



Australian Government



THE PRIME MINISTER'S
PRIZES FOR SCIENCE

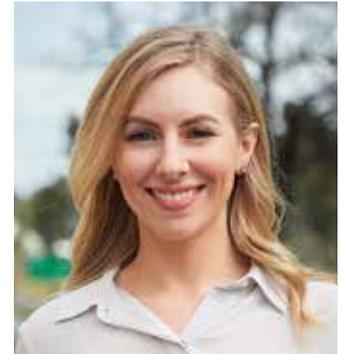
Celebrating 20 years

Associate Professor Laura Mackay

Doherty Institute, University of Melbourne

2019 FRANK FENNER PRIZE FOR LIFE SCIENTIST OF THE YEAR

- Associate Professor Laura Mackay, from the Doherty Institute at the University of Melbourne, is a leader in the field of immunological memory. Her work in understanding tissue-resident memory T cells (TRMs) is changing the way the science world treats infectious disease and cancer—two of the leading causes of global mortality.
- Initially it was believed that immune responses were controlled by elements in the blood until Associate Professor Mackay showed that T cells found in tissues of the body were actually critical in providing a first line of defence against infection.
- Associate Professor Mackay has defined a new population of T cells that permanently reside at body surfaces, in the skin and gut; cells that are distinct from those found in the blood (TRMs).
- Associate Professor Mackay's work has showed that TRMs are the key to preventing melanoma tumours from growing, and are significantly associated with improved outcomes for patients with breast cancer.
- As a result of her discoveries, Associate Professor Mackay has become a global leader in the field. Her research papers are redefining how scientists understand cellular immune responses, and she is one of the most in-demand speakers for science research and immunology, presenting at the best international conferences, universities and research institutes in the world.
- Her work has contributed to new vaccines designed to incorporate TRMs in Phase 1 clinical trials (Malaria, HIV) and pharmaceutical investment in targeting TRMs as an anti-cancer strategy (investment by Pfizer).
- Associate Professor Mackay is also emerging as a professional leader in the field, becoming the youngest ever and first female President of the Immunological Societies of Asia-Oceania (FIMSA), comprising 16 countries, including Japan and China. Her presidency promises to drive more emphasis on early career researchers while encouraging much more diversity across the discipline.
- Associate Professor Mackay says mentoring women in science is important not only to her, but also to help promote diversity of ideas and discoveries in science.





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QUALIFICATIONS

- BSc (Hons), University of Warwick (2004)
- MSc (Distinction), Immunology, University of Birmingham (2005)
- PhD, University of Birmingham (2009)

CAREER HIGHLIGHTS

- \$10+ million AUD in competitive research funding
- 2020–2025 National Health and Medical Research Council—Leadership Investigator Grant
- Research collaboration agreement with Pfizer
- More than 40 invitations to present her work as a Plenary Speaker
- More than 29 seminar program invitations (incl. Harvard Medical School, New York University and Vanderbilt)
- 2019–23 Sylvia and Charles Viertel Charitable Foundation Senior Medical Research Fellowship
- 2019 Winner, Macquarie University Eureka Prize for Outstanding Early Career Researcher
- 2019 Woodward Medal for Science and Technology, University of Melbourne
- 2019 The Gottschalk Medal, Awarded by The Australian Academy of Science
- 2018–21 President, Federation of Immunological Societies of Asia-Oceania (FIMSA)
- 2018 The Michelson Prize for Human Immunology and Vaccine Development, awarded by The Michelson Medical Research Foundation and The Human Vaccines Project (three awarded worldwide)
- 2017–22 Howard Hughes Medical Institute (HHMI) Bill and Melinda Gates International Research Scholar (41 scholars from 16 countries)
- 2016–19 National Health and Medical Research Council (NHMRC) Career Development Fellowship
- 2016 Victorian Young Tall Poppy Award for Excellence in Science
- 2014–16 Australian Research Council Discovery Early Career Researcher Award
- 2013 Eureka Prize for Infectious Disease Research Finalist
- 2012 Victorian Infection and Immunity Network Young Investigator Award