

# Adelaidean

NEWS FROM THE UNIVERSITY OF ADELAIDE

June 2010 | Volume 19 | Number 4 | Free Publication

## Our star attraction

green rating for  
new building

Story on page 5



# Green is good

Our campuses are undergoing the most significant transformation in the University's history.

We are spending \$400 million on the construction of new teaching and research facilities over four years. This is a huge commitment from the University and it will greatly benefit our students and staff, and therefore the wider community. It will provide much-needed facilities for the here and now, as well as helping us to plan for the future.

But there are other changes going on across our University that are significant and deserving of attention. These are changes that will help the University to become more environmentally sustainable.

At the University of Adelaide, we have some of the most brilliant minds conducting world-class research and teaching on all aspects of the environment – science, law, engineering, impact on health and population, to name just a few – our academic output on the environment is enormous; we are a force for good on these issues.

Of course, the University is also a major organisation that employs many thousands of people and educates tens of thousands more. We have highly complex research facilities across multiple campuses and, by necessity, a very significant need for a whole range of resources.

Given all of this, it is vitally important for the University to better understand our own impact on the environment and to become more sustainable, both for the long-term future benefit of the University and also of our planet.

Over the past 12 months, the University of Adelaide has been making excellent headway on issues of environment and sustainability.

We have increased our staff resources to tackle environmental issues, launched a University-wide sustainability awareness program called Ecoversity, and set targets on reducing CO<sub>2</sub> emissions, paper consumption, electricity and water use, and reducing our production of waste.

We now have a much better understanding of our greenhouse gas emissions and energy use and have participated in greenhouse gas emission audits since the 2007/08 financial year.

In the past year the University has recycled almost 25 tonnes of electronic waste – including old computers, monitors, televisions and servers.

We will soon learn more about the travel habits of our staff and students, to help prepare sustainable travel initiatives in partnership with the Department for Transport, Energy and Infrastructure.

Students are playing an important role in the work we're doing. Student surveys have highlighted recycling as their number one environmental issue. With this in mind, the University will launch a new waste and recycling program later this year in conjunction with the State Government's Zero Waste SA initiative.

Sustainability is also an important part of the new buildings being constructed on our campuses. We were thrilled to learn that our new \$100 million Innova21 building on the North Terrace Campus has recently achieved the highest possible Green Star rating for design from the Green Building Council of Australia. At the same time, our new Plant Accelerator at the Waite Campus is receiving \$5 million from the Federal Government to help make that facility's power use more sustainable.

The University of Adelaide is moving towards a truly holistic and coordinated approach to sustainability. This will see us bring together the knowledge and expertise of our international research centres and institutes, our environment-based curriculum and campus operations.

Our approach to sustainability issues is not to take the 'easy' way out through short-term efforts to offset our carbon footprint. We would rather take a more responsible and sustainable approach that yields long-term benefits.



**JAMES A. McWHA**  
Vice-Chancellor and President

## Adelaidean

*Adelaidean* is the official newspaper of the University of Adelaide. It provides news and information about the University to the general public, with a focus on Life Impact.

**Circulation:**  
11,000 per month  
(March to December)

**Online readership:**  
140,000 hits per month (on average)  
[www.adelaide.edu.au/adelaidean](http://www.adelaide.edu.au/adelaidean)

**Editor:**  
David Ellis

**Design:**  
Chris Tonkin

**Writers:**  
Candy Gibson  
Kate Husband  
Robyn Mills

**Contributors:**  
Ben Osborne,  
Claire Oremland, Mirna Heruc

**Cover photo:**  
The University of Adelaide's new Innova21 building  
Photo by ASB Creative

**Deadline for July issue:**  
Friday 4 June 2010

Do you receive too many *Adelaideans*?  
Not enough? Want to be added to our mailing list or taken off?

Contact us to let us know.

