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**MENZIES SCHOOL OF HEALTH RESEARCH
SUBMISSION TO THE JOINT SELECT COMMITTEE ON NORTHERN AUSTRALIA
INQUIRY INTO THE DEVELOPMENT OF NORTHERN AUSTRALIA**

Introduction

The Menzies School of Health Research (Menzies) is a leader in Indigenous and tropical health research in Australia. Our evidence-based approach focuses on ways to better prevent, diagnose and treat disease, building Indigenous research capacity and improving the delivery of health services. Menzies' areas of expertise include Aboriginal and Torres Strait Islander health; children's, youth and mental health; the impact of education, housing, employment and the environment on health; tropical and emerging infectious diseases; preventable chronic diseases and global health.

Established in 1984, Menzies is committed to understanding and improving Indigenous health, as well as the health of people living in Northern Australia and the tropics. In partnership with the Northern Territory Government and Charles Darwin University, Menzies vision is:

To improve health outcomes for populations in Australia and the Asia-Pacific region, particularly Aboriginal and Torres Strait Islander communities, through excellence and leadership in research, education and capacity development.

Menzies has approximately 230 full-time equivalent staff, more than 80% of them employed directly on research. We have a head office in Darwin, with offices in Brisbane and Alice Springs, and undertake research projects around Australia and our region. We work in approximately 60 communities across the Northern Territory, and have strong research and capacity building partnerships with universities, health services and governments in many neighbouring countries, particularly in Indonesia, Malaysia and East Timor. Our global health team work in more than 20 countries across Asia.

Menzies has experienced a period of rapid growth over the last 6 years, culminating in the construction of two new purpose-built research facilities funded by the Commonwealth and NT Governments and located on the Royal Darwin Hospital and Charles Darwin University campuses.

Menzies welcomes the opportunity to make a submission to the Joint Select Committee Inquiry into the Development of Northern Australia.

In this submission, we outline the economic, social and health benefits that Menzies currently provides Northern Australia and our region. Our vision is to create a Northern Australia Centre of Excellence, to be based at Menzies' new buildings located at Royal Darwin Hospital and Charles Darwin University in Darwin, to help drive the Governments' Northern Australia tropical health and medical research agenda.

Economic Benefits

A Deloitte Access Economics commissioned reportⁱ found that between 2002 and 2010 Menzies contributed a total of \$128 million, \$91m directly and \$37m indirectly, to the Northern Territory economy. During the same period, Menzies contributed a net economic and social contribution of \$393 million to Australia and the Asia Pacific.

Menzies funding was calculated to have a net benefit to cost ratio of 3.12:1. Every dollar invested in Menzies returned \$3.12 in direct and indirect economic and health benefits. In contrast, the benefit to cost ratio for Australian health research and development as a whole is 2.17:1ⁱⁱ. Menzies' return is almost 50% higher than the national average.

The same Deloitte Access Economics study also found the following economic benefits from a small sample of Menzies health research programs between 2002 and 2010:

- Malaria – forecasted \$298m in value for the Asia Pacific region between 2011 and 2035, mostly attributable to changes in treatment in Asia Pacific countries leading to lower mortality and better health outcomes.
- Melioidosis (a potentially fatal disease caused by bacteria found in wet soil and surface water in tropical areas) - \$1.3m saved by the NT and \$5.7m saved by the rest of Australia.
- Acute Rheumatic Fever and Rheumatic Heart Disease (a disease of childhood that damages the heart valves, leading to heart failure and often early death) - \$12m value to communities in NT, WA and QLD as a result of reduced rates of RHD.
- Oral disease - \$1m value to the NT Aboriginal communities from improvements in the oral health of children under the age of five.
- Primary health care - \$15m value to the NT and \$99m value to the rest of Australia as a result of improved health service delivery.
- Pyoderma (a superficial bacterial skin infection (“skin sores”), highly prevalent in children in remote Indigenous communities) - \$4m value from improvements in the treatment of Pyoderma among NT children under the age of 15.

Menzies' main source of funding is from the National Health and Medical Research Council (NHMRC). Menzies always performs strongly in obtaining competitive research funding. In 2013:

- Menzies received over \$9 million in NHMRC funding – bringing more than \$28m dollars in direct and indirect economic and health benefits to NT and the region in a single year.
- Our success rate in NHMRS grants was 38% compared to a national average of 19%.
- This was the highest success rate amongst the top 10 Medical Research Institutes (MRIs) and top 20 universities.
- A Menzies project, investigating the real-world effectiveness of a vaccine against a leading cause of hospitalisation for gastroenteritis, was celebrated as one of the NHMRC's 'Ten of the Best' for 2013:
http://www.nhmrc.gov.au/files/nhmrc/publications/attachments/r53_ten_of_the_best_2013_131218.pdf.
- A Menzies project investigating melioidosis was recognised with a NHMRC Project Grant Excellence Award, just one of three awarded Australia-wide:
http://www.nhmrc.gov.au/files/nhmrc/media_releases/Media%20release%20-%20Excellence%20Awards%202012%20-%20Final_0.pdf
- For most of the last 10 years, using the nationally accepted benchmark for quality research proposals (the NHMRC peer-review grant assessment process), Menzies has been **the largest single recipient** of NHMRC funding for Indigenous health research.

