

The Monash University Department of Medicine is responsible for the provision of teaching and other academic programs at The Alfred for medical undergraduates and postgraduate research students. The department is the focus of many research activities undertaken by university personnel employed in the department and also by hospital clinical departments associated with the Department of Medicine. Many physicians and scientists employed in the hospital's clinical departments have honorary appointments within the Department of Medicine to facilitate the provision of the teaching program, research programs and supervision of postgraduate research students.

Respiratory Immunology Group

There is an active program of research by the clinician scientists of the Department of Allergy, Immunology and Respiratory Medicine, and scientists in the Monash University Departments of Medicine and Immunology. The program includes the investigation of the immunobiology of allergic diseases with development of novel T cell targeted peptide immunotherapy for peanut allergy and novel approaches to management of chronic lung diseases including allergic bronchopulmonary aspergillosis, cystic fibrosis, idiopathic pulmonary fibrosis and lung transplantation. A program of study of lung regeneration using stem cell technology was established in association with Monash Immunology and Stem Cell Laboratories together with investigation of strategies to prevent ischaemic reperfusion injury in lung transplantation. Research investigates the potential for follistatin to prevent airway inflammation and fibrosis in chronic inflammatory lung diseases.

Renal Disease

Clinical research projects are in the area of glomerulonephritis, vasculitis, progression of renal disease, diabetic renal disease, chronic allograft rejection, evaluation of renal disease in patients with end stage heart and lung pathology facing heart or lung replacement, and renal disease following successful heart and lung transplantation. The broad theme of the laboratory research program is the mechanisms of progression of primary renal disease. Both human and experimental models of renal disease are studied, with a particular focus on the role of the fibrogenic growth factors and apoptosis in progression of injury.

Neurosciences

The Van Cleef Roet Centre for Nervous Diseases conducts research programs in stroke, Alzheimer's disease and other dementias, inherited and sporadic ataxias, movement disorders and cognition in cerebellar stroke and hepatitis C. Traumatic brain injury is the focus of research of another neuroscience group within the department, using experimental models of injury. This group works in close collaboration with the National Trauma Research Institute.

Clinical Pharmacology

Pharmacological research is focused on drugs that may affect the cardiovascular system. Basic research programs investigate the role of: urotensin II in cardiac disease; p38 MAP kinase system in heart failure disease progression; Rho kinase in cardiac fibrosis; novel agents in cardiac fibrosis and inflammation. Therapeutics research

also encompasses novel device and procedure-based approaches to treatment of cardiovascular disease.

Infectious Diseases

Research programs are conducted in the fields of HIV, viral hepatitis, neurovirology, infections in the immunosuppressed (such as those with malignancy, in intensive care and post-splenectomy) and infection control and hospital epidemiology.

Women's Health

Research pertains to the main health conditions that affect women at midlife and beyond. Major research projects include a large study of the physical, psychological and social well-being of breast cancer survivors, a community based study of urinary incontinence in women, a study to increase the understanding of joint pain in women being treated for breast cancer, and studies to delineate the role of sex steroids in the preservation of cognitive function in women after menopause.

Endocrinology and Diabetes

Laboratory research is conducted in the areas of diabetic complications and insulin-like growth factor dysregulation in cancer. Clinical research areas include diabetes care and thyroid cancer.

Experimental Anatomical Pathology

This laboratory has a strong focus on pathologic study of human tissue and, through collaborative studies, conducts research into the role of the endothelium in cardiac transplantation, new prognostic markers in breast and prostate cancer, imaging of dementia, pathologic diagnosis of early muscular dystrophy and pulmonary venoocclusive disease and pulmonary hypertension. A particular focus within the laboratory is latent viral infections of the brain.

Centre for Ethics in Medicine and Society

The specific objectives of the centre are: (1) to stimulate a culture of reflection, debate, dialogue and awareness of ethical issues in the medical community and the faculty; (2) to deliver high quality teaching products; (3) to conduct research; and (4) to contribute to the development and enrichment of practice.

PhD student, Tara Bull, supervised by Associate Professor Tom Kotsimbos and Dr Nicole Mifsud, studies Clara cell secretory protein as a biomarker post lung transplantation.



Postgraduate Students

62 PhD Student
2 MD Students
2 Masters Student

Publications

103 Journal Articles
1 Book
7 Book Chapters