



Professor David McAlpine
Professor of Hearing, Language and the Brain
Director of Hearing Research

Health sciences

From research into paediatric physiotherapy, sporting injuries and chronic pain to the relationship between hearing loss, ageing and dementia, Macquarie's health sciences researchers are uniquely positioned to address the complex issues that face humanity.

Our researchers have expertise in the fields of allied health, chiropractic, clinical audiology, environmental health, physiotherapy, public health, psychology, and speech and language pathology. They include Professor Ron Rapee, Director of the Centre for Emotional Health, who was awarded an Australian Laureate Fellowship to research emotional distress during adolescence.

A recent major investment in public health on Macquarie's campus has been the development of the Australian Hearing Hub. Inspired by the interdisciplinary research environment at Macquarie, the Australian Hearing Hub is a revolutionary independent research facility designed to foster innovation. It brings together world-renowned scholars and leading service providers to advance research, education and innovation into hearing, cognition and speech and language disorders.

Multidisciplinary researchers from the Australian Institute of Health Innovation, Australia's foremost healthcare systems research institute, are harnessing the data stored in our health records to make predictions about everything from a patient's length of stay in hospital to their risk of infection to the likely effectiveness of particular treatments.

The Macquarie University Simulation Hub draws together a range of simulation devices into one location, enabling leading experts from the University and from industry to collaborate on translational research across a wide range of disciplines. It includes simulation labs for driving, home, work and recreation, flight, motion capture and virtual reality.

Macquarie also has outstanding physiotherapy, chiropractic and anatomy research facilities, considered to be the best university facilities in the region and among the best in the world.

With more than 22,000 square metres of space for interdisciplinary research, education and innovation, Macquarie offers unparalleled opportunities for research training in an environment that is unmatched in Australia.

mq.edu.au/research/health-sciences



MACQUARIE
University
SYDNEY · AUSTRALIA



AREAS OF SPECIALISATION

- Aeroallergens and allergic respiratory diseases
- Anatomy and chiropractic education
- Auditory processing disorders in children and adults
- Chiropractic management of common sporting injuries
- Chiropractic practice
- Climate change and human health
- Clinical management of low back pain
- Development of spoken language and reading in young children with hearing impairments
- Development, public health and poverty
- Early intervention for those who stutter
- Emotional and mental health
- Environmental health, law, policy and contamination
- Epidemiology, diagnosis and emerging diseases
- Global health
- Hearing, speech and cognitive disorders across the lifespan
- Media and health
- Medical imaging and radiation science
- Neuroscience of acute and chronic back pain
- Physiotherapy practice
- Plant products as antimicrobial agents
- Prognosis and management of musculoskeletal conditions
- Rehabilitation from neurological disorders
- Reproductive health technologies and education
- Social determinants of health
- Spinal orthopaedics
- Tobacco control



FACILITIES

- Anechoic chamber that includes a 3D array of 41 loudspeakers used to reproduce acoustic real-world environments
- Australian Hearing Hub
- Centre for Emotional Health
- Centre for Language Sciences
- Chiropractic and anatomy labs with rooms for radiology, orthopaedics, rehabilitation and case management
- Community-based chiropractic clinics serving the health needs of the public
- Environmental Quality Laboratory
- Indigenous Bioresources Research Group
- Macquarie node of the HEARING CRC
- Macquarie Public Health Research Network
- Macquarie University Cognition Clinic for Reading
- Macquarie University Psychology Clinic
- Macquarie University Speech and Hearing Clinic with new clinical and research spaces that provide opportunities for research in auditory processing, speech perception and auditory plasticity after rehabilitation or device fitting
- Magnetoencephalography (MEG) laboratories for adults and children, and the world's first MEG system for people with cochlear implants
- Optically stimulated luminescence laboratory
- Purpose-built physiotherapy research laboratory supplemented by access to the extensive radiology imaging suite at Macquarie University Hospital



RESEARCH HUB

- Macquarie University Simulation Hub



OUR RESEARCH PRIORITIES

We pursue excellence in a broad range of research areas. Our five interdisciplinary strategic research priorities – Healthy People, Resilient Societies, Prosperous Economies, Secure Planet and Innovative Technologies – respond to globally significant challenges and opportunities to improve the lives of millions. Together, these research priorities provide a focal point for research, with discoveries made under these priorities translating into real improvements in the lives of local, national and global communities.

JOINTLY SUPERVISED PHD PROGRAMS

Macquarie actively encourages cotutelles and joint degrees – shared supervision arrangements with universities whose research activity strongly aligns with ours. Under each model, you are enrolled at two universities with a principal supervisor at each and may be eligible for additional scholarship support.

mq.edu.au/cotutelle-and-joint-phd



FIND OUT MORE

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