



Biological sciences

From research into bionic brains and superbugs to invasive fruit flies and conservation of endangered wildlife, Macquarie's biological sciences researchers are uniquely positioned to help shape the complex issues that define the future of humanity.

Our research strengths are concentrated in the areas of animal behaviour, conservation genetics, ecology, evolutionary biology, microbiology, palaeobiology, plant biology and zoology, and a significant theme is international networking that builds global research collaborations.

We are home to many renowned biological sciences researchers, including one of the world's most influential ecologists, Professor Mark Westoby. A pioneer of trait-based ecology, Westoby was named Scientist of the Year at the 2014 NSW Science and Engineering Awards. He is an ARC Laureate Fellow and the leader of the Genes to Geoscience Research Centre.

Other world-renowned researchers include climate change scientist Professor Lesley Hughes, who won the 2014 Australian Government Eureka Prize for Promoting Understanding of Australian Science Research; and Associate Professor Ian Wright, who won the 2015 Australian Academy of Science Fenner Medal for his research on plant ecology.

In 2015, Professor David Raftos was awarded the Rural Research and Development Corporations Eureka Prize for Rural Innovation for his work safeguarding Australia's oyster industry. Associate Professor Phil Taylor was announced as leader of a \$20.5 million project with Horticulture Innovation Australia to research an effective sterile insect technique program to curb the prevalence of fruit flies in Australia.

Our biological scientists also enjoy an international reputation as leaders in their fields. Macquarie is number one in Australia for the citation impact of our environmental sciences and ecology research (ESI, 2014) and in the top 100 universities in the world for earth and marine sciences (QS, 2015). Additionally, in the most recent Excellence in Research for Australia evaluation, our biological sciences research received a rating of 'performance above world standard'.

As a higher degree research candidate at Macquarie, you'll be part of a large and vibrant community of more than 100 research students, and you'll have the opportunity to conduct research alongside Future Fellows, ARC Discovery Early Career Researchers, International Research Fellows and Young Tall Poppy Science Award winners.

mq.edu.au/research/biological-sciences



MACQUARIE
University
SYDNEY · AUSTRALIA



AREAS OF SPECIALISATION

- Animal behaviour
- Behavioural ecology
- Biodiversity and conservation
- Climate change biology
- Comparative cognition
- Conservation genetics
- Ecology and evolution
- Environmental and molecular microbiology
- Human biology
- Human genetics
- Immunobiology
- Marine biology
- Mathematical modelling of biological systems
- Neurobiology
- Palaeobiology and palaeoecology
- Plant and animal physiology
- Synthetic biology



FACILITIES

- Acid leaching facility and fossil preparation laboratory
- Bee/fly house, animal enclosures, freshwater ponds
- Biological Sciences Museum
- Field vehicles and boats
- Microscopy unit
- On-campus marine science seawater facility
- Plant growth facility, herbarium and glasshouse
- State-of-the-art laboratories
- Sydney Institute of Marine Science



RESEARCH HUBS

- Climate Futures
- Concentration of Research Excellence in Animal Behaviour
- Concentration of Research Excellence in Ecology and Evolution
- Genes to Geoscience



Professor Phil Taylor

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

Macquarie University NSW 2109 Australia
T: +61 (2) 9850 7987

mq.edu.au/research/biological-sciences

CRICOS Provider 00002J



MACQUARIE
University
SYDNEY · AUSTRALIA