**Editorial/Advertising enquiries:**  
Phone: +61 8 8303 5414  
Fax: +61 8 8303 4829  
Email: [adelaidean@adelaide.edu.au](mailto:adelaidean@adelaide.edu.au)

**Mailing address:**  
Adelaidean  
Marketing & Strategic  
Communications,  
University of Adelaide,  
SA 5005  
Australia

**Printed by:**  
Lane Print & Post

**Distribution:**  
Lane Print & Post  
Passing Out Distribution Co.

Registered by Australia Post  
No 565001/00046



*Adelaidean* is printed on Impress  
Gloss paper which features the  
following environmental profile.  
[www.dalton.com.au](http://www.dalton.com.au)



australian  
made



mill  
certified



elemental  
chlorine  
free



renewable  
energy



sustainable  
forest



# University plans for a smoke-free campus

Smoke-free air will soon be enjoyed by all staff, students and visitors to University of Adelaide campuses as the University moves towards an entirely smoke-free environment over the coming year.

After more than 12 months of consultation, the University has just released a draft policy that will make all outdoor spaces, including car parks, sporting grounds and garden areas smoke-free. Smoking inside buildings is already prohibited under state legislation.

The University aims to be the first higher education institution in the state to establish an entirely smoke-free environment on all of its campuses.

"The University of Adelaide is committed to providing a healthy environment for staff, students and the wider community who share and visit our campuses," said Professor Justin Beilby, Executive Dean of the Faculty of Health Sciences.

"As an institute of higher learning, we cannot ignore the seriousness of the health risks associated with exposure to second-hand smoke."

The move has been fuelled by strong and positive support from the wider University community and similar plans by SA Health to introduce smoke-free policies across all public health facilities.

"The late Professor Konrad Jamrozik, the former Head of School of Population Health and Clinical Practice, played a leading role in championing the prohibition of smoking on campus," said Professor Beilby.

Last year, the University's Pulteney Street precinct was officially declared a smoke-free area (inside and outside buildings). This demonstrated the University's resolve to encourage healthier lifestyle choices and to minimise the impact of smoke on students, staff and visitors to the University.

A significant part of the implementation of a smoke-free policy includes appropriate support for staff and students who want to stop smoking.

"We are taking a staged approach with the implementation, which will give our staff, students and partners time to adjust to the healthier smoke-free campus environment and encourage current smokers to quit," Professor Beilby said.

Story by Kate Husband

## Contents

4 Countries ranked on environment impact

### COVER STORY

5 Our star attraction – green rating for new building

6 Shamray donates fee towards new Steinway

7 Ray Martin headlines O'Donoghue Oration

8 Super greenhouse goes green on energy

9 Cool discovery brings mammoth blood back to life

10 Blood test for newborns to detect allergy risk  
Public opinion sought on IVF funding

11 Sex of baby drives response to pregnancy stress

12 Brain speed linked to quality of life  
\$2 million in scholarships

13 DVD offers students a visual textbook

14 Scholars add to rise in law research

15 Taste of industry pays off  
Alumni Privileges

16 Coming Events

# Countries ranked on environment impact



A new study led by the University of Adelaide's Environment Institute has ranked most of the world's countries for their environmental impact.

The research has used seven indicators of environmental degradation to form two rankings – a proportional environmental impact index, where impact is measured against total resource availability, and an absolute environmental impact index measuring total environmental degradation at a global scale.

Led by the Environment Institute's Director of Ecological Modelling, Professor Corey Bradshaw, the study has been published in the online, peer-reviewed science journal PLoS ONE ([www.plosone.org](http://www.plosone.org)).

The world's 10 worst environmental performers according to the proportional environmental impact index (relative to resource availability) are: Singapore, Korea, Qatar, Kuwait, Japan, Thailand, Bahrain, Malaysia, Philippines and Netherlands.

In absolute global terms, the 10 countries with the worst environmental impact are (in order, worst first): Brazil, USA, China, Indonesia, Japan, Mexico, India, Russia, Australia and Peru.

The indicators used were natural forest loss, habitat conversion, fisheries and other marine captures, fertiliser use, water pollution, carbon emissions from land use and species threat.

"The environmental crises currently gripping the planet are the corollary of excessive human consumption of natural resources," said Professor Bradshaw.

"There is considerable and mounting evidence that elevated degradation and loss of habitats and species are compromising ecosystems that sustain the quality of life for billions of people worldwide."

Professor Bradshaw said these indices were robust and comprehensive and, unlike existing rankings, deliberately avoided including human health and economic data – measuring environmental impact only.

The study, in collaboration with the National University of Singapore and Princeton University, found that the total wealth of a country (measured by gross national income) was the most important driver of environmental impact.

