Look deeper into the Science of Vision at the University of Melbourne

Department of Optometry and Vision Sciences

Research projects for Honours (Vision Science) offered in 2017

Assoc. Prof. Larry Abel (Eye Movement Unit) – Email: label@unimelb.edu.au

- The effects of age and cognitive load on fixation suppression of the optokinetic response.

Dr Andrew Anderson (Optological Unit) – Email: aaj@unimelb.edu.au

- The influence of reward on where we look.
- What does our motion processing system see as noise?

Assoc. Prof. Bang Bui (Clinical Trial and Ocular Physiology Units) – Email: bvb@unimelb.edu.au

- Does blood pressure modify the eyes response to changes in intracranial and intraocular pressure?
- Repeatability of visual evoked responses in the murine visual system.

Dr Holly Chinnery (Cornea and Immunology Unit) – Email: holly.chinnery@unimelb.edu.au

- Post-mortem assessment of changes to the mouse cornea using spectral domain optical coherence tomography.
- Does systemic infection alter the immunobiology of the ocular surface?

Dr Laura Downie (Anterior Eye, Clinical Trials and Research Translation Unit) – Email: ldownie@unimelb.edu.au

- The relationship between meibomian structural integrity and contact lens comfort.
- Longitudinal changes in tear film stability with ocular lubricants.

Prof. Michael Ibbotson (National Vision Research Institute) – Email: michael.ibbotson@unimelb.edu.au

- Development of a bionic eye to return sight to the blind, including investigations of retinal physiology.
- Cortical visual processing.
- Modelling and measuring cortical development.

Prof. Allison McKendrick (Clinical Psychophysics Unit) – Email: allisonm@unimelb.edu.au

- Perceptual illusions in people with migraine.
- What can imaging the eye reveal about migraine?
- Motion perception in dim light.

Assoc. Prof. Andrew Metha (Imaging Retinal Cells Human Unit) – Email: ametha@unimelb.edu.au

- Characterizing single red and white blood cell flow through human retinal capillary networks.

Prof. Trichur Vidyasagar (Visual and Cognitive Neuroscience Units) – Email: trv@unimelb.edu.au

- Brain mechanisms underlying reading.
- Microarchitecture of the primary visual cortex.
- Neural mechanisms of attention.

If you are interested in any of the above projects as part of an Honours programme, you would need to apply online on the Faculty's webpage,

http://sc.mdhs.unimelb.edu.au/how-apply

However, before you apply online, you are recommended to do the following:

- Attend the **MDHS Discover Research EXPO** on **Thursday, Sept 8th 2016, 2-4.30 PM** Ground Floor, Alan Gilbert Building**,** visit Optometry & Vision Science table and talk to some of the staff and students who will be there

  and/or

  attend **Vision Sciences Poster Day**
  (showcasing some of the research in the department in the form of conference posters) on **Tuesday, 20th September 2016, 12-1 PM,** Alice Hoy Building, Level 4 (Corridor West).

- Look up the **departmental webpage** to get a detailed idea of the research interests of the various research units. http://healthsciences.unimelb.edu.au/research2/optometry-and-vision-sciences-research

- Contact by email, **one or more laboratory Heads**, whose research areas interest you, provide them with your curriculum vitae and academic transcripts and arrange a meeting to discuss a project in more detail. You have to enter these preferences in your online application.