



quest

The Quarterly Newsletter of the Royal Hobart Hospital Research Foundation

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Pictured left to right : Associate Professor Luke Bereznicki, Dr Bonnie Bereznicki, Associate Professor Graeme Zosky and Associate Professor Sean Beggs.

Our QUEST is for knowledge that will lead to better healthcare and medical services for the people of Tasmania. You can help us by supporting our research efforts with a gift, bequest or donation.

Each year the Foundation funds research into a variety of conditions affecting the lifestyle and wellbeing of the people of Tasmania, including cancer, heart disease, stroke, diabetes, and neurological diseases.

This research is undertaken by a diverse range of health professionals at the Royal Hobart Hospital, and the University of Tasmania's Faculty of Health Science and the Menzies Institute for Medical Research.

Many of our researchers are nationally-renowned in their fields, whilst others are at the very early stages of promising careers. All of them are working to improve the quality of health and well being for Tasmanians.

Your gift, bequest or donation can be vital in ensuring that this QUEST continues to provide benefits for Tasmanians, now and into the future.

ROYAL HOBART HOSPITAL RESEARCH FOUNDATION

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New research to reveal misconceptions around childhood fever

Parents are understandably very concerned when they have a sick child and often have difficulty assessing the severity of the illness. Fever, a main indicator of illness, often creates undue anxiety among parents and can interfere with the parent's ability to accurately observe the general wellness of their child. The implications of this include misuse of medication and an unnecessary burden on the healthcare system. The extent of this problem in Tasmania is not yet known. After receiving a 2016 starter research grant funded by the Royal Hobart Hospital Research Foundation, Dr Bonnie Bereznicki and her team will be conducting an online survey for parents of young children to gain insight into parental knowledge and misconceptions around childhood fever. Parents of young children will be recruited online via social media advertising, and asked to complete an anonymous survey including questions relating to fever knowledge and beliefs, fever management and the burden on parents when their child has a fever.

To complement this survey, they will also conduct a retrospective audit of the RHH's Medical Records to describe the visits to the emergency department by children

with fever. Bonnie and her team are keen to explore whether a large proportion of emergency department presentations for childhood fever are preventable and, given appropriate education or advice, can be easily managed in the home by parents.

The results of this project will inform the development of a targeted educational package for parents about childhood fever, with a view to work with health professionals and key stakeholders to identify ways they could deliver the materials to benefit the community. It is envisaged that the provision of accurate information will empower parents, encouraging them to be more proactive in the treatment of childhood fever. Once it is discovered how to better educate parents on the management of childhood fever in the home, there is the potential to reduce the burden on the RHH, and the Tasmanian healthcare system in general, meaning shorter waiting times for the critically ill and better work conditions for healthcare workers. Dissemination of the project's results will mean that health professionals will benefit by learning more about parents' information needs for childhood fever, which can pave the way for changing practice in the community and hospital settings.

ceo welcome

Every now and again, there's a moment that you reflect on, knowing that it's been a turning point with a degree of significance that perhaps wasn't initially obvious.

In this issue of Quest you'll read about the gifts of a benefactor that have made a considerable difference to our investments in medical research grants this year. In this case, it grew from an interaction with a gentleman who had held only a moderate degree of connection with our work. Like you, he receives Quest and so had a good understanding of our role in generating funds to deliver an annual competitive grants program. He was beginning to plan distribution of his estate in later years and had begun to consider the Foundation as a potential beneficiary - he was eager to know a little more about who we are, what we do, why and how. As the article 'Jeff's living gift makes a real impact' explains, an initial contact and subsequent conversation has allowed that relationship with the Foundation to flourish, so much so that we were able to expand our Starter Grant program by a further 50% in 2016.

While it might not seem immediately apparent, the growth of this initial thought into a new relationship with significant benefit to the broader community's health and wellbeing in some ways reflects the way in which a clinician's day to day experience can trigger an idea that then flourishes into a successful research program. This issue of Quest profiles the grants awarded across the three categories offered by the Foundation and I'm sure you'll agree that they demonstrate the diversity of our involvement in a host of clinical areas.

As our cover story about Dr Bonnie Bereznecki's Starter Grant explains, her observations in the RHH's Emergency Department, her personal experience as a parent and her clinical practice as a pharmacist highlighted the need to increase understanding amongst parents of the signs and management of fever. Her Starter Grant is just part of a wider agenda that Bonnie hopes to pursue, enabling her research interests to inform not only her own clinical practice, but that of others - all based on solid evidence. Of course the ultimate outcome is improved wellbeing of young children through delivery of the most appropriate form of care. This is an admirable and highly satisfying achievement brought about through matching the triggers of observation and the question of 'is there a better way' with the knowledge and investment required to address this. Ultimately, it's what the RHH Research Foundation aims to encourage and nurture - answering those early questions of how we can improve clinical practice and how research must be used to inform this.