"We correlated rankings against three socio-economic variables (human population size, gross national income and governance quality) and found that total wealth was the most important explanatory variable – the richer a country, the greater its average environmental impact," Professor Bradshaw said.

There was no evidence to support the popular idea that environmental degradation plateaus or declines past a certain threshold of per capita wealth (known as the Kuznets curve hypothesis).

"There is a theory that as wealth increases, nations have more access to clean technology and become more environmentally aware so that the environmental impact starts to decline. This wasn't supported," he said.

Professor Bradshaw also holds a joint position with the South Australian Research and Development Institute (SARDI).

Story by Robyn Mills  
Photo by Shutterstock

## Art & Heritage Collections

Mirna Heruc  
Manager, Art & Heritage Collections

Right: A selection of intriguing historical items from the University's Scientific Apparatus Collection  
Photograph: Jennifer Thurmer, Art & Heritage Collections

This year the University is celebrating 125 years of the Medical School.

University Archives and Art & Heritage Collections have joined forces to help create an exhibition that traces the Medical School's development from inception in 1885 to today.

Searching through the collections, we were able to find relevant and interesting items illustrating the School's progression, highlighting key benefactors, Nobel laureates and intriguing medical equipment and teaching tools.

Most of the artefacts on display are well used and of their era. If you are afraid of needles you might like to have a look – you may be cured instantly!

Some items are beautifully crafted and are now curios, but in their time they were state-



of-the-art technologies utilised to build the reputation of our Medical School, which has made an important impact in Australia and the world.

The exhibition is on display in the Barr Smith Library until 4 September.



# Our star attraction – green rating for new building

A new \$100 million flagship building at the University of Adelaide has achieved the highest Green Star design rating for an education building in Australia.

The new Innova21 building on the University's North Terrace Campus has received Australia's first 6 Star Green Star Design – Education v1 environmental rating for an education building.

The nine-level, state-of-the-art building has achieved the unique rating under the Green Building Council of Australia's Green Star – Education v1 Tool, which assesses the environmental attributes of new and refurbished education facilities in Australia.

"We are delighted that Innova21, the flagship building in the University's facilities expansion, has been recognised for environmentally sustainable design leadership," said the University's Vice-Chancellor and President, Professor James McWha.

Innova21, located on the lower level of the North Terrace Campus, will house the Faculty of Engineering, Computer and Mathematical Sciences. It offers improved student amenities including a cafe, computer labs, exhibition area, teaching spaces and 24-hour, seven-days-a-week access to major resources and support facilities. The new building will be in use by Semester 2 this year.

"Innova21 will not only deliver contemporary staff accommodation and computer aided teaching facilities, but will do so following strict environmental quality criteria established by the Green Star – Education v1 Tool," Professor McWha said.

"The completion of this building to such a high standard is an important step forward for the University, which is on track to deliver more than \$400 million in state-of-the-art teaching and research facilities by 2011."

The building incorporates innovative environmental initiatives, such as active slab technology (hydronic cooling loops within the concrete floor) combined with an under-floor air distribution system that utilises 100% fresh air ventilation, providing a healthy and comfortable internal environment.

Rainwater will be collected via an extensive underground rainwater harvesting system and stored in a 500,000 litre capacity tank. The rainwater will be used in the building's cooling towers, for toilet flushing and irrigation within the building.

The building's exhibition space on ground level has an Ethylene Tetra Fluoro

Ethylene (ETFE) inflated roof membrane, providing insulation and natural light penetration at the same time. These features are complemented by a low E double-glazed curtain wall and a programmable (DALI) lighting system.

The building also contains a tri-generation plant located at roof level, which produces electricity, heating and cooling, while saving energy and utility costs and a digital Building Management System (BMS) to reduce energy consumption.

"The technologies within the building are monitored via the BMS, allowing us to use the building as a teaching tool," said the University's Executive Dean of Engineering, Computer and Mathematical Sciences, Professor Peter Dowd.

"The data from the BMS will be available to students in real time via a central media wall, which will display information about energy use efficiency and the performance of structural elements."

Story by Olivia Jones and Kate Husband

Above: Image by Tucker Creative

# Shamray donates fee towards new Steinway

Outstanding pianist Konstantin Shamray has done more than just perform for Adelaide audiences at the recent opening concert of the 2010 Evenings at Elder Hall Concert Series.



