Eastern Hill Academic Precinct: Student information night 2020

Dr Amanda Edgley
University of Melbourne
Academic Co-ordinator for Research Training

Acknowledgement of Country

I would like to show my respect and acknowledge the Traditional Custodians of the Land, the Wurundjeri people, upon whose ancestral lands the University stands.

I would also like to pay my respect to the Elders both past and present of the Kulin Nation, and extend that respect to other Indigenous Australians present.

Overview of Proceedings

- University of Melbourne at St Vincent's Hospital
- Eastern Hill Precinct Partners
- Uni Melb Research Pathways
- Research highlights from the precinct
- Student panel discussion and Q & A
- Break-out into researcher/ institute sessions

* Please submit any questions using the Q&A function

Eastern Hill Precinct - where are we?

St Vincent's Hospital Melbourne
41 Victoria Parade
Fitzroy VIC 3065

The Royal Victorian Eye and Ear Hospital
32 Gisborne Street,
East Melbourne
Victoria 3002 Australia

20 minute scenic walk from Parkville

University of Melbourne at Eastern Hill

Department of Surgery, SVH

Professor Peter Choong
Sir Hugh Devine Chair of Surgery
Director of Orthopaedics at St Vincent's Hospital Melbourne
Chair of the Bone and Soft Tissue Sarcoma Service at the Peter MacCallum Cancer Centre.

Department of Medicine, SVH

Professor Mark Cook.
The Sir John Eccles Chair of Medicine, Director of Clinical Neurosciences at St. Vincent's Hospital and Director of the Graham Clark Institute

Department of Surgery (Ophthalmology)

Professor Keith Martin.
The Ringland Anderson Chair of Ophthalmology and the Managing Director of the Centre for Eye Research Australia (CERA)

Department of Medical Bionics

Associate Professor James Fallon

Department of Surgery (Otolaryngology)

Professor Stephen O'Leary. William Gibson Chair of Otolaryngology at the University of Melbourne.

University of Melbourne at Eastern Hill

ACMD: The Aikenhead Centre for Medical Discovery.

www.acmd.org.au

www.biofab3D.org
@biofab3d

ST VINCENT'S HOSPITAL DEPARTMENTS

- Anaesthesiology
- Cardiology
- Emergency Practice Innovation Centre
- Gastroenterology & Hepatology
- Immunology Research Centre

DEPARTMENT OF MEDICINE (SVH)

- Clinical Neurosciences
- Diabetes Technology Research Group
- Palliative Nexus
- Innate Immunity and Infectious Diseases
- Clinical Epilepsy Epidemiology
- Renal and Cardiovascular

DEPARTMENT OF SURGERY (SVH)

- Musculoskeletal – Bioengineering & tissue reconstruction
- Centre for Research Excellence in Total Joint Replacement – OPUS
- Advanced Limb Reconstruction
- Arthritis Clinical Trials and Epidemiology

DEPARTMENT OF MEDICAL BIONICS

- Cochlear Implants
- Hearing Loss
- Gastrointestinal Inflammation
- Nanoengineered Drug Delivery
- Neural Stimulation
- Language Development
- Parkinson's Disease Treatments

OPHTHALMOLOGY, DEPT OF SURGERY

- Gene Therapy
- Corneal Research
- Age-related Macular Degeneration
- Ophthalmic Epidemiology & Neuroscience
- Mitochondria Research
- Glaucoma
- Stem Cells

OTOLARYNGOLOGY, DEPT OF SURGERY

- Hearing Protection
- Virtual Reality Surgery
- Indigenous Ear Health
- Biomedical Engineering for Cochlear Implants

SVI - O'BRIEN INSTITUTE

- Tissue Engineering
- Stem Cells
- Lymphatic and Regenerative Surgery
- Vascular Biology
- Cardiac Regeneration

ST VINCENT'S INSTITUTE

- Structural Biology
- Bone Cell Biology and Disease
- Genome Stability
- Genomics and Immunology
- Immunology and Diabetes
- Molecular Genetics
- Protein Chemistry & Metabolism
- Stem Cell Regulation