Please enjoy this issue of Quest and thank you for your enduring support.



Heather

2016 Research Grants revealed

We are thrilled to tell you a little more about the exciting research studies we are funding in 2016. We are providing six new annual starter grants and five new annual establishment grants, and one significant three year project grant, all supporting local medical research to be undertaken in Tasmania. In total, the Foundation has invested over \$610,000 to support local health and medical research through grant funding this year.

New Starter Grants for 2016

Study of automated neonatal targeting of oxygen – resuscitation trial 1 (the SANTO-R1 study) - Dr Sanoj Ali

For preterm infants requiring breathing support at birth, studies have shown that oxygen levels which are either too high or low are both detrimental for the baby. Dr Ali and his team plan to investigate for the first time whether a device providing automated control of oxygen supply can more effectively target the desired range of oxygen levels in the first minutes of life in preterm infants. This would be a significant advance in the care of these critically ill babies.

Linking exercise blood pressure to clinical outcomes: the EXERCise stress Test collaboration (EXERTION) Tasmanian pilot study - Dr Martin Schultz

The EXERCise stress Test collaboration (EXERTION) aims to link clinical exercise testing results to cardiovascular disease outcomes, to provide the first-ever evidence-based thresholds for abnormal exercise blood pressure. Results will inform clinical guidelines, providing supervising clinicians with signposts of cardiovascular risk upon which to optimise patient management and follow-up care.

Investigating the physical and chemical Y-site incompatibility of injectable antifungals and parenteral nutrition solution - Mr Troy Wanandy

Simultaneous intravenous administration of nutrition solution and injectable antifungals is often required in cancer patients. The compatibility between newer antifungals and parenteral nutrition is unknown. Hence, timely administration of lifesaving antifungals or much needed nutrition can be delayed awaiting separate intravenous line access. Therefore, it is important to urgently study their compatibilities to facilitate the timely administration of antifungals and parenteral nutrition to cancer patients.

The Tasmanian electronic falls ascertainment tool (TASeFALL) - Dr Michele Callisaya

Falls are extremely common in older people. The aim of this project is to test the feasibility and validity of the Tasmanian electronic falls ascertainment tool (TASeFALL) for use in research studies and clinical practice.

New Starter Grants for 2016 (cont'd)

Investigating the burden of childhood fever on Tasmanian families and the Royal Hobart Hospital's Emergency Department - Dr Bonnie Bereznicki

This project will describe the presentations to the Royal Hobart Hospital emergency department by children with fever, investigate the knowledge, beliefs and perceptions about childhood fever among parents and caregivers in Tasmania, and develop an educational package for parents and caregivers about childhood fever.

Assessing the HR-HPV types in stored cervical excision samples for comparison with anal HR-HPV carriage in TasGANS - Dr Steve Simpson Jr.

Dr Simpson Jr. and his team previously showed a significant association of post-toilet front-to-back and dabbing behaviours with occurrence of anal cancer precursors and cancer-causing HPV types. This research aims to substantiate the within-person autoinoculation route by comparing HR-HPV types present in stored cervical excision samples with those found in TasGANS anal samples.

New Establishment Grants for 2016

Mixed Meal Challenge: A new diagnostic test for screening pre-diabetes - Dr Michelle Keske

Pre-diabetes is diagnosed using the oral glucose tolerance test. Dr Michelle Keske and her team have data demonstrating this test causes acute microvascular insulin-resistance in healthy people reducing the effectiveness of this test for screening at-risk individuals. The team will determine whether a liquid mixed meal challenge (carbohydrate, protein and fat) is a more sensitive test.

Improved clinical assessment of blood pressure

- Associate Professor James Sharman

Clinical blood pressure is usually measured by doctors but can result in falsely elevated or highly variable readings, which is a major problem for correct diagnosis and clinical care. This study will test a new, quick and automated method to measure blood pressure that is expected to improve clinical care.

Study of automated neonatal targeting of oxygen – trial B (the SANTO-B study) - Professor Peter Dargaville

Professor Peter Dargaville and his team have developed an automated inspired oxygen controller, which in preliminary studies is very effective in keeping oxygen levels in the desired range in premature infants. The function of the controller has been further enhanced, allowing it to self-tune to an infant's needs to predict drops in oxygen levels, and to be operated by bedside caregivers. The team will now conduct a further evaluation of the device, operated independently by bedside caregivers under standard clinical conditions.