Social Benefits

Menzies directly supports approximately 230 full-time jobs in the NT, largely as a result of its capacity to attract funding from outside the NT. Menzies' expenditure creates further employment opportunities nationwide. Health services in the Top End find it difficult to recruit and retain highly trained health professionals. Menzies offers opportunities to combine world-class health research with work as a health service provider, adding to the attraction of working in the Top End. This pulls health professionals into the Northern region; people with much needed expertise who aim to make a significant contribution and who bring their families.

Menzies is a significant employer of Aboriginal and Torres Strait Islander workers, including in remote communities of the NT. More than 10% of our staff are of Aboriginal or Torres Strait Islander descent. We aim to grow this to 25%. Many Indigenous employees receive training while at Menzies, in particular a purpose-created Certificate II in Health Research. This is a crucial entry pathway into health research and ongoing employment for Aboriginal people in communities. Forty people have successfully completed this VET sector accredited course since 2005. More than half have remained employed in health research and the health sector. We are now growing a cohort of Indigenous research leaders, who are making crucial contributions to address kidney disease, cancer and nutrition and to build pathways for other Aboriginal and Torres Strait Islander Australians to follow.

Links with the Asia-Pacific region

Menzies is conscious of living on the Asia-Pacific doorstep – a region that is home to over 50 per cent of the world's population. Each year millions die from malnutrition and infectious diseases such as malaria, tuberculosis and other bacterial infections.

In exploring ways to prevent these deaths, Menzies Global and Tropical Health program partners with regional health services and institutes in the Asia-Pacific. A major focus is the epidemiology, treatment and elimination of malaria, including the regionally-important species *P. vivax* and *P. knowlesi*. With funding from the Gates Foundation and Wellcome Trust, we lead efforts in malaria elimination across 25 countries throughout the region. Other regional programs include tuberculosis, child nutrition and prevention of pneumococcal disease and rheumatic fever.

Menzies also has a number of international postgraduate students working with staff on these programs.

Health Benefits

Since 1984, Menzies has contributed to a long list of positive health outcomes. The health outcomes of a small sample of Menzies research, as measured by Deloitte:

- Menzies' community-oriented primary oral care intervention to prevent dental decay among pre-school aged NT children resulted in a 36% reduction in cavities.
- Menzies' Melioidosis research achieved a 85% reduction in mortality – averting an estimated 230 deaths between 2011 and 2031.
- Menzies Pyoderma research achieved a 15% drop in skin sore prevalence among Indigenous children in the NT from 2004-7.

Menzies' unique location gives us the ability to help Commonwealth and NT Governments in responding to pandemics arriving from our north. Menzies works closely with our local NT Centre for Disease Control, providing support with our expertise in epidemiological and clinical aspects of infectious diseases; and our laboratory assisting with molecular epidemiology.

Menzies also examines and develops solutions for hazards posed by Northern Australia's tropical environment. Work includes research on the agents of skin disease, such as the bacteria *Staphylococcus aureus* (golden staph) and *Streptococcus pyogenes* (Group A strep) and the parasitic mite which causes scabies. Menzies also investigates the soil and waterborne disease melioidosis, influenza and other infections resulting in community-acquired pneumonia and sepsis.

Further evidence of health outcomes can be found at the Menzies website <http://www.menzies.edu.au/page/Research/>.

Collaboration across Northern Australia

Menzies has a track record of successful collaboration with many Australian universities and research institutes. Many Menzies projects extend across jurisdictional borders –including our work in rheumatic heart disease, scabies, kidney disease, diabetes and primary health care services research.

With commitment and funding from jurisdictions and from the Commonwealth Government, there is an opportunity to drive the Governments' Northern Australia tropical health and medical research agenda via the creation of a Northern Australia Centre of Excellence. Darwin is placed strategically in the middle of the region and Menzies would welcome the opportunity to host such a centre in its new buildings. The attached document outlines the proposal for a Centre, representing a comprehensive approach to building Indigenous research leadership and the creation of employment opportunities in Indigenous communities.

A **one-off capital investment of \$30 million** would fund ongoing Centre activity and help drive efforts to improve health outcomes in Northern Australia for the foreseeable future. With the Menzies track record of leveraging further competitive research funding from such an investment, it would continue to generate a minimum of \$10 million every year in direct and indirect economic and health benefits.

**Professor Alan Cass,
Director Menzies School of Health Research**

ⁱ Deloitte Access Economics (2012) *Economic and social contribution of Menzies School of Health Research to the NT, Australia and the Asia Pacific*.

http://www.menzies.edu.au/icms_docs/155388_Deloitte_Report.pdf

ⁱⁱ Australian Society for Medical Research (ASMR), *Exceptional Returns: The Value of Investing in Health R&D in Australia II*, prepared for ASMR by Access Economics Pty Ltd, Canberra, 2008.

<http://www.asmr.org.au/Except.pdf>