervisors: A/Prof Ross Dickins and Dr Margherita Ghisi
Email: ross.dickins@monash.edu

The role of Ikaros in B-ALL tumour suppression and treatment resistance
Supervisors: A/Prof Ross Dickins and Dr Margherita Ghisi
Email: ross.dickins@monash.edu

Characterisation of a Potentially Novel Molecular Marker of Early Epigenetic Treatment Response in Myeloid Malignancies
Supervisors: Dr Anthony Dear and Dr Hong Bin Liu
Email: anthony.dear@monash.edu
Baker IDI Heart and Diabetes Institute

Baker IDI Heart and Diabetes Institute is an independent, internationally-renowned medical research facility, with a history spanning more than 88 years. The Institute's work extends from the laboratory to wide-scale community studies with a focus on diagnosis, prevention and treatment of diabetes and cardiovascular disease. The comprehensive range of research undertaken to target these deadly diseases, combined with the flexibility and innovation to respond to changing health and community needs, is unique and sets Baker IDI apart from other health and research Institutes. The Institute’s main laboratory facilities are located on the Alfred Medical Research and Education Precinct.
Projects available:

**IDOL-mediated regulation of lipid metabolism in skeletal muscle and the heart**
Supervisors: Dr Anna Calkin and Dr Brian Drew
Email: anna.calkin@bakeridi.edu.au

A novel mechanism to promote mitochondrial health and prevent skeletal muscle insulin resistance and diabetes
Supervisors: Dr Brian Drew Dr Anna Calkin
Email: brian.drew@bakeridi.edu.au

**Novel antioxidant treatments to limit glucose-driven retinal vascular injury**
Supervisors: Dr Judy de Haan and Prof Jenny Wilkinson-Berka
Email: judy.dehaan@bakeridi.edu.au

**Interactions between RAGE and GLP-1 in diabetes and diabetic nephropathy**
Supervisors: Dr Karly Sourris and Dr. Melinda Coughlan
Email: karly.sourris@bakeridi.edu.au

**Anti-atherosclerotic properties of CTLA4**
Supervisors: Prof Merlin Thomas, Dr Chris Tikellis and Dr Raelene Pickering
Email: merlin.thomas@bakeridi.edu.au

**Metabolic memory - the bitter legacy of high glucose levels**
Supervisors: Prof Merlin Thomas, Dr Chris Tikellis and Dr Raelene Pickering
Email: merlin.thomas@bakeridi.edu.au

**Plasmalogen Modulation: A New Treatment for Atherosclerotic Heart Disease**
Supervisors: A/Prof Peter Meikle and Dr Judy DeHaan
Email: peter.meikle@bakeridi.edu.au

**High Density Lipoprotein and Oxidized Lipids in the Prediction of Acute Coronary Syndromes**
Supervisors: A/Prof Peter Meikle and Dr Bronwyn Kingwell
Email: peter.meikle@bakeridi.edu.au

**The role of Nox5 in diabetic complications**
Supervisors: Prof Karin Jandeleit-Dahm and Dr. Stephen Gray
Email: Karin.Jandeleit-Dahm@bakeridi.edu.au

**Role of the At2 receptor in diabetic atherosclerosis**
Supervisors: A/Prof Terri Allen and Dr Christine Koulis
Email: terri.allen@bakeridi.edu.au

**Targeted virus particles for genetic transfer of fusion proteins to inhibit atherosclerosis**
Supervisor: Prof Christoph E. Hagemeyer
Email: christoph.hagemeyer@monash.edu

**Recombinant agents for efficient and safe anticoagulation and thrombolysis**
Supervisor: Prof Christoph E. Hagemeyer
Email: christoph.hagemeyer@monash.edu

**Single-chain antibody-targeted nanoparticles for diagnosis of vascular diseases**
Supervisor: Prof Christoph E. Hagemeyer
Email: christoph.hagemeyer@monash.edu
Burnet Institute

The Burnet Institute combines medical research in the laboratory and at a population level with public health action and advocacy to address major health issues of disadvantaged populations in Australia and communities in the developing world. Three major health themes underpin the Burnet’s work: Infectious diseases, maternal and child health, and young people’s health.
Projects available:

**The role of monocytes in immunity to blood stage malaria parasites**  
Supervisors: A/Prof Anthony Jaworowski and Dr Anna Hearps  
Email: anthonyj@burnet.edu.au

**The inflammatory monocyte subset as a reservoir for HIV**  
Supervisors: A/Prof Anthony Jaworowski and Dr Anna Hearps  
Email: anthonyj@burnet.edu.au

