



UNIVERSITY of  
TASMANIA

MENZIES   
Institute for Medical Research

# Menzies Institute for Medical Research

Building a healthier community



[menzies.utas.edu.au](http://menzies.utas.edu.au)



## Building a healthier community

The University of Tasmania's Menzies Institute for Medical Research exists to perform internationally significant medical research leading to healthier, longer and better lives for Tasmanians.

Menzies is one of Australia's leading health and medical research institutes and is recognised worldwide for its research excellence.

Since our establishment in 1988, significant breakthroughs have been made by our scientists into the cause, prevention and treatment of a number of diseases impacting on Tasmanians and people around the world.

Over the next decade, our research activity will continue to primarily focus on the major diseases affecting the Tasmanian community, including arthritis, cancer, dementia, diabetes, heart disease, mental health and multiple sclerosis. Menzies is dedicated to improving health outcomes for all Tasmanians, today and in the future.

## Making discoveries

Significant research breakthroughs by Menzies include the discovery of:

- The link between babies' sleeping position and sudden infant death syndrome (SIDS)
- Genetic markers linked to men's risk of developing prostate cancer
- The potentially irreversible impact of childhood exposure to parental cigarette smoke on cardiovascular health later in life
- Association of higher vitamin D levels with a lower relapse risk in multiple sclerosis
- Potential avoidance of increased cardiovascular risk from childhood obesity if obesity in adulthood is avoided
- Remodelling of nerve cells in undamaged parts of the brain in response to acquired brain injury
- Ability of platelets found in the blood to kill the malaria parasite during the early stages of a malarial infection.

## Our history

The Menzies Institute for Medical Research, formerly known as the Menzies Centre for Population Health Research, was established in 1988 by the University of Tasmania with support from the Tasmanian Government and the Menzies Foundation. Menzies was primarily established to address the health issues facing the Tasmanian community.

From modest beginnings, Menzies quickly gained an international reputation for its innovative work into the link between babies' sleeping position and sudden infant death syndrome (SIDS). From this work our research expanded and population health and epidemiological research programs were developed. In 2006, we expanded our focus to include both clinical and basic laboratory science.

In 2010, the University of Tasmania opened a new \$58 million world-class medical research, clinical and education facility known as Medical Science 1 (MS1).

In 2013, a \$90 million facility known as Medical Science 2 (MS2) officially opened. MS2 has enabled Menzies to further expand our highly innovative research program, attract more internationally renowned researchers to our shore, make more discoveries and intensify the pace of turning our discoveries into better treatments and health practices for the Tasmanian community. Together, MS1 and MS2 are known as the University of Tasmania Medical Science Precinct.

Work in the Medical Science Precinct will keep Tasmania at the forefront both in Australia and internationally in medical research, clinical translation and education - well into the future.

## Our key research areas

Menzies is renowned internationally for its innovative research, utilising the unique competitive advantages that Tasmania offers, including island geography, a stable population and extensive genealogical records.

The Institute has the ability to perform high quality basic, clinical and population health research. Research at Menzies takes a bench-to-bedside and disease prevention approach aimed at improving patient care and clinical outcomes for the community.

The Institute offers a dynamic and stimulating scientific environment where scientists share ideas and knowledge to facilitate faster and more effective research results.

Menzies research is divided into five themes.

### Public Health and Primary Care

Our public health and primary care team seeks to better prevent and manage important population health problems. Projects address a broad range of conditions, including cardiovascular disease, type 2 diabetes, cancer, multiple sclerosis and depression. Several projects are investigating how lifestyle factors (for example smoking and physical activity), obesity and hormones in childhood and early adulthood affect the risk of developing disease later in life. Research in this area includes epidemiology, behavioural science, environmental health, biostatistics and health economics.

Established partnerships with the Tasmanian State Government and management of the Tasmanian Cancer Registry and Tasmanian Data Linkage Unit ensure a focus on applied research.







### **Neurodegenerative Diseases/Brain Injury**

Using cutting-edge tools, our neuroscientists aim to understand the mechanisms underlying the brain's response to trauma (for example road accidents and falls) and diseases such as dementia (including Alzheimer's disease), multiple sclerosis, Parkinson's disease and motor neuron disease. This research will assist in the development of new ways to diagnose, prevent or treat these devastating disorders.

### **Cardio-Metabolic Health and Diseases**

The primary aim of this group is to reduce the burden of cardiovascular and metabolic disease on our community. The group uses interventions targeted at identifying and preventing the development of obesity, insulin resistance, type 2 diabetes, hypertension and heart disease. Areas of interest include blood pressure assessment, assessment of large and small blood vessel functioning and cardiac imaging in heart disease. Research techniques from laboratory models, clinical and population health studies and clinical interventions are used to discover new ways to prevent the progression of cardio-metabolic disease.

### **Musculoskeletal Health and Diseases**

Research in this area optimises Tasmania's unique population characteristics to investigate musculoskeletal disease, with a particular emphasis on osteoarthritis and osteoporosis. Epidemiological research into musculoskeletal disease helps us understand the impact of arthritis and other musculoskeletal conditions on the individual and the community, so the best medical care can be developed and delivered where needed.

### **Cancer, Genetics and Immunology**

This team comprises laboratory-based researchers and biostatisticians. Research into cancer genetics is aimed at understanding genes that contribute to the development of different types of cancers. At present the group is studying genetic susceptibility to prostate cancer and blood cancers such as leukaemia. They are studying the immune response in the context of cancer, infectious diseases and autoimmune diseases, with a particular interest in the Tasmanian Devil Facial Tumour Disease, multiple sclerosis and lupus. Genetics researchers are studying eye diseases including glaucoma, keratoconus and diabetic retinopathy.



## **FOR FURTHER INFORMATION**

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