South Australian Young Tall Poppy Science Awards 2011

The Tall Poppy is a metaphor for excellence and endeavour. It symbolises Australia’s pride in its outstanding achievers in the sciences.
THE TALL POPPY CAMPAIGN

The Tall Poppy Campaign was established in 1998 by the Australian Institute of Policy and Science to promote public awareness of Australia’s intellectual achievements. An important component of the Campaign is the Young Tall Poppy Science Awards which recognise the achievements of outstanding young researchers in the sciences including technology, engineering, mathematics and medical research.

The Awards are made state-by-state and in 2011 are being made across all states and territories of Australia. The South Australian Young Tall Poppy Science Awards recognise the achievements of young SA researchers from a wide mix of scientific areas.

These prestigious awards uniquely acknowledge the recipients’ research achievements alongside their capacity and commitment to communicate science and its significance to the broader community. Award winners go on to demonstrate their value as role models by promoting and encouraging an interest and engagement in science within the education and community sectors through Tall Poppy Campaign initiatives.

MESSAGE FROM THE AIPS

I want to offer my congratulations to all of this year’s nominees and to the 2011 South Australian Young Tall Poppy Science Award recipients. We wish you well in your ongoing research and public engagement activities with the media, business and community sectors.

As a society, we need to recognise the value that science and its people bring to our lives – from finding better treatments for disease, to minimising our carbon footprint and finding technological solutions for numerous challenges. Just as important is “blue sky” research, and research which contributes to innovation and our shared political and social policy challenges.

These awards recognise and support our best and brightest young achievers across science, technology, engineering and mathematics. Over the last decade I have seen many Young Tall Poppies go on to achieve even greater things and to become inspiring leaders in a range of scientific fields and communicators of their value and relevance. I am delighted to see the awards made this year during National Science Week and to witness the level of support they have enjoyed from so many South Australian collaborators and supporters.

I thank our dedicated selection committee and our many valued supporters in South Australia, including the SA Government Department of Further Education, Employment, Science and Technology (DFEEST), The University of Adelaide, The University of South Australia and Flinders University without whose partnership our work would not be possible.

Professor Rick McLean, MD FRACP
Chair, Australian Institute of Policy and Science

Rachel Crees - SA Tall Poppy Campaign Manager
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Dr Brooks investigates how different sounds are made, for example the noise made when the blades of a windmill cuts through the air; the noise of a submarine’s fins cutting through water or the noise of air flowing over an airplane wing as it flies. Laura uses both experiments and computer modelling to understand how the flow of air or water over a surface creates these sounds. Laura’s work will enable the development of quieter modern transport, energy and defence technologies.

Dr Stuart Brierley
The University of Adelaide
Research Field: Neuroscience & Gastroenterology

Dr Brierley researches the chronic pain disorder Irritable Bowel Syndrome which affects up to 20% of all Australians and costs millions of dollars a year in lost productivity and health care. He is investigating why for most people pain is activated only by tissue damage while sufferers of IBS experience long-term pain responses even when damaged tissue has healed. Stuart’s work shows that in these patients special nerve endings that are activated during a bout of gastroenteritis don’t “reset” back to normal after the illness has passed leaving the gut over-sensitive and chronically painful. Understanding how these pain-sensing nerve endings work will lead to new treatments for IBS.
Dr Gregory’s research addresses the leading cause of death for sufferers of breast cancer – the spread of cancer cells from the initial tumour to other organs. He studies the transformation of cancerous cells into the even more aggressive cells which are able to spread throughout the body. Discovering the genetic reasons for this fatal transformation will allow Philip to develop therapies to target and prevent these changes and lead to better diagnosis and treatment of breast cancer.

Dr Philip Gregory
SA Pathology
Research Field: Breast Cancer Research

Dr Jessup investigates how transplanting clusters of special cells into the pancreas of people whose bodies cannot control their blood sugar levels could provide a long term treatment for diabetes. These clusters of special cells are called islets, are found only in the pancreas and are the only cells in the body which can produce insulin – the substance that allows the body to control the level of sugar in the blood. Claire is working toward successful transplantation of these islets into diabetic patients by ensuring they develop the tiny bloody vessels they need to survive and carry out their role in their new environment.

Dr Claire Jessup
The University of Adelaide
Research Field: Diabetes & Transplant Research
Dr Tara Pukala
The University of Adelaide
Research Field: Biological Chemistry

Dr Pukala’s work investigates the molecular machinery that keeps our bodies’ factories running. The proteins that make up this machinery are like any other piece of equipment made of multiple parts that need to work together smoothly. Tara’s work is generating a better understanding of the shapes of proteins and the way they fit together to help manage and repair this vital machinery. Her research is developing new methods to “see” the atomic detail of proteins and so unravel the processes which go astray and cause disease. Currently her focus is the protein linked to Parkinson’s disease and how small changes in the machinery can cause or cure this illness.