Eastern Hill Academic Precinct - Who we are

University of Melbourne Research Training – Eastern Hill Campus:

Academic Co-ordinator Research Training

- Dr Amanda Edgley: aedgley@unimelb.edu.au

Honours and Graduate Research Programs Co-ordinator

- Nora Hanafi & Meredith Faragher: easternhill-gr@unimelb.edu.au

Student Co-ordinator (Otolaryngology):

- Dr Hayden Eastwood: haydente@unimelb.edu.au

Research Co-ordinators (Education), Ophthalmology/ CERA:

- A/Prof Ian Trounce: i.trounce@unimelb.edu.au
- Dr Rachel Lee: cera-education@unimelb.edu.au

Bionics Institute student Co-ordinator:

- Professor Colette McKay: student.enquiries@bionicsinstitute.org

St Vincents Institute of Medical Research Student Co-Ordinator:

- Dr Tom Brodnicki: tbrodnicki@svi.edu.au

Research Pathways

Undergraduate Bachelor of Science/ Biomedical Science, or equivalent WAM 65

Bachelor of Science/ Bachelor of Biomedical Science Honours

(BH-SCI / BH-BMED)

- 1 year / 100 points
- 75 point research project
- 25 points coursework

challenging

Masters of Biomedical Science

(MC-BMEDSC)

- 2 year / 200 point coursework Masters
- 125 point research project
- 75 points coursework (discipline and professional skills)

Doctor of Medicine (MC-DMED)

- 4 year graduate entry medical coursework degree
- Includes a 1 year MDRP research project subject
- Commencement of RHD degree usually at resident/registrar.

rewarding

Post-graduate Research Higher Degrees – PhD / MPhil

Research Pathways – How to apply

Honours (BH-SCI / BH-BMED)	• https://mdhs-study.unimelb.edu.au/degrees/honours/apply-now#apply-now • Semester 1, 2021 - First round application closing October 31st, 2020
Masters of Biomedical Science (MC-BMEDSC)	• https://study.unimelb.edu.au/find/courses/graduate/master-of-biomedical-science/how-to-apply/ • Semester 1, 2021 - First round application closing November 30th 2020 • Both 1st and 2nd semester entry
PhD/MPhil	• https://study.unimelb.edu.au/how-to-apply/graduate-research • Can apply any time but the main scholarship round closes October 31st, 2020

Research at Eastern Hill – Finding a project and supervisor

- Link to the Eastern Hill Project Booklet – provided in Q&A and emailed to registrants.
- Eastern Hill Graduate Research Team: easternhill-gr@unimelb.edu.au

For Honours and Masters Students:

- SONIA project database. https://mdhs-study.unimelb.edu.au/degrees/honours/overview#overview

- Affiliated Research Institute websites and information sessions

For Graduate Research Projects

- https://mdhs.unimelb.edu.au/research/research-library
- https://medicine.unimelb.edu.au/research/research-by-department

- Affiliated Research Institute websites and information sessions!

Tips for finding a supervisor!

- Do your homework
- Email introduction include transcripts and CV
- Meet in person (or via zoom)
- Talk to other students or staff in the lab

Research highlights – Dept of Medicine, St Vincents Hospital

Prof Jennifer Philip

Chair Of Palliative Medicine - St Vincent's Hospital

Partnering with VCCC

Head of Palliative Nexus Research Group

Improving equity, access, and quality of care in serious illness

https://www.palliativenexus.org/

Professor Kumar Visvanathan

Innate Immunity and Infectious Diseases

Human Liver Organoids to study the innate immune response and cytotoxicity towards tumour cells and hepatitis infected cells.

Research highlights – Department of Medicine, St Vincents Hospital

Clinical Neurosciences

Led by Professor Mark Cook and his team - developed and tested a device implanted in the brain that can predict epilepsy seizures in humans

Neural Engineering and Brain Dynamics Research Group

- Decoding brain signals for prosthetic limbs
- Epilepsy research
- Neural dynamics and subject-specific brain modelling

True cross disciplinary collaboration: engineering, mathematics, physics, physiology and clinical medicine – commercialisation SEER medical

St Vincent's Hospital Departments

ST VINCENT'S HOSPITAL MELBOURNE

D.T.R.G
Diabetes Technology Research Group

Aiming to improve the lives of people with diabetes through exceptional research that drives advancement in innovative technologies...

