

CELEBRATING AUSTRALIAN HEALTH AND MEDICAL RESEARCH

QUEENSLAND HEALTH AND MEDICAL RESEARCH AWARD WINNERS ANNOUNCED

Winners of these prestigious awards were announced at the ASMR Annual Gala Dinner, this year at the Sky Room at the Brisbane Convention Centre, South Brisbane.

Simon de Veer, Queensland University of Technology, Winner of the Postgraduate Student Award

Seeding drug discovery: development of novel protease inhibitors for inflammatory skin disorders

The skin forms an essential barrier that shields the body from infection and physical or chemical damage. Failure to preserve skin barrier integrity is a major contributor to several skin disorders including dermatitis, which have far reaching health, psychosocial and economic impacts. Here we developed a novel therapeutic strategy that aims to restore skin barrier function by blocking the activity of enzymes that can disrupt this vital protective structure when overactive. Mr de Veer and colleagues have developed inhibitors to these enzymes, called proteases, by mimicking a naturally occurring inhibitor found in sunflower seeds and show these inhibitors can restore skin barrier function.

Dr Kyle Upton, Mater Research Institute, Winner of the Postdoctoral Researcher Award

Defining the Role of Mobile Genetic Element Mutations in Development and Disease

Mobile Genetic Elements are fragments of DNA that can move around within our DNA. They are a normal feature of our DNA and have played a significant role in evolution. However, continued movement of these DNA fragments can result in mutations and can cause disease. Dr Upton has developed a state-of-the-art technique to identify mutations caused by these Mobile Genetic Elements and, in collaboration with leading international scientists he is defining their role in normal development and disease. The team has found these Mobile Genetic Elements play a significant role in cancer and, unexpectedly, in normal brain development. Mobilisation of the DNA fragments within the brain may underpin the plasticity of the brain, allowing us to learn, remember and think.

Dr Stephen Mattarollo, UQ DI, Winner of the Senior Researcher Award

Combination immunotherapeutic strategy for B cell lymphomas

Patients with blood cancers typically respond well to initial treatment but the disease eventually returns. The immune system can be effective at controlling cancer and therefore a potential treatment option is to boost a patient's natural immune response to their cancer. This 'boosting' or manipulation is called immunotherapy. Dr Mattarollo's research uses a vaccine to activate a particular immune cell. His team has found that combining the vaccine with established treatments for blood cancers significantly increases the effectiveness of the treatment.

Dr Siok Tey, QIMR Berghofer, Winner of the Clinical Researcher Award

Regulatory T cells for the treatment of graft-versus-host disease following allogeneic haematopoietic stem cell transplantation

Bone marrow transplantation can cure blood cancers. However, many patients develop a complication known as graft-versus-host disease (GVHD) whereby immune cells present in the donor tissue attack the recipient patient's tissues. One approach to help control GVHD is to increase the levels of a particular type of immune cell called Tregs, as these cells can suppress the attack from donor immune cells. Dr Tay's has developed a method to collect Tregs from healthy people, increase their numbers in the laboratory, and importantly, make them safer to inject into patients. Her team are now preparing to test this treatment in a clinical trial in patients with GVHD.

Abstracts, including lay-abstracts, and biographical information are available from <http://asmr.org.au/MRWMedia>

For interviews contact Jill Larsen at 0421 175 096 or Catherine West at 0415 928 211

The Queensland Health and Medical Research Awards 2014 are proudly supported by



**Queensland
Government**