

# Around the universities and research institutes

The 2018 Australian Museum Eureka Prize winners have been announced with health and medical personnel picking up several gongs. The UNSW Eureka Prize for Excellence in Interdisciplinary Scientific Research was won by the Optical Physics



in Neuroscience team at the **University of Queensland**, which has devised cutting-edge methods for studying how our brains work to detect gravity and motion. Using optical trapping and novel microscopes, they successfully imaged the functioning brain circuits that process gravity and motion and combine this information with other senses. The Australian Infectious Diseases Research Centre Eureka Prize for Infectious Diseases Research was won by the CR Air team, including Metro North Hospital and Health Service; The Prince Charles Hospital; **QIMR Berghofer Medical Research Institute**; Children's Health Queensland; **University of Queensland**; **Griffith University**; Gold Coast Health; and **Queensland University of Technology**. The CF Air team uncovered the process by which



the deadly pathogens causing airway infections are transmitted between cystic fibrosis (CF) patients. Their research has attracted considerable attention from the CF community, impacting



clinical practice and policy and ultimately reducing infection rates amongst patient groups. Professor Tony Weiss, AM, from the **University of Sydney**, won the Johnson and Johnson Eureka Prize for Innovation

in Medical Research, for developing an adhesive surgical glue that quickly seals wounds without the need for common staples. The technology, made from natural elastic protein, has the potential to revolutionise treatment at emergency sites and was recently sold to an international pharmaceutical company. The ANSTO Eureka Prize for Innovative Use of Technology was won by Professor Wendy Erber, Dr Kathryn



Fuller and Henry Hui, from the **University of Western Australia**, who figured out how to detect abnormal chromosomes inside leukaemia cells. This fast, accurate and sensitive automated method can detect just one leukaemia cell in 10 000 normal cells, a major advance that will lead to personalised treatments and better patient care. The UNSW Eureka Prize for Scientific Research was won by Professor



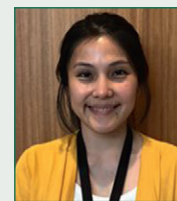
Sally Dunwoodie, from the **Victor Chang Cardiac Research Institute**, and her multidisciplinary team who discovered the potential of vitamin B3 to treat a molecular deficiency causing miscarriages and multiple types of birth defects. Their finding could prevent developmental defects through a common dietary supplement, which may transform the way pregnant women are cared for around the world.

<https://australianmuseum.net.au/2018-eureka-prizes-winners>



Professor Grant McArthur has been awarded the 2018 Tom Reeve Award for Outstanding Contributions to Cancer Care by the Clinical Oncology Society of Australia. Professor McArthur is inaugural Lorenzo Galli Chair in Melanoma at the **University of Melbourne**; Consultant

Medical Oncologist, Melanoma and Skin Cancer Service at the **Victorian Comprehensive Cancer Centre**, Head of the Cancer Therapeutics Program, at the **Peter MacCallum Cancer Centre** and most recently, was appointed Executive Director of the Victorian Comprehensive Cancer Centre in Melbourne. He also holds other senior appointments, including Professorial Fellow in the Department of Medicine at St. Vincent's and Geelong Hospitals, Victoria and Professorial Fellow in the Department of Pathology at the University of Melbourne. His award citation read: "Professor McArthur epitomises the values of COSA and of Tom Reeve. His respect for the contribution of all members of the multidisciplinary team sets an example for all colleagues and influences the culture of health care delivery for multidisciplinary clinicians and researchers. This approach to his colleagues defines his clinical, education and research activities. Like COSA, Professor McArthur works across the pillars of education, advocacy, research and practice and has a life-long commitment to establishing collaborative networks that improve outcomes for people with cancer."



Velma Herwanto, a PhD student from the **Westmead Institute and University of Sydney**, has received best international abstract in the upcoming International Sepsis

Forum. The abstract was based on Ms Herwanto's research on developing a test for sepsis. There is no test for early detection of sepsis, meaning early warning signs may go unnoticed until symptoms become critical. However, in the future Ms Herwanto's research could help develop a simple blood test that could reduce mortality rates. "I'm analysing the metabolic profile of blood samples taken from sepsis patients, then comparing these profiles to the severity of infection and sepsis to look for patterns," she said. So far, she has found that patients with more severe sepsis have more reduced mitochondrial function. Eventually, Velma hopes to find a biomarker that can help predict sepsis.

<https://www.westmead institute.org.au/news-and-events/2018/stopping-sepsis-in-its-tracks>

doi: 10.5694/mja18.0110C2