**A superagonist antibody to human IL-21 in cancer immunotherapy**  
Supervisors: Dr Di Yu and Yew Ann Leong  
Email: di.yu@monash.edu

**Determining the roles of Nuclear Factor-kB1 in Follicular Helper CD4+ T cells**  
Supervisors: Dr Raffi Gugasyan and Elisha de Valle  
Email: gugasyan@burnet.edu.au

**The inflammatory monocyte subset as a reservoir for HIV**  
Supervisors: A/Prof Anthony Jaworowski and Dr Anna Hearps  
Email: anthonyj@burnet.edu.au

**Elucidating the regulatory mechanisms controlling viral transcription within the CNS and the establishment of a HIV viral reservoir**  
Supervisors: A/Prof Melissa Churchill, Dr Lachlan Gray and Prof Paul Gorry  
Email: churchill@burnet.edu.au
Cabrini Monash Department of Medicine

The Cabrini clinical school is part of the undergraduate medical education program coordinated by Central Clinical School, Monash University. The Cabrini teaching program is coordinated by the Clinical Dean, Associate Professor Michele Levinson. Current research focuses on ICU for those aged over 80 years, Doctor–patient discourse analysis and End-of-life studies. Please visit the Cabrini Monash Department of Medicine website for publications and new studies: http://www.med.monash.edu.au/cecs/education/umed/cabrini.html

Cabrini has potential B Med Sci Projects

- Language around and understanding of concepts of resuscitation in the community. Collaboration with the Australian Patients' Association.
- A survey of nurses’ knowledge and attitudes to cardiopulmonary resuscitation and NFR decisions.
- A pilot project to determine if a tool to assist decision making around goals of care is effective
- Quality of death after MET attendance, without MET attendance (hospital) and in nursing homes

Projects available:

Language around concepts of 'do not resuscitate'
Supervisors: A/Prof Michele Levinson and Dr Amber Mills
Email: mlevinson@cabrini.com.au

Open Project Opportunity
Supervisors: A/Prof Michele Levinson and Dr Amber Mills
Email: mlevinson@cabrini.com.au
Department of Immunology

The Monash University Department of Immunology is internationally renowned for its combined expertise in research, teaching and service delivery in immunology and immuno-pathology.

There are extensive research programs in basic and translational immunology, including highly successful collaborations with The Alfred hospital and other AMREP partners. The department's research activities target diseases including allergy, asthma, autoimmunity, inflammation, diabetes, lupus, organ fibrosis, cancer and malaria. The department also focuses on engineering novel treatments such as nanoparticle-based vaccines in cancer and infection.

Projects available:

**Regulation of the immune response by non-classical MHC**
Supervisors: Dr Dan Andrews and Katharine Goodall
Email: Dan.andrews@monash.edu

**Examining pathogenic macrophages in chronic obstructive pulmonary disease (COPD)**
Supervisors: A/Prof Margaret Hibbs and Dr Evelyn Tsantikos
Email: Margaret.hibbs@monash.edu

**Examining the temporal development of disease comorbidities in models of chronic lung disease**
Supervisors: A/Prof Margaret Hibbs and Dr Evelyn Tsantikos
Email: Margaret.hibbs@monash.edu
The contribution of NOX5, NADPH oxidase 5, to vision loss in animal models of diabetic retinopathy
Supervisors: Prof Jennifer Wilkinson-Berka and Dr Devy Deliaynti
Email: jennifer.wilkinson-berka@monash.edu

Does a salty diet influence retinal disease via the adaptive immune system?
Supervisors: Prof Jennifer Wilkinson-Berka and Dr Devy Deliaynti
Email: jennifer.wilkinson-berka@monash.edu

New therapeutics against cancer, allergy and asthma using nanotechnology
Supervisors: Prof Magdalena Plebanski, Dr Sue Xiang and Dr Andrew Stephens
Email: magdalena.plebanski@monash.edu

Nanovaccines against malaria
Supervisors: Prof Magdalena Plebanski and A/Prof Cordelia Selomulya
Email: magdalena.plebanski@monash.edu

Immunotherapy of ovarian cancer
Supervisors: Prof Magdalena Plebanski, Prof Michael Quinn, A/Prof Cordelia Selomulya and A/Prof Orla McNally
Email: magdalena.plebanski@monash.edu

Nanoparticles, neurotransmitters and diet that prevents asthma and allergic inflammation
Supervisors: Prof Magdalena Plebanski and A/Prof Cordelia Selomulya
Email: magdalena.plebanski@monash.edu

Non-specific effects of vaccines in the elderly
Supervisors: Prof Jennifer Wilkinson-Berka and A/Prof Katie Flanagan
Email: jennifer.wilkinson-berka@monash.edu
Department of Infectious Diseases

The Department of Infectious Diseases, Central Clinical School, and Alfred Health, is a premier center for clinical and biomedical research and education, offering undergraduate and postgraduate study programs.