ENDOCRINOLOGY

https://diabetestechnologyresearchgroup.com.au/

RHEUMATOLOGY

Associate Professor Mandana Nikpour

PhD scholarship for research into systemic sclerosis
https://mdhs.unimelb.edu.au/study/scholarships/n/harrison-pennicott-phd-scholarship

GASTROENTEROLOGY

ONCOLOGY

IMMUNOLOGY

EMERGENCY PRACTICE

CARDIOLOGY

Research highlights – Department of Surgery, St Vincents Hospital

Advanced Limb Reconstruction

Professor Peter Choong

NHMRC
Centre for Research Excellence in Total Joint Replacement - OPUS
https://opus-tjr.org.au/

Cartilage Regeneration Program

A/Prof Claudia Di Bella

Epidemiology, Outcomes & Clinical Trials Orthopaedic Group

A/Prof Michelle Dowsey
Career Development Clinical Fellow

Research highlights – BioFab3D

BioFab3D
A facility of ACMD

www.biofab3D.org
@biofab3d

ARC Centre of Excellence for Electromaterials Science

SWINBURNE UNIVERSITY OF TECHNOLOGY

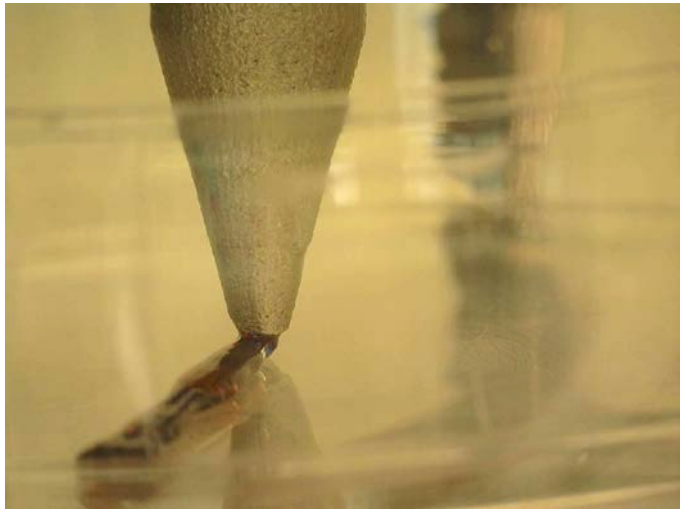
THE UNIVERSITY OF MELBOURNE

RMIT UNIVERSITY

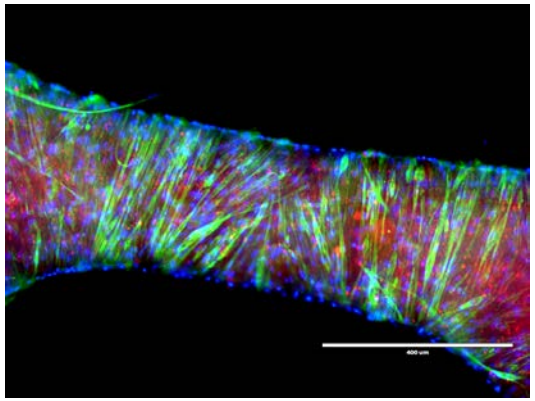
UNIVERSITY OF WOLLONGONG

Research highlights – BioFab3D

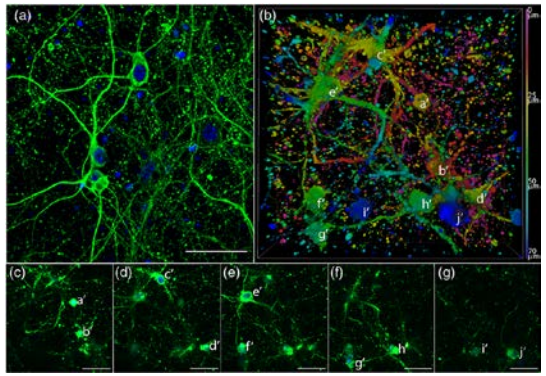
Tissue Engineering and 3D printing -

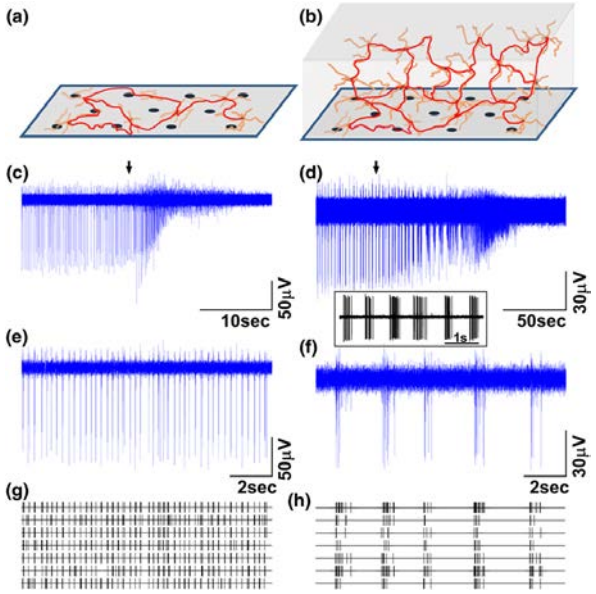


3D printed muscle



Three-dimensional neural cultures produce networks that mimic native brain activity

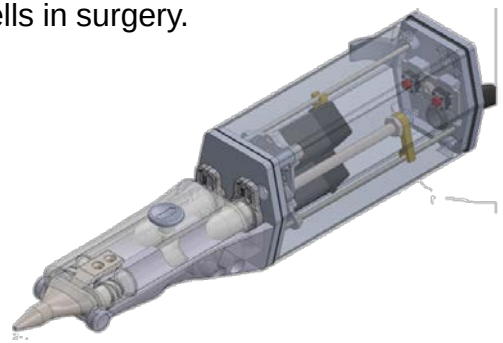




Journal of Tissue Engineering and Regenerative Medicine
Volume 12, Issue 2, pages 490-493, 12 DEC 2017

Professor Peter Choong

Development of the Biopen - A handheld device for printing cells in surgery.



St Vincent's Institute

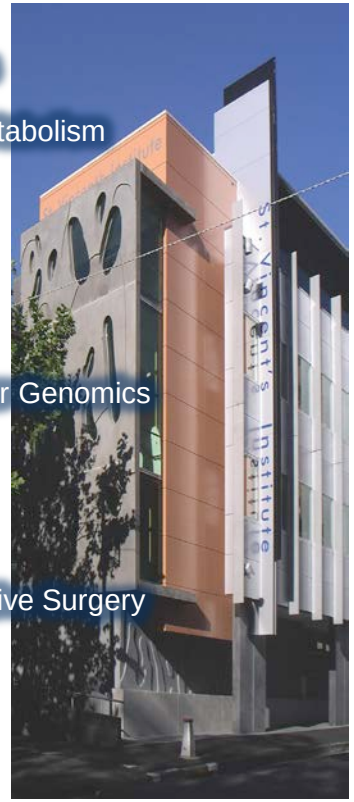
Virtual Student Open Day

Thursday, 24 September @ 4pm

To register, please go to:

https://www.svi.edu.au/careers_students/students/student_open_day/

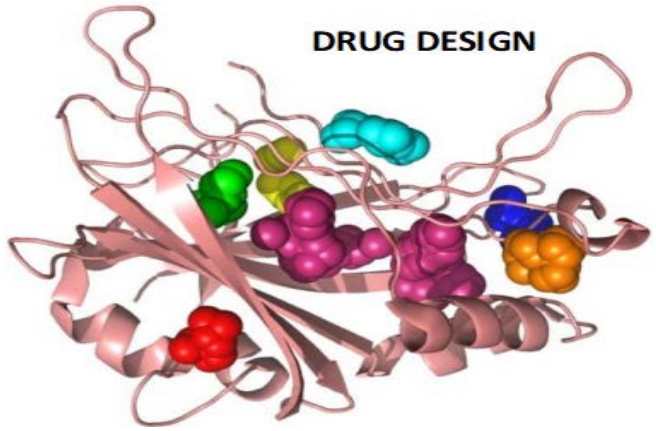
- Immunology & Diabetes
- Protein Chemistry & Metabolism
- Bone Cell Biology
- Cancer & RNA Biology
- Genome Stability
- Bioinformatics & Cellular Genomics
- Vascular Biology
- Structural Biology
- Lympathic & Regenerative Surgery
- Molecular Genetics
- Cardiac Regeneration



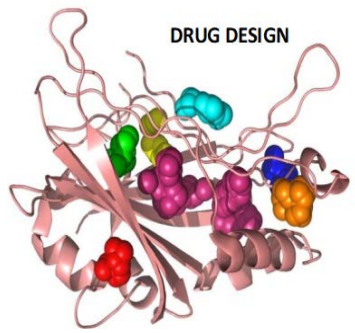
Discover the experience!

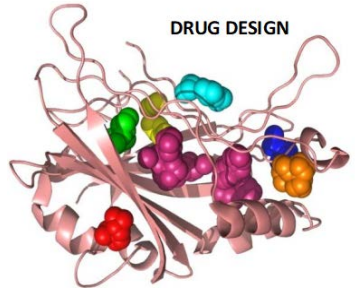
Enjoy the camaraderie!

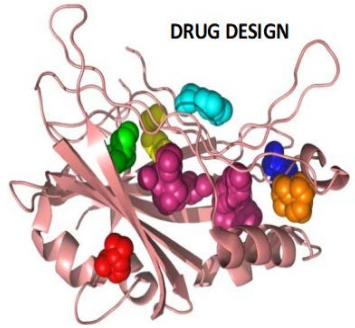
Come join us!



www.svi.edu.au







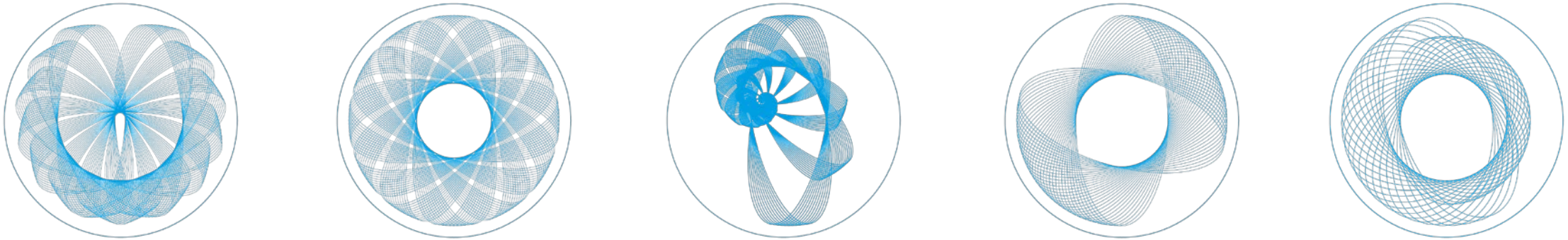
Bionics institute

The Bionics Institute is a global leader in medical bionics research

Medical bionics is an exciting area where **biology, medicine and engineering intersect**

The BI's mission is **improve people's lives** by translating research into clinical use devices that monitor or modulate neural activity for managing health conditions

The BI's multidisciplinary research teams work in three key areas: **bionic hearing, bionic vision and neurobionics**



BIONIC HEARING

Techniques: Psychophysics, fNIRS brain imaging, EEG, signal processing, animal physiology, safety studies, optogenetics, clinical studies

- Improving how cochlear implants work for individual participants
- Optimising language development in infants born with a hearing loss
- Developing new implantable hearing devices
- Delivering drugs into the cochlear to preserve cochlear hair cells and nerves

BIONIC VISION

Techniques: Psychophysics, EEG, signal processing, optogenetics, clinical studies

- Improving the patient benefit for those with the first versions of the Melbourne Bionic Eye
- Applying optogenetics for a novel Bionic Eye

NEUROBIONICS

Neurobionics aims to develop clinical devices designed to monitor, diagnose and treat a variety of intractable neurological disorders using neural stimulation and neural activity monitoring.

