

Menzies secures 2016 NHMRC funding for groundbreaking projects

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Innovation and transformation are at the heart of the Menzies School of Health Research (Menzies) projects which have secured funding in the highly competitive NHMRC grant round.

The *Rapid Iron Infusion Project* will assess whether children suffering from iron deficiency anaemia can avoid being exposed to a painful treatment regimen.

The rapid iron infusion will be given to eligible children prior to discharge from hospital. It aims to reduce the risk of ongoing anaemia, increase haemoglobin levels, remove the need for additional painful injections, improve the adherence to recommended treatment and lessen the reliance on primary health care resources.

Led by Deputy Head of the Menzies Child Health division, Professor Peter Morris, the *Rapid Iron Infusion Project* will compare multiple painful intramuscular (IM) iron injections with an intravenous infusion of ferric carboxymaltose (Ferinject).

Proven to be a safe and effective treatment in adults, (and now recommended for use in pregnancy), Ferinject is a new iron preparation that allows a higher dose of iron to be given as a rapid iron transfusion with very low risk of transfusion reaction.

In remote Indigenous communities in the Northern Territory (NT), around 25-30% of children aged 0-4 years are anaemic at any time and most children are affected at some point.

'Iron deficiency anaemia is one of the most common health problems affecting Indigenous children in the NT. The illness reduces energy levels and can harm development in young children,' Prof Morris said.

'While we have seen improvements in rates of severe illness and child mortality, high rates of anaemia in children persist,' Prof Morris continued.

Along with the benefit of reducing treatment pain, the use of Ferinject will remove the need for children to have follow-up injections in the months following hospital discharge. This requirement of the current treatment plan has been difficult for patients and clinics.

'We hope to see reduced rates of anaemia in children whilst eliminating the need for ongoing, painful treatment regimens,' Prof Morris concluded.

Menzies ear health program leader, Professor Amanda Leach's project *VOICES: Vaccines to prevent Otitis media In Children Entering School*, will enable specialised audiology and early child development researchers to join the ear health team.

The VOICES project will measure longer term benefits of different vaccine schedules to gain a better understanding of the impact of ear disease and hearing loss on social, cultural and school readiness trajectory in early childhood.

'The VOICE project will lead to research around what works best, in addition to prevention and treatment of ear disease through medical interventions, to assist toddlers with hearing problems to maintain a strong learning trajectory.

'Hearing is critical to cultural learning through listening to stories, to language, pre-school enjoyment and school attendance, leading to improved education outcomes, self-esteem and later employment,' Prof Leach commented.

Despite some improvements in serious ear disease in remote communities, reported rates are still well above the World Health Organisation criteria for a public health emergency.

'This project is more timely than ever and will be paramount in identifying the best combination of strategies about 'when and how' communities, families and policy makers in health and education can improve the hearing and learning environment of toddlers, to better prepare them for school and employment in adulthood," Prof Leach concluded.

In addition to these grants, Menzies received support for four early career fellowships.

Menzies director, Professor Alan Cass, believes NHMRC fellowships are only awarded to researchers who are extremely productive and positioned to effectively grow their research work to bring about change.

"It is fantastic that Menzies researchers secured this highly competitive fellowship funding - it will give the researchers certainty to continue their career in science and medical research, as well as helping Menzies to retain highly skilled staff," Prof Cass said.

Project grants

Chief investigator, Professor Peter Morris - Rapid ferric carboxymaltose infusion (Ferinject) for iron deficiency anaemia in Aboriginal children: a randomized controlled trial.

Chief investigator, Professor Amanda Leach – Otitis media, hearing loss and school readiness of Indigenous children followed from birth in two randomized controlled trials of novel pneumococcal conjugate vaccine schedules (VOICES – Vaccines to prevent Otitis media In Children Entering School).

Fellowships

Dr Emma McMahon – Providing timely feedback on diet quality in remote Indigenous communities to support policy makers and other key stakeholders in making decisions to improve food supply and access remote Indigenous communities.

Dr Paul Lawton – Chronic kidney disease in Indigenous Australians: using existing data to improve outcomes

Dr Jane Davies - Improving outcomes from Hepatitis B infection in Aboriginal and Torres Strait Islander people in Northern Australia

Dr Nikki Percival - Improving linkages for chronic disease prevention in Indigenous communities: a quality improvement approach.

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Menzies School of Health Research

Menzies School of Health Research is one of Australia's leading medical research institutes dedicated to improving Indigenous, global and tropical health. Menzies has a history of over 30 years of scientific discovery and public health achievement. Menzies works at the frontline, joining with partners across the Asia-Pacific as well as Indigenous communities across northern and central Australia. Menzies collaborates to create new knowledge, grow local skills and find enduring solutions to problems that matter.