The Department incorporates a large clinical service with active research programs in the fields of HIV, viral hepatitis, infections in the immunosuppressed (such as those with malignancy, in intensive care and post-splenectomy), influenza, drug resistant organisms, antibiotic use and infection prevention and hospital epidemiology. The Department integrates clinical services with clinical and basic science research.
Projects available:

**National cross sectional study of women living with HIV in Australia**  
Supervisor: A/Prof Michelle Giles  
Email: m.giles@alfred.org.au

**Tackling Medically Important Biofilm-related Infections**  
Supervisors: Prof Anton Peleg and Prof David McGiffen  
Email: anton.peleg@monash.edu

**New Kid on the Block to Prevent or Treat Life-threatening Invasive Fungal Disease**  
Supervisors: Dr C Orla Morrissey and Prof Anton Peleg  
Email: o.morrissey@alfred.org.au

**Clinical Utility of Bronchoalveolar Lavage (BAL) and Blood Aspergillus Galactomannan and PCR for Guiding Antifungal Therapy in Lung Transplant Recipients**  
Supervisors: Dr C Orla Morrissey, Prof Anton Peleg, A/Prof Glen Westall and Dr Harini de Silva  
Email: o.morrissey@alfred.org.au

**The Impact of Infections on the Development of Chronic Rejection Post-Lung Transplantation**  
Supervisors: Dr C Orla Morrissey, Prof Anton Peleg, Prof Greg Snell and A/Prof Andy Fisher  
Email: o.morrissey@alfred.org.au

**Predicting Chronic Kidney Disease in HIV Positive Patients**  
Supervisors: Prof Jennifer Hoy and Dr Janine Trevillyan  
Email: jennifer.hoy@monash.edu
Department of Medicine

The Central Clinical School’s Department of Medicine within the Division of Clinical Sciences is based at the Alfred Medical Research and Education Precinct (AMREP). Co-located with a number of world class research institutions and Alfred Health, the Department of Medicine is a premier centre for clinical and biomedical research and education, offering undergraduate and postgraduate study programs.

Research in the Department of Medicine encompasses programs in Dermatology, Developmental biology, Hormones and Vasculature, Molecular Endocrinology, Neuroscience, Oncology, Pathology and Skin Cancer. Many of the research programs are integrated with clinical services at Alfred Health, facilitating the translation of basic research findings to medical practice, therapeutics and improved health care.
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Projects available:

**Augmented eXperience Modules (AXM) Usage Patterns and Acceptability for 3rd Year Medical Students**
Supervisors: A/Prof Rob Selzer and Fiona Foley
Email: rob.selzer@monash.edu

**Expression profile of skin tumours with high risk of malignant conversion**
Supervisors: Dr Charbel Darido and Prof Stephen Jane
Email: charbel.darido@monash.edu

**Investigating the requirements of pro-inflammatory signaling in skin and head & neck SCC**
Supervisors: Dr Charbel Darido and Dr Smitha Georgy
Email: charbel.darido@monash.edu

**Investigating the molecular mechanisms in epidermal homeostasis and cancer**
Supervisors: Dr Charbel Darido and Prof Stephen Jane
Email: charbel.darido@monash.edu

**Determinants of diabetes after lung transplantation**
Supervisors: Prof Leon Bach, Dr Kathryn Hackman and Prof Greg Snell
Email: leon.bach@monash.edu

**Haemodynamic instability during renal replacement therapy - clinical and modelling analyses**
Supervisors: Prof Rowan Walker and Dr Scott Wilson
Email: r.walker@alfred.org.au

**Understanding the genetic and molecular mechanisms which regulate craniofacial development**
Supervisors: Dr Sebastian Dworkin and Prof Stephen Jane
Email: sebastian.dworkin@monash.edu

**What signals direct neural crest cells to form the craniofacial skeleton?**
Supervisors: Dr Sebastian Dworkin and Dr Marina Carpinelli
Email: sebastian.dworkin@monash.edu

**Therapeutic targeting of Grhl3 dependent pathways in Head and Neck SCC**
Supervisors: Dr Smitha Rose Georgy, Dr Charbel Darido and Prof Stephen Jane
Email: smitha.georgy@monash.edu

