From research into robotic limbs, melanoma and breast cancer to medical tourism, prostate cancer screening and electronic medication management, Macquarie's medicine and surgery researchers are uniquely positioned to help shape the complex issues that define the future of humanity.

Macquarie is setting new national benchmarks in medical research through the establishment of Australia's only academic health sciences centre. Macquarie University Health Sciences Centre (MUHSC) is a partnership between the University, Macquarie University Hospital and healthcare providers. MUHSC delivers an integrated approach to research, clinical services, education and training. This research and healthcare model is used by many of the world's leading academic institutions and hospitals, and it ensures that medical research breakthroughs directly lead to improving patients’ lives. This partnership provides our higher degree research candidates with access to a research environment that is unmatched in Australia.

The Australian Institute of Health Innovation conducts multidisciplinary research into health sector practices, organisation and management. It emphasises translational research and turning policy into practice. Research interests include healthcare policy, governance and leadership; the development of intelligent search systems to support evidence-based healthcare; and the rigorous multi-method evaluation of health systems and safety practices.

Our research efforts are supported by Macquarie University Hospital, which is Australia's most technologically advanced private hospital on a university campus. The hospital provides a training ground for clinical and basic research programs in audiology, clinical neuropsychology, clinical psychology, imaging, medicine and surgery.

As a higher degree research candidate at Macquarie, you will have the opportunity to work alongside experts in academia, industry, and clinical care and health systems evaluation, providing you with an unrivalled research experience, as well as the opportunity to drive innovation and improve the lives of people around the world.
Highlights

• Researchers in the Centre for Physical Health have developed the world’s first internet-based self-management program to help people with a stroke or traumatic brain injury increase their physical activity levels and improve their health.

• Physiotherapy researchers are leading studies in low back pain to identify prognostic factors, and understand changes on MRI and somatosensory alterations to optimise patient recovery.

• Research into the use of the gamma knife in the treatment of AVMs is leading to a non-surgical treatment.

• Macquarie is concentrating its activity on advancing a cure for motor neurone disease.

• Our cancer research programs are identifying the molecular signatures of melanoma and breast tumours, which allows personalised treatment options for these lethal cancers.

• Research into infectious agents is focusing on the control of infection in the operating theatre.

• Our research is cross-disciplinary, with synergies across areas including molecular and cell biology, genetics, pharmacology, musculoskeletal and cardiorespiratory conditions, biomedical engineering, cardiovascular disease, oncology, neurosciences and surgery.


Support

You will be provided with individualised support, as well as a range of opportunities, at all stages of your research degree, including:

• higher degree research learning skills advisers who provide valuable training options such as workshops in research communication, presentation skills, academic writing skills, thesis planning and more

• inspirational supervision and mentoring

• a candidature management plan that closely supports progress, commencement programs, work-in-progress reviews, and presentations providing opportunities for feedback from a panel of academics

• real-world engagement with opportunities for cotutelle and joint degrees

• financial support for a range of research-related activities

• world-class facilities

• a transformative research experience that fosters cross-disciplinary collaboration.

FACILITIES AND EQUIPMENT

• Anatomy labs with facilities for orthopaedics and radiology

• Australian Hearing Hub

• Australia’s first gamma knife

• Centre for Physical Health

• Cyclotron for the manufacture of radiopharmaceuticals

• da Vinci® Surgical System

• Macquarie University Hospital and clinics

• Magnetic resonance imaging (MRI) and positron emission tomography (PET)

• Molecular and cell biology research laboratories

• Motion analysis lab (3D and overground force plates)

• Quantitative sensory testing facility

• Surgical Skills Centre and Simulation Skills Centre

• Virtual reality suite

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