Clinical Associate Professor Marcus Skinner talking to local media recently about his research.

Determining the utility of a novel, modified anaesthetic airway device that facilitates upper gastrointestinal endoscopy and airway protection - Clinical Associate Professor Marcus Skinner

Potential life-threatening airway and respiratory compromise occurs frequently when upper gastrointestinal procedures are performed under heavy sedation or general anaesthesia with an unprotected airway. Clinical Associate Professor Marcus Skinner and his team will investigate the utility of a world-first, Tasmanian developed modified anaesthetic airway device, the LMAGastro™, whose design features include a dedicated channel for the passage of an endoscope directly to the oesophagus and a second dedicated channel for airway control. This multi-disciplinary project represents a new collaboration between the departments of Anaesthesia and Gastroenterology at the Royal Hobart Hospital (RHH).

Assistive technology for motor rehabilitation

- Dr Andreas Duenser

There are few rehabilitation options for people with little to no upper limb movement after stroke. The aim of this project is to test the feasibility of a new robotic rehabilitation system coupled with a Brain-Computer Interface and eye-gaze tracking to improve arm function

New Project Grant for 2016

Improved cardiovascular Disease health service delivery in Australia (the IDEAL study)

- Dr Martin Schultz

The IDEAL study program will establish a new health service method with the goal of improving the measurement and delivery of information to general practitioners about the cardiovascular disease risk of their patients. This new health service method will be developed within Tasmanian Pathology Services and tested via a large-scale clinical trial. It is expected that the new health service method will reduce cardiovascular related hospitalisations and mortality.



Jeff's living gift makes a real impact

As mentioned in the CEO's Column of this issue of Quest, a gentleman's recent contact with the Foundation and experience at the RHH Hospital provided the initial conduit that presents a new pathway for the Foundation and accelerates our capacity to invest directly into local medical research.

Let's name him Jeff. He's not originally from our island state or even Australia. He's an older fellow who has enjoyed good health over a productive life, although more recently he's needed to consult with the cardiovascular team at the RHH. Impressed with the manner in which members of this team collaborate to deliver high quality care and support, and with a desire to take a planned approach to distribution of his estate in later years, Jeff chooses to contact the Foundation for initial conversations, particularly exploring how a decision about providing this support might assist clinicians at the hospital and, ideally, the wellbeing of the broader community.

Discussion was broad ranging. Jeff has a particularly strong and enquiring mind, he's consulted with financial and legal advisors in considering future steps and is seeking the right match - an organisation that shares his broader values and can fulfil his intentions. Jeff makes his decision to support the Foundation, but takes it a step further - with the idea of a living gift and purposefully facilitating research in the immediate future is also one that appeals.

Jeff understands that the Foundation delivers three categories of research each year that totals around \$600k. He finds the idea of supporting the early work undertaken through Starter Grants appealing and so, as an initial step, Jeff decides to commit \$20k to accelerate our investment in this category by a further 50% in 2016. Knowing that it's a competitive process with a rigorous selection program driven by the Foundation's Scientific Research Advisory Committee, Jeff awaits that group's assessment of grants deemed most deserving of funds.

Then the fun begins. Armed with the selection of 'most fundable' Starter Grant submissions, Jeff makes his decision around which two will gain extra funding this year - increasing our awards from four to six in this category. You'll find details of our 2016 Grants on page two and three of this issue of Quest. Two researchers have now met with Jeff to share the excitement about their research work. Jeff's response so far - 'that was brilliant, I've really enjoyed that!'

Over the course of the next year Jeff's gifts will make a significant difference - nurturing the aspirations of these early career researchers and adding to the understanding of conditions that are of particular relevance to our community. Jeff's gifts will have an impact for many years to come - and he knows that following his own lifetime, his gifts will continue through a bequest from his estate. This is a generous and carefully planned move which makes a very real difference.

If this is something you would like to consider, I would be so pleased to meet with you to discuss this further. Please phone 6166 8943 or email heather.francis@ths.tas.gov.au

Please find below our exciting list of events planned for 2016. Proceeds from these events assist us in raising over \$600,000 each year to invest in local medical research. In order to make these events a success we rely on our wonderful supporters so thank you!



MONTH	DAY/DATE	EVENT TITLE
May	Wednesday 4	Celebration of Cycling – Giro d'Italia Dinner
June	Friday 17	Research Excellence Dinner
July	Wednesday 20	Celebration of Cycling - Tour de France Dinner
August	Sunday 14	EDGE! Abseil Wrest Point
September	Wednesday 7	Welcome Springtime Lunch
November	Tuesday 3	Melbourne Cup Lunch
December	Tuesday 6	Big December Breakfast