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Leading Researchers Prestigious NHMRC Grant Success

Researchers at the Kids Research Institute have been awarded 17 prestigious Medical Research Council (NHMRC) grants worth more than \$12m. This will benefit research into a number of childhood illnesses and conditions such as kidney disease, neuromuscular disorders and foetal alcohol syndrome as well as enabling the development of innovative treatments using cell and gene therapies and bone tissue engineering with the aim of achieving better outcomes for children and their families.

Funding was received for research projects, a partnership, career development fellowships and to develop two new Centres of Research Excellence. This will provide support for teams of researchers to pursue collaborative research and develop capacity.

Finding treatments, or even a cure, for lifelong muscle disorders such as muscular dystrophy and spinal muscular atrophy will be the focus of the new national Centre for Research Excellence in neuromuscular disorders.

“These disorders are characterised by progressive muscle weakness, loss of the ability to walk or perform normal daily activities, and in many cases weakness of the respiratory muscles leading to early death,” said Professor North, Head of the Institute for Neuroscience and Muscle Research at the Kids Research Institute. “The impact on patients and families is enormous, and severity ranges from death in infancy or early childhood due to inability to breathe or swallow, through to the onset of chronic and progressive weakness in childhood or adulthood.”

“The establishment of the CRE heralds major breakthroughs for neuromuscular disorders and their treatment strategies”, said Professor North. “We now have a golden opportunity to transform our approach to these disorders from ‘compassionate assistance’ to targeted treatment and prevention, to ensure that the latest discoveries are rapidly translated into tangible health outcomes for patients, their families, and the community.”

Immunisation in understudied and special risk populations will be the focus of a Centre for Research Excellence. The National Centre of Immunisation and Surveillance (NCIRS) located at the Kids Research Institute was successful in a joint bid with the UNSW School of Public Health and Community Medicine.

“This is an important recognition and extension of the work NCIRS undertakes in researching and promoting new approaches to immunisation in newborns, during pregnancy and in Aboriginal children and their families as well as refugee and immigrant families, said Prof Peter McIntyre, Director of NCIRS. “The grant will support 4 senior researchers working at NCIRS and UNSW. “

Prof McIntyre is a chief investigator, along with Prof. Raina MacIntyre, Prof Robert Booy, Dr Julie Leask, Prof. Cheryl Jones and Dr Robert Menzies.

Professor Jonathon Craig has been awarded Partnership Project funding for his research into better evidence for better health for urban Aboriginal children.

The Study of Environment on Aboriginal Resilience and Child Health (SEARCH) is looking at an urban population to discover whether the increased risk for chronic kidney disease seen in Aboriginal adults may start to manifest in older Aboriginal children and young Aboriginal adults. Although chronic kidney disease is 8 to 30 times more common in Indigenous adults than the rest of the population, a 10 year study is showing that the problems do not begin in childhood.

“Until now most intervention programs have been targeted at school children – but this shows there needs to be specific intervention strategies for adolescents,” said Professor Craig.

Little is known about in health and environmental resilience of Aboriginal children in urban areas and the study aims to help close the gap by understanding, and ultimately preventing, chronic disease. Baseline data has already revealed that 40% of the children have some sort of problem with their ears or hearing, even though they have access to good regional services.

The Lililwan Project , a community led study looking into the Prevalence of Fetal Alcohol Spectrum Disorders in Western Australia’s remote Fitzroy Valley, has also received funding.

FASD has a devastating effect on communities where women drink alcohol during pregnancy. Babies can have damage to the brain and nervous system, heart, lungs, eyes and ears, as well as other physical, mental, or behavioural problems. As affected children grow up they may experience academic failure, mental health problems and have a higher risk of drug and alcohol abuse.

Stage 1 of the project (2009-11) included development and use of a medical history checklist to obtain information about antenatal exposures, early life trauma, health and development from parents and carers of all children born in 2002 or 2003. Stage 2 involves multi-disciplinary assessment of the health and development of these children.

Professor Elizabeth Elliott AM, Chief Investigator on the project, is Consultant Paediatrician at The Children's Hospital at Westmead, Professor in the Discipline of Paediatrics and Child Health, Sydney Medical School and Director of the Australian Paediatric Surveillance Unit at Kids Research Institute.

“The project will enable us to estimate the prevalence of FASD and other health problems and to develop individual treatment plans for children”, said Prof. Elliott. “The project includes community education, support for parents and carers and advice for teachers. It provides opportunities for capacity building in the community, including training and employment of local Aboriginal people. “

These grants recognise the Kids Research Institute’s role as a leading health and medical research institution that has a global impact on children’s health.