Techniques: Pre-clinical *in viva* and *in vitro* basic studies, first-in-human clinical trials, signal processing, engineering

- Deep brain stimulation (DBS) for Parkinson's Disease and other neurological conditions
- Implantable devices for Vagus nerve stimulation to treat a variety of conditions
- Devices to monitor and prevent epilepsy seizures

Bionics institute

The Bionics Institute Student Recruitment Event!

Come along to meet some of our research team and find out how you could join one of our exciting new projects at the forefront of medical bionics research!

Wednesday 23rd September; 6-7pm

Zoom
Meeting ID: 847 7902 0533
Passcode: 963922

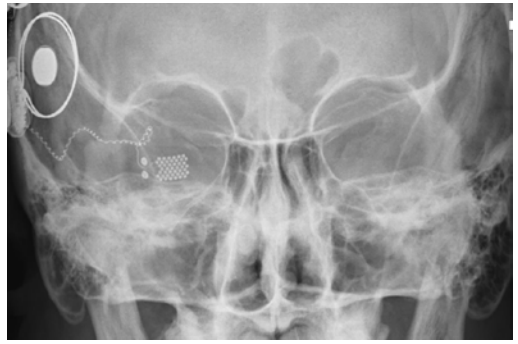
Bionics institute

Ophthalmology, Department of Surgery/Centre for Eye Research Australia (CERA) Research

