ROYAL HOBART HOSPITAL
RESEARCH FOUNDATION

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MEDIA RELEASE

RHH Research Foundation announces new grant recipients for Tasmanian health research in 2017

The Royal Hobart Hospital Research Foundation today announced details of its grant funding for 2017, providing seven new annual starter grants and five new annual establishment grants, together with a further significant three year project grant, all supporting local medical research to be undertaken in Tasmania.

The Research Foundation's Chair, Mr Trent Sayers, explained "*the purpose of these grants is to assist emerging and highly skilled clinical researchers to collaborate with each other for the benefit of the local community. Each grant category is designed to nurture further expertise and research capacity while also delivering improved health and well-being for us all*."

"*The Foundation is thrilled to be celebrating its 20 year anniversary this year, and since inception has focused strongly upon supporting research into medical conditions and approaches to healthcare that are of particular relevance to the Tasmanian community. We've invested over $7m to support projects undertaken by local clinicians*," Mr Sayers said, '*Over the past two decades the RHH Research Foundation really has made a significant difference to the health and wellbeing of the Tasmanian community*.'

After an intensely competitive selection process undertaken over the final months of 2016, the range of projects chosen for funding in 2017 offers a broad scope of intended benefit for the wellbeing of many Tasmanians, with potential that is even more far-reaching.

For example, the Foundation will support a local medical research team guided by Dr Liesel Fitzgerald to investigate the importance of a chromosome in Tasmanian families with hereditary prostate cancer. Of particular focus for Dr Fitzgerald and her team is the significance of this chromosome in an individual's genetic sequence and how this might impact their experience of prostate cancer. This study funded by the Research Foundation aims to learn more about this chromosome with an ultimate aim to allow better targeting with emerging new therapies which may potentially slow prostate cancer progression.

Chief Executive Officer Heather Francis emphasised that research supported by the RHH Research Foundation is selected via a rigorous assessment process undertaken by the Foundation's scientific research advisory panel, which is endorsed by the National Health & Medical Research Council (NH&MRC).

"*Facing a highly competitive field of applications from interested clinicians, only projects and researchers of excellence can be selected to pursue their investigations. Even then, in every funding round we are overwhelmed with applications from a community of eager researchers based within and around the RHH. This demonstrates a need for continuing and increased support from across our general and business communities for this vital work*," she said.

"*On this occasion, the Research Foundation has been oversubscribed by researchers' applications that amounted to more than six times above the funds available. There were many excellent projects submitted which, had funding been available, could have been considered further*.

"*There's great scope for additional investment in high quality local health and medical research and this is something the RHH Research Foundation aims to achieve with the community's support through our fundraising initiatives and also through the generosity of benefactors*," she said.

On this occasion, and for the second successive year, anonymous Hobart benefactors have generously chosen to become involved with the Foundation by directly funding a selection of $10,000 Starter Grants.

One new benefactor explains "*I had only half-formed that idea in my head when someone told me about the Royal Hobart Hospital Research Foundation. I was amazed to find out that researchers at the hospital have made medical breakthroughs that are now put into practice throughout the world. I feel so privileged to be funding an entire research project on my own. Funding something local means that my family can get involved. We get to meet with the research team and are kept up-to-date as the project progresses*."

As an independent entity, the RHH Research Foundation provides an important role in supporting specialist doctors, nurses and allied health professionals with research interests through its annual grants program. With a strong emphasis on collaboration, this latest round of funding includes researchers from the RHH, and various areas of the University of Tasmania including the Menzies Research Institute.

"*In total, the Foundation has budgeted almost $650,000 to support local health and medical research through grant funding in 2017*," highlighted Ms Francis.

-Ends-

For more info: CEO Heather Francis 0407 201 113

Interviews available: CEO RHH Research Foundation Heather Francis and 2017 medical research grant recipient Dr Liesel Fitzgerald
2.00pm, Wednesday 1 March 2017
Hadley's Orient Hotel foyer, 34 Murray Street Hobart

Research Grant Recipients – 2017

New Starter Grants for 2017

Non-conventional antimicrobial testing of emerging pathogens should more accurately predict antibiotic susceptibility for informing patient management
Project Team: Dr Louise Roddam, Assoc Prof Sean Beggs, Dr Mark Ambrose, Dr Roslyn Malley, Ms Emily Mulcahy and Ms Joanne Pagnon.

Pandoraea is an emerging bacterial pathogen of cystic fibrosis. Conventional antibiotic susceptibility testing shows *Pandoraea* to be multi-drug resistant with limited treatment options. This study will investigate the antibiotic susceptibility of *Pandoraea* using non-conventional methods to determine if the research team is underestimating treatment options for this chronic infection.

Investigating the anti-inflammatory effect of a non-anticoagulant molecule of heparin following experimental traumatic brain injury
Project Team: Dr Nicole Bye, Prof Bruce Taylor and Dr Rahul Patel.
Heparin attenuates neuroinflammation following traumatic brain injury (TBI); however, anti-coagulative properties make it an unsuitable treatment due to bleeding risk. The research team has shown that heparin-derivative Dp4 retains heparin's anti-inflammatory, but not anti-coagulative, actions. The research team will administer Dp4 to TBI mice, potentially identifying a novel and valuable therapeutic agent for brain-injured patients.