Dr Erin Symonds
Royal Adelaide Hospital
Research Field: Gastroenterology & Nutritional Research

Dr Symonds' work examines the way the human stomach senses food causing feelings of fullness and loss of appetite. She has discovered that “taste buds” for different nutrients exist not only in the tongue but also throughout the gut and that these sensors are decreased when too much fatty food is consumed. Erin’s research investigates how our bodies sense the sort of food we eat to enable development of drug therapies to reduce appetite and the incidence of obesity and associated diseases, such as diabetes and heart disease.
Dr Tingay’s research examines stresses in the Earth’s crust caused by movements of its tectonic plates. In particular he investigates how rocks buckle and break under natural processes (e.g. formation of mountains, generation of earthquakes) and man-made influences (e.g. tunnels, mines). Mark also studies how oil wells are drilled to avoid and control disasters that cause oil spills. These two research areas came together in Mark’s study of the 2006 Lusi mud flow disaster in Java, Indonesia, which flooded ten square kilometres of the city of Sidoarjo with hot mud. While debate has raged over the cause of this disaster, Mark’s studies show that it was triggered by a nearby drilling accident.

Dr Craig Priest
The University of South Australia
Research Field: Microfluidics & Interfacial Chemistry

Dr Priest researches the way liquids spread over or stick to surfaces, much like what happens when writing with a pen, painting a wall or using non-stick cookware. He controls whether liquids stay on or run off a surface by using microscopic bumps, grooves and coatings which often imitate those found in the natural world, for example on the surfaces of leaves. Craig uses this control of microscopic droplets and streams of liquid to perform chemical and biological reactions in tiny devices to make detection of diseases or chemical hazards faster, safer and more efficient.
MORE ABOUT AIPS

The Australian Institute of Policy and Science is an independent not-for-profit first established in 1932 that works to:

• Increase public engagement in science and ensure people have a voice in decisions that affect them
• Promote excellence in research, innovation and the promotion and communication of science
• Inform and influence policy and policy-making through expert comment and input
• Invest in a scientifically inspired, literate and skilled Australia that contributes to local and global social challenges

Young Tall Poppies and other Institute stakeholders are engaged through working groups on issues such as health, energy, water and climate change as well as on challenges relevant to the development of the research sector and workforce. They participate in roundtables with policy makers and politicians and reach out to the broader community through the media and community engagement initiatives.

The AIPS flagship publication AQ: Australian Quarterly helps to bring politically and socially relevant issues where science has a role to play to a broader audience.

RECENT SA YOUNG TALL POPPIES

2010
Dr Siobhan Banks
Research Fellow
University of South Australia
Assoc Prof Leonie Heilbron
Research Fellow
The University of Adelaide
Dr Mark Hutchinson
Postdoctoral Research Fellow
The University of Adelaide
Dr Charlie Huvenerers
Lecture/Shark Ecologist
Flinders University & SARDI - Aquatic Sciences
Dr Damien Keating
ABC Future Fellow, Head Molecular & Cellular Neuroscience Group
Flinders University
Dr Saravana Kumar
Senior Research Fellow & Deputy Director
International Centre for Allied Health Evidence, University of South Australia
Dr Ellen Nisbet
Lecturer
University of South Australia
Dr Gabrielle Todd
SA Young Tall Poppy of the Year 2010
Research Fellow Neuroscience
NHMRC Career Development Award
The University of Adelaide
Dr Nam Nguyen
Consultant & Senior Lecturer Gastroenterology
The University of Adelaide/Royal Adelaide Hospital
Dr Alice Rumbold
Research Fellow Reproductive Health
The University of Adelaide/Menzies School of Health Research
Dr Christopher Sunbly
Lecturer Supramolecular Chemistry
The University of Adelaide
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Lecturer Supermolecular Chemistry
The University of Adelaide

2009
Dr Claudine Bonder
Head of Laboratory
Vascular Biology & Cell Trafficking
Centre for Cancer Biology SA Pathology
Dr Joanne Bowen
NHMRC Training Fellow & Affiliate Lecturer
Supportive Care in Cancer
The University of Adelaide
Dr Kathryn Burdon
Peter Doherty Research Fellow
Ophthalmic Genetics
Flinders University
Dr Travis Eldon
Research Fellow Fish Ecology & Ecosystem Ecology
The University of Adelaide
Dr Matthew Haren
Research Fellow Epidemiology
University of South Australia
Dr Hugh Harris
Senior Lecturer Bioinorganic Chemistry
The University of Adelaide
Dr Karen Murphy
Research Fellow Nutrition & Cariometabolic Health
University of South Australia

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The University of Adelaide/Royal Adelaide Hospital
Dr Alice Rumbold
SA Young Tall Poppy of the Year 2009
Research Fellow Reproductive Health
The University of Adelaide/Menzies School of Health Research
Dr Christopher Sunbly
Lecturer Supermolecular Chemistry
The University of Adelaide

ACKNOWLEDGEMENTS
AIPS thanks our 2011 SA Young Tall Poppy Selection Committee

Professor Ross McKinnon
Chair-SA Tall Poppy Science Awards Committee
Research Director
Flinders Centre for Innovation in Cancer

Associate Professor Peter Ashman
Deputy Head
School of Chemical Engineering
University of Adelaide

Professor John Carver
Professor of Chemistry
School of Chemistry & Physics
University of Adelaide

Professor Chris Daniels
Professor of Urban Ecology
Barbara Hardy Institute
University of South Australia

Ms Deborah Keighley-James
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Science & Information Directorate
Department of Further Education,
Employment, Science and Technology

Associate Professor Debra Panizzon
Deputy Director
Flinders Centre for Science Education
in the 21st Century
Flinders University

Professor Keryn Williams
Senior Research Fellow
School of Medicine
Flinders University

Australian Institute of Policy and Science

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