

For time immemorial, Aboriginal and Torres Strait Islander people have lived in harmony with the Australian land, managing their health with a deep knowledge of the healing properties of native flora.

By maintaining strong connections to country, language, and culture, they continue to show resilience and growth in the face of adversity. However, as identified in *Closing The Gap: Prime Minister's Report 2018*, the life expectancy of Indigenous males at birth is 69.1 and females 73.7, 10.6 and 9.5 years younger than non-Indigenous males and females respectively. In addition, Indigenous Australians are disproportionately affected by infectious diseases, including blood borne viruses, respiratory infections, skin infections and sexually transmitted infections.

## Indigenous health at the Doherty Institute

The challenge, 'What will this Institute do to improve the health of Aboriginal Australians?', was posed by respected Wurundjeri elder Aunty Joy Murphy Wandin AO at the Institute's opening in 2014. Responding to this challenge, Indigenous health is now a key cross-cutting discipline of the Institute.

The Indigenous health discipline draws together collaborative groups with a shared goal of reducing the impact of infectious diseases on Indigenous Australians. The Institute works collaboratively with colleagues across the University of Melbourne and partners around Australia to ensure research is beneficial to communities involved.

## Principles

The Institute aims to work collaboratively with communities, conducting research not only contributing to the body of knowledge, but importantly, translating into clear benefits for Indigenous Australians. At all times, staff at the Institute will be respectful of the values, history, culture, language, diversity, and context of the communities they work with.

The Institute will be transparent and accountable for the impact of its work and will maintain the highest ethical standards, adhering to the guidelines of the Lowitja Institute and National Health and Medical Research Council.

## Research

Impetigo (skin sores) affects approximately 45 per cent of Indigenous children and can cause serious complications including sepsis and heart and kidney disease. The Institute's research teams are using mathematical modelling to understand the relationship between social, environmental, and biological factors in the ongoing prevalence of skin sores. Another collaborative study with the Menzies School of Health Research in the Northern Territory is helping researchers understand complex interactions between nutrition and infection on child growth and development.



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# Indigenous Health



The prevalence of hepatitis B virus (HBV) for Indigenous Australians is much higher than for non-Indigenous Australians, leading to an increased risk of cirrhosis and liver cancer. A collaboration between the Institute and Menzies identified a unique subtype of HBV in the Indigenous population. Our researchers are studying the natural history, biology and vaccine response of this subtype and are working with partners to eliminate HBV from Indigenous communities in the Northern Territory.

Indigenous Australians experience more severe influenza infection, with higher levels of hospitalisation, morbidity, and mortality. The Institute is working to understand how genetic factors in immune cells explain why Indigenous Australians respond differently to influenza and the vaccine, with the aim to develop a vaccine better suited to Indigenous populations.

Human T-Lymphotropic Virus type 1 (HTLV-1) is a virus which, similarly to HIV, infects cells of the immune system. It is incurable and can cause leukaemia, neurological disease, and other illness. In some remote Indigenous communities in Central Australia, HTLV-1 infects more than 50 per cent of the population. The Institute's HIV teams are utilising their expertise to better understand HTLV-1 to reduce its transmission and impact.

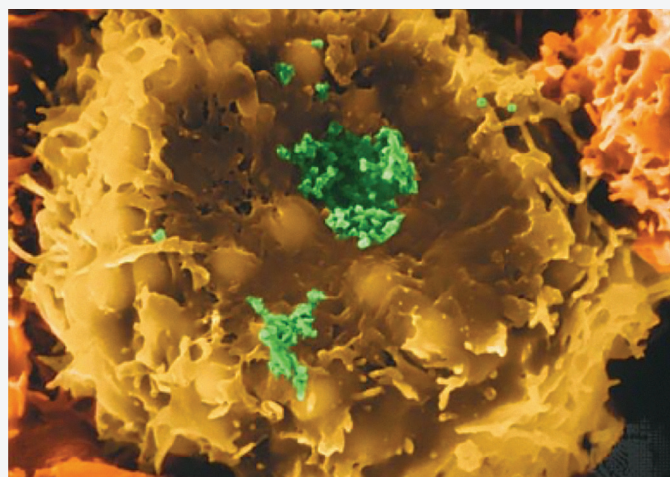
## Capacity building

The Institute aims to build capacity in Indigenous health research by training and supporting the next generation of Indigenous leaders in biomedical research. In 2017, the Institute hosted its inaugural Indigenous Health Forum, providing an opportunity for Indigenous leaders from Australia to assist with identifying key principles for Indigenous health research. This will be a regular event, with the aim to engage with communities beyond current research projects and track the Institute's progress.

Also in 2017, the Institute announced the Yiaga Ngarnga Scholarship to support students from Aboriginal or Torres Strait Islander backgrounds to pursue PhD studies in infection and immunity. Indigenous students will be spending time at the Institute through the RISE and Gateways programs, encouraging pathways into health and medical research. In addition, cultural safety training programs are being progressively delivered to staff and students.

## 'What will this Institute do to improve the health of Aboriginal Australians?'

Challenge posed by respected Wurundjeri elder Aunty Joy Murphy Wandin AO at the Doherty Institute's opening in 2014



The HTLV-1 virus.

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