Does hospital opioid prescribing increase the risk of chronic opioid use?
Project Team: Ms Felicity Veal, Dr Chris Orlikowski, Mr Peter Boyles, Mr Sam Halliday, Assoc Prof Luke Bereznicki, Mr Angus Thompson and Dr Emma Huckerby.

Chronic opioid use for persistent pain is skyrocketing and is associated with substantial patient harm. This study will review what the risk of chronic opioid use is, following a supply of an opioid at discharge from the Royal Hobart Hospital, and make recommendations to improve the way opioids are prescribed.

Tracking the origin and spread of hospital-acquired infections using whole-genome sequencing
Project Team: Dr Ronan O'Toole and Dr Louise Cooley.

Each year in Australia, approximately 200,000 hospital-acquired infections occur, placing pressure on healthcare resources and staff. Here, the research team will harness the power of the latest technologies in whole-genome sequencing to trace the origin of these infections, and identify new ways to prevent their further spread at the Royal Hobart Hospital.

Does vitamin D supplementation have long-term effects on knee osteoarthritis?
Project Team: Dr Benny Eathakkattu Antony, Prof Changhai Ding, Prof John Burgess and Dr Zhaohua Zhu.

This 5-year follow-up study will assess vitamin D status and inflammatory marker of participants on an NHMRC-funded trial showing vitamin D supplementation over 2 years had modest effects on knee osteoarthritis.

Variability in plasma concentrations of glucosamine in osteoarthritis patients taking various glucosamine formulations
Project Team: Prof Gregory Peterson, Prof Graeme Jones, Dr Rahul Patel, Dr Syed Tabish R Zaidi and Mrs Chhavi Asthana.

Glucosamine is often taken by patients with osteoarthritis, with patients varying in their clinical response. This variation may be due to differences in absorption of the compound, which is known to be poorly absorbed. This study will investigate plasma levels, with a newly developed analytical procedure, in individuals taking glucosamine.

Identifying novel genetic loci associated with an increased relapse rate and disability progression in multiple sclerosis
Project Team: Mr Yuan Zhou and Prof Bruce Taylor.

Determining genetic drivers of MS clinical course requires meticulously collected prospective data in well characterised MS longitudinal cohorts. The research team have such a cohort but lack the comprehensive genotyping to allow this vital analysis. This grant will enable the research team to complete genotyping this cohort.

New Establishment Grants for 2017

Investigating the utility of retinal Base-Editing
Project Team: Assoc Prof Alex Hewitt, Dr Guei-Sheung Liu and Dr Anthony Cook.
The CRISPR/Cas system, used by bacteria to counter viral intrusion, can edit DNA in specific sites. The application of this technology opens the very real prospect of anticipatory cures to well-defined inherited retinal diseases. This study proposes expanding the pre-clinical investigation of DNA editing of cells in the retina.

Understanding the human ischemic cascade: Improving the process of drug development for cerebral ischemia
Project Team: Prof David Howells, Dr Emma Eaton, Assoc Prof Mirella Dottori and Prof Peter Dargaville.

Brain ischemia is a major cause of death and disability. Drug therapies for ischemic injury which have shown promise in rodent models, have had poor translation in human patients. This study aims to characterise the human cellular response to ischemia and use injury-reducing hypothermia to identify human-relevant therapeutics targets.

Clinical and metabolic factors and imaging abnormalities in chronic plantar heel pain
Project team: Prof Graeme Jones, Mr Jason Rogers, Prof Tania Winzenberg, Prof Jill Cook and Dr Andrew Halliday.
Plantar heel pain is the most common reason why people with foot pain consult a health practitioner but it is poorly understood. This study will compare clinical, psychological and metabolic factors and imaging abnormalities in individuals with and without plantar heel pain, with re-assessment of cases 12 months later.

Investigation of loss and gain at chromosome 7p21 in a Tasmanian hereditary prostate cancer family
Project Team: Dr Liesel FitzGerald, Assoc Prof Joanne Dickinson, Dr Roslyn Malley, Dr Shaun Donovan, Ms Karen Dun, Mr Giuseppe (Joe) Diano, Dr Marketa Skala and Dr Frank Redwig.

The research team's preliminary data suggests that multiple prostate cancer patients in a Tasmanian family have a genetic disruption on chromosome 7. This study aims to confirm and further characterise this chromosomal disruption as it may be targeted with emerging new therapies, which slow prostate cancer progression.

Investigating Batten disease-causing CLN3 mutations in patient-specific stem cells and neurons
Project Team: Dr Anthony Cook, Dr Tyson Ware, Assoc Prof Alex Hewitt and Dr Anna King.
Batten disease is a rare childhood disease that results in dementia and a progressive loss of vision, and which can be due to mutation of the CLN3 gene. Using advances in stem cell technologies, the research team will study how the Batten disease-causing mutations in CLN3 differently affect nerve health.

New Project Grant for 2017-19

Paving the way for future stroke drug development: creating a new gold-standard model of stroke
Project Team: Dr Lila Landowski, Prof David Howells, Dr Helen Castley, Dr Brad Sutherland and Dr Matthew Kirkcaldie.

Stroke is a leading cause of death and chronic disability. Stroke therapeutics developed in animal models fail when translated into human clinical trials, due to flaws inherent in these models. The study breaks through this translational roadblock by using magnetic microparticles to induce an ischemic stroke that better recapitulates human stroke.