Russian-born Shamray has donated his performance fee to help the University of Adelaide's Elder Conservatorium of Music purchase a new Steinway grand piano.

The piano, valued at more than \$250,000, is a much-needed instrument for Elder Hall performances as well as teaching in the Conservatorium.

Steinway pianos are highly regarded throughout the world for their quality, with each grand piano requiring up to one full year to hand craft.

The Conservatorium of Music has been raising money since 2008 to purchase a new Steinway, which is due to arrive in Adelaide later this year.

"I have valued my past concerts in Adelaide, especially in Elder Hall, and Adelaide has become like a second home

to me," said Shamray, who is arguably one of the most exciting pianists to have won the Sydney International Piano Competition.

"I feel very strongly about assisting the Elder Conservatorium in its purchase of a new Steinway. Such a piano can give great pleasure to so many people. It will offer students at the University the quality of instrument they need for both their studies and public performances."

"We are very grateful to Konstantin for his generous donation, and for all of those people who have donated towards this worthy purchase," said the Director of the Elder Conservatorium of Music, Associate Professor Carl Crossin OAM.

"We very much look forward to Konstantin returning to Adelaide and playing on our Steinway once it has arrived."

The next Evenings at Elder Hall concert is on Saturday 24 July. For a full program, visit: [www.elderhall.adelaide.edu.au](http://www.elderhall.adelaide.edu.au)

Tickets to the Evenings at Elder Hall concerts are \$25 adult, \$20 concession or \$15 student. Special Family Ticket deals are also available.

For ticket bookings, contact Elder Hall Manager Claire Oremland on 8303 5925 or email: [claire.oremland@adelaide.edu.au](mailto:claire.oremland@adelaide.edu.au)

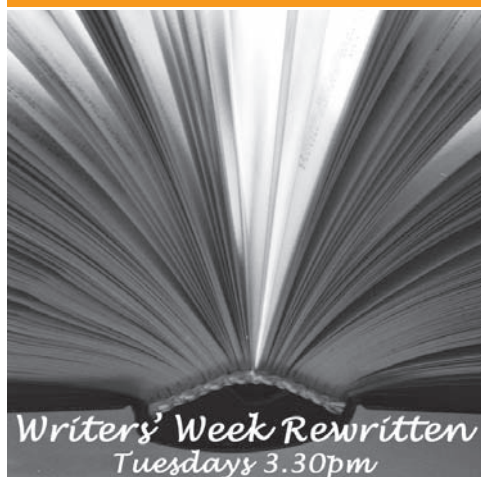
Story by David Ellis

Above: Pianist Konstantin Shamray in Elder Hall  
Photo by Andrea Laube, courtesy of *The Advertiser*



## Radio Adelaide 101.5 FM

[radio.adelaide.edu.au](http://radio.adelaide.edu.au)



**Writers' Week Rewritten**  
Tuesdays 3.30pm



**Subscribe to Radio Adelaide in June**  
annual - \$52 or \$26 concession  
lifetime - \$500  
and you'll go into the draw to win  
**a dozen of Fox Creek's fantastic flagship wine**  
**The 2006 Reserve Shiraz**  
**valued at \$840**  
[www.foxcreekwines.com.au](http://www.foxcreekwines.com.au)



**Nganampa**  
**our Wangka**  
**languages**  
**of South**  
**Australia**  
**Fridays, 3pm**

# Ray Martin headlines O'Donoghue Oration

Renowned journalist and national television presenter Ray Martin AM will give the 2010 Lowitja O'Donoghue Oration on Wednesday 2 June at the University of Adelaide.

The Oration, which is presented annually by the Don Dunstan Foundation in conjunction with the University of Adelaide and Flinders University, is entitled *Walking Together on the Journey of Healing*.

A multi-Logie Award-winner, Ray Martin began his distinguished career as a journalist with the ABC in 1965. He is well known for his work on Nine's *60 Minutes*, as well as being the host of *Middy* and presenter of *A Current Affair*.

Mr Martin is deeply involved in charities concerned with Aboriginal disadvantage and is in his third term as a Community Member on the Council for Aboriginal Reconciliation. He is also Chairman of the Fred Hollows Foundation.

The 2010 Lowitja O'Donoghue Oration will be held at 7.00pm Wednesday 2 June in Bonython Hall, North