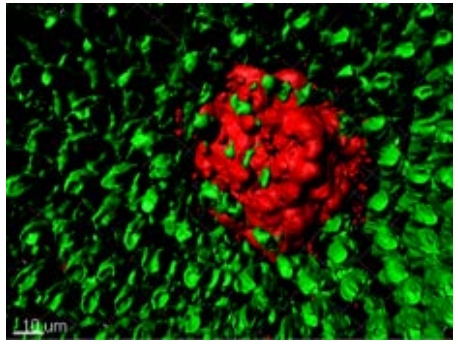
CERA: Snapshot of our Research

CENTRE FOR Eye Research Australia

Bionic Eye Research

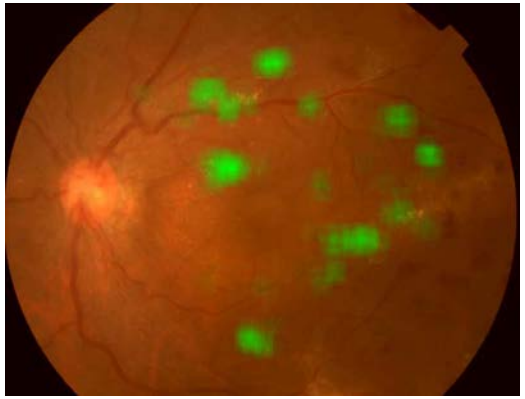


Macular Research

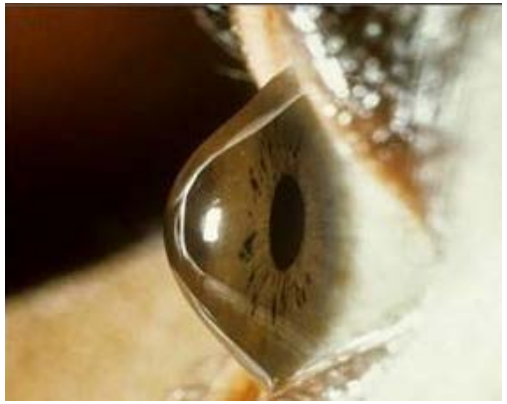


Ophthalmic Neuroscience

Clinical Trials Research Centre



Ophthalmic Epidemiology



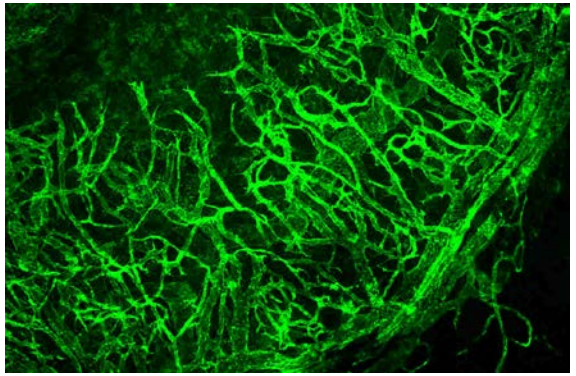
Surgical Research

Ophthalmology, Department of Surgery/Centre for Eye Research Australia (CERA) Research

CERA: Snapshot of our Research

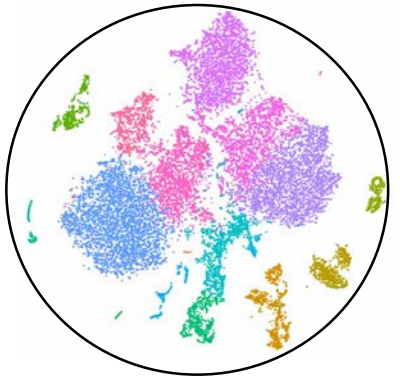
CENTRE FOR Eye Research Australia

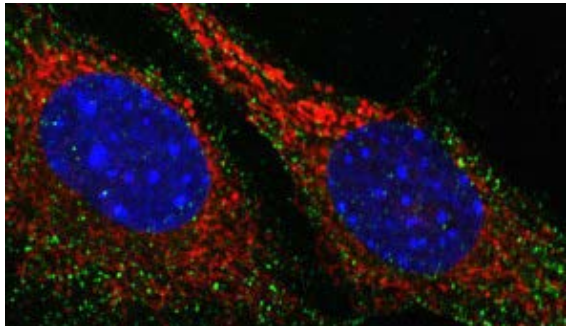
Ocular Fibrosis



Ophthalmic Genetics

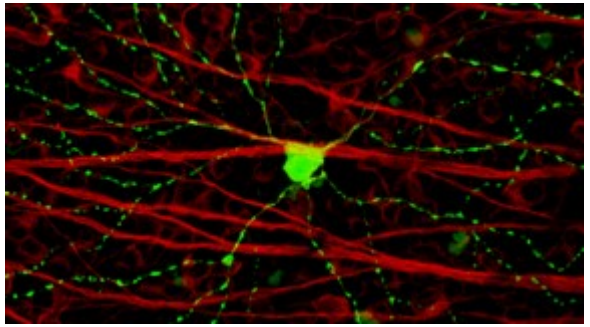
Cellular Reprogramming





Mitochondria and Neurodegeneration

Mitochondrial Biology and Disease



Retinal Gene Therapy Glaucoma Research

St Vincents Student Society

Annual Student Retreat

Welcome and Farewell events for Honours Students

GSA Postgrad Ball

BIOMED LINK 2018

Conference for students by students

Monthly social events

Student Panel Discussion and Q&A

Annabelle Choong: Current Honours Student

Ayeshah Augusta Rosdah: Current PhD student based in St Vincent's Institute

Crystal Nguyen: Current PhD student based in the Centre for Eye Research Australia

Daniel Gould: Current MD / PhD student based in Department of Surgery – future research pathways in the new Doctor of Medicine in 2022.

THE UNIVERSITY OF MELBOURNE

Thank you!

Student Recruitment FAQs

Thursday, 24 September 2020

Eastern Hill Precinct Graduate Research Team

Eastern Hill Campus Precinct at the University of Melbourne

The Melbourne Medical School's Eastern Hill Campus Precinct offers Honours, Masters and Graduate Research admissions through the following University departments:

- Medicine (St Vincent's Hospital)
- Surgery (St Vincent's Hospital)
- Otolaryngology
- Ophthalmology (Centre for Eye Research Australia)
- Medical Bionics (Bionics Institute)

Our students conduct their research in our affiliated medical research institutes and in the various departments/units within St Vincent's Hospital.