**Evaluating Grainyhead-like 2 mutant mice as a model for age-related hearing loss**
Supervisors: Dr Marina Carpinelli and Dr Sebastian Dworkin
Email: marina.carpinelli@monash.edu
Melbourne Sexual Health Centre

The Melbourne Sexual Health Centre (MSHC) is a specialised unit for the diagnosis and treatment of sexually transmissible infections (STI/HIV) and is a principal centre for training health professionals in Victoria. The Centre conducts epidemiological, public health and clinical research primarily aimed at improving the services offered at MSHC.
Projects available:

**Detection of Mycoplasma genitalium (MG) in sexual contacts and implications for clinical management**
Supervisors: A/Prof Catriona Bradshaw, Prof Christopher Fairley and A/Prof Marcus Chen
Email: CBradshaw@mshc.org.au

**Partner treatment to reduce recurrence of bacterial vaginosis in women**
Supervisors: A/Prof Catriona Bradshaw, Prof Christopher Fairley, Dr Tim Read, Dr Jade Bilardi, Dr Eric Chow and Dr Marcus Chen
Email: CBradshaw@mshc.org.au

**Mycoplasma genitalium, determining the effectiveness of extended azithromycin for the treatment of this emerging sexually transmitted infection**
Supervisors: A/Prof Catriona Bradshaw, Dr Tim Read, Prof Kit Fairley, A/Prof Marcus Chen and Dr Melanie Bissessor
Email: CBradshaw@mshc.org.au

**Epidemiology of STI since 1917**
Supervisors: Prof Christopher Fairley and Dr Eric Chow
Email: cfairley@mshc.org.au

**Research in Sexual Health Medicine**
Supervisors: Prof Christopher Fairley, Dr Chow and A/Prof Bradshaw
Email: cfairley@mshc.org.au

**Systematic review of the cost effectiveness of screening for gonorrhoea in very low prevalence populations**
Supervisors: Prof Christopher Fairley, A/Prof Marcus Chen and A/Prof Catriona Bradshaw
Email: cfairley@mshc.org.au

**Prospective case control study of the risk factors for anal and throat gonorrhoea**
Supervisors: Prof Christopher Fairley, A/Prof Marcus Chen and A/Prof Catriona Bradshaw
Email: cfairley@mshc.org.au

**Analysis of the accuracy of a self diagnosis web site for common sexually transmitted infections**
Supervisors: Prof Christopher Fairley, A/Prof Marcus Chen and A/Prof Catriona Bradshaw
Email: cfairley@mshc.org.au

**Symptoms and microbiological findings of women attending as partners of men diagnosed with urethritis at MSHC**
Supervisors: Prof Christopher Fairley, A/Prof Marcus Chen and A/Prof Catriona Bradshaw
Email: cfairley@mshc.org.au

**Bacterial load in urethral gonorrhoea and implications for gonorrhoea transmission**
Supervisors: A/Prof Marcus Chen, Prof Christopher Fairley and A/Prof Catriona Bradshaw
Email: MChen@mshc.org.au

**Analysis of the “Let Them Know partner” notification web site - how people exposed to STIs were contacted by their partners**
Supervisors: A/Prof Marcus Chen, Prof Christopher Fairley and A/Prof Catriona Bradshaw
Email: MChen@mshc.org.au
Secondary analysis of a trial dataset of reasons why gay men have HIV tests
Supervisor: Dr Tim Read, A/Prof Marcus Chen and Prof Christopher Fairley
Email: Tread@mshc.org.au

Clinical and microbiological features of epididymitis
Supervisor: Dr Tim Read, A/Prof Marcus Chen, A/Prof Catriona Bradshaw and Prof Christopher Fairley
Email: Tread@mshc.org.au
Monash Alfred Psychiatry research centre

MAPrc is one of Australia’s largest clinical research centres in psychiatry. The centre has a long track record of producing world class research with direct clinical translation. The key goal of MAPrc is to conduct clinical research aimed at developing new treatments with direct, effective, and immediate applications. The research covers all ages and many different mental illnesses. MAPrc research is integrated with clinical practice, based in the Alfred Hospital in affiliation with Monash University. We have a multidisciplinary group of researchers with a research agenda that meets clinical and social needs and has a short 1-5 year timeline to real clinical impact.
Projects available:

**An investigation into the physiology and psychology of ultra-runners**
Supervisors: Dr Bernadette Fitzgibbon and Dr Donna Urquhart
Email: bernadette.fitzgibbon@monash.edu

**Increasing the speed of thought: Using brain stimulation to enhance speed of information processing**
Supervisors: Dr Kate Hoy and Dr Rebecca Segrave
Email: Kate.hoy@monash.edu

**A comparison of the behavioural and biological effects of Transcranial Magnetic Stimulation and Theta Burst Stimulation on cognition**
Supervisors: Dr Kate Hoy and Dr Neil Bailey
Email: Kate.hoy@monash.edu

**Does regular mindfulness meditation enhance positivity and resilience? An EEG investigation**
Supervisors: Dr Neil Bailey and Dr Rebecca Segrave
Email: neil.bailey@monash.edu

**Does mindfulness decrease the emotional bias for memories? A study of emotional memory related brain activity in mindful individuals**
Supervisors: Dr Neil Bailey and Dr Rebecca Segrave
Email: neil.bailey@monash.edu

**Improving social cognition in schizophrenia with deep TMS**
Supervisor: Prof Paul Fitzgerald
Email: Paul.Fitzgerald@monash.edu

**Improving symptoms of obsessive compulsive disorder with brain stimulation**
Supervisor: Prof Paul Fitzgerald
Email: Paul.Fitzgerald@monash.edu

**Developing optimal methods for theta burst prefrontal brain stimulation**
Supervisor: Prof Paul Fitzgerald
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**Modulating parietal activity to influence emotional processing: an investigation into theta burst stimulation**
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**Is bigger better? The impact of electrode size on cognitive enhancement with tDCS**
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**How reliable are the effects of tDCS? A study of intra-individual reliability**
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**Youth Recovery/Discovery College to Promote Social Connection and Self Management for Young People with Mental Illness?**
Supervisors: Dr Stuart Lee and Lara Nikitin
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Self management workbook to prevent psychological distress during haemopoietic stem transplantation
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Understanding the impact of childhood trauma on emotion regulation and bipolar/anxiety tendencies across genders
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How eye movements can inform us about cognition and schizophrenia symptoms
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Hypothalamic-Pituitary-Gonadal Axis Hormones and Psychopathology in Women with Schizophrenia
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Investigating Emotion Regulation for Coping During Perimenopause
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Safety of low dose quetiapine use in pregnant women
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Antipsychotic use and effect in women compared with men
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The causes, phenomenology and treatments of Borderline Personality Disorder
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Depression, Alcohol and Substance Use in Medical Students
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Interpersonal Violence in Women and Depression
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Neonatal abstinence syndrome at birth, and subsequent outcomes at 12 months of age, infants whose mothers took antipsychotic medication during pregnancy
Supervisors: Prof Jayashri Kulkarni and Ms Heather Gilbert
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Neonatal respiratory distress at birth, and subsequent outcomes at 12 months of age, in infants whose mothers who took antipsychotic medication during pregnancy
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Mood stabilisers in women during pregnancy: outcomes for mother and baby
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The impact of gestational diabetes mellitus in women who took antipsychotic medication during pregnancy, on the outcomes for mother and baby up to 12 months postnatally
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The Women’s Mental Health Clinic Evaluation
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Depression and the Oral Contraceptive Pill
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Obesity and Early Trauma in Women
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The Relationship between Internalised Stigma, Symptom Severity and Response to Hormone Treatment in Patients with Schizophrenia
Supervisors: Prof Jayashri Kulkarni and Dr Jasmin Grigg
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The Effect of Gender and Hypothalamic-Pituitary-Gonadal (HPG) Axis Hormones on Dimensions of Positive Symptoms in Schizophrenia
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Optimising the dosage of Transcranial Magnetic Stimulation
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Investigation of novel treatment for metabolic syndrome in patients with schizophrenia
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Major depression and its effect on the heart
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Review of guidelines for the management of aggression in patients with an acute brain injury and the evaluation of their efficacy
Supervisor: Prof David Barton
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Prevalence of psychiatric disorders in patients admitted to an acute brain injury unit
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Department of Surgery

The Department of Surgery, part of the CCS's Division of Clinical Sciences, is a premier centre for clinical and surgical research and education, contributing to Monash's MBBS and offering postgraduate study programs. Research in the Department of Surgery includes programs in a wide variety of areas including trauma, burns, cardiothoracic, colorectal, endocrine, upper gastrointestinal, urology, orthopaedics, spine injury, general surgery and neurosurgery specialisations. The Department of Surgery is closely associated with the National Trauma Research Institute.

Projects available:

**Use of Human-derived Feeders and Nutrients for Cultured Epithelial Autograft**
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**Validation of a computer assisted decision support software system for resuscitation of trauma patients**
Supervisors: Prof Mark Fitzgerald and A/Prof Biswadev Mitra
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