Minimum WAM for Admissions

The Faculty of Medicine, Dentistry and Health Sciences (MDHS) require a **minimum of 65%** for admissions into any of these degrees: Bachelor of Science (Honours), Bachelor of Biomedicine (Honours), and Master of Biomedical Science. *Do note some supervisors may request for a higher WAM.*

Entry into graduate research degrees require a minimum of **75% (Masters by Research)** or **80% (PhD, Doctor of Medical Science).**

SONIA Project Platform

SONIA is a research project database containing all the projects that are available to **Honours applicants** for 2021 Start Year Intake. Prospective students can access **SONIA** using the following login details:

Username: MDHSHonours

Password: MDHSHonours

Eastern Hill Projects

Download our research project booklet here

MDHS Research Library

For other graduate research projects, students can search by researcher, school, project or topic via the MDHS Research Library:

https://mdhs.unimelb.edu.au/research/research-library/

Previous Research Experience

Our supervisors are mindful that undergraduate students have minimal research experience prior to enrolling in an Honours or graduate research degree and will provide the mentorship you'll need for successful completion of your degree and beyond.

Where do I apply?

https://study.unimelb.edu.au/how-to-apply

Other Research Placements

Depending on the degree you're currently enrolled in, there are may be opportunities to undertake a research placement in your final year.

Bachelor Science and Bachelor of Biomedicine students, for instance, have the opportunity to enrol in the **Science and Technology Internship (SCIE30002)** subject as part of their degree. Please contact your course coordinator for more information.

Postal address:
29 Regent Street, Fitzroy VIC 3065

Email:
easternhill-gr@unimelb.edu.au

Towards 2022 – An intercalated MD/PhD Pathway

As part of the Doctor of Medicine curriculum re-design, the Melbourne Medical School is planning to offer an **intercalated MD/PhD pathway** for students. The new Doctor of Medicine program is in development and will be launched in 2022.

Current MD students should speak to Prof Steve Trumble and their MDRS supervisors to discuss options for an MD/PhD pathway.

Volunteering Opportunities

Students are welcome to inquire about volunteering opportunities within individual laboratories or research groups. Our affiliated medical research institutes may also offer summer vacation scholarships for undergraduate students.

Scholarships

- **Frances Elizabeth Thomson Trust Scholarship (Honours)**

The scholarship is offered to highly ranked full-time students who have enrolled in an MDHS program through the Bachelor of Biomedicine (Degree with Honours) and the Bachelor of Science (Degree with Honours) and demonstrated a level of financial needs. The scholarship will award eligible students with a one-off payment of $5,000.

- **Research Training Program Scholarship (Graduate Research)**

This scholarship is provided by the Australian Commonwealth Government and the University of Melbourne and offered to high-achieving domestic and international research students. Students are offered full fee remissions and/or a living allowance for up to 3.5 years.

- **Faculty Trust Scholarships**

MDHS administers a range of scholarships funded from trust income and as such, the purpose of these funds is limited by the rules of the trust and the level of funding available in each round.

https://scholarships.unimelb.edu.au/

International Students

We welcome queries for prospective international students wanting to enrol in Honours, Master of Biomedical Sciences or graduate research within the Eastern Hill Campus Precinct. Please contact us at **easternhill-gr@unimelb.edu.au**.

Honours Timelines

ACTIVITY	DEADLINE
Round 1 Applications Closing Date	**Saturday 31st October 2020**
Round 1 Project Preference submissions	Friday 13th November
Round 1 Application Outcomes	Wednesday 23rd December
Round 2 Applications Closing Date	**Monday 25th January 2021**
Round 2 Project Preference Submissions	Monday 1st February
Round 2 Application Outcomes	Monday 8th February
Honours Commencement	**Monday 15th February**

Graduate Research 2021

Graduate research applications can be submitted at any time of the year, but students should be aware of the following scholarship timelines:

ROUND	CLOSING DATE	OUTCOMES
1	31st October 2020	By 18th December 2020
2	31st January 2021	By 26th March
3	14th May	By 9th July

Tips for Prospective Students

- Speak to supervisors early!
- Speak to current research students about their experience.
- Be mindful of any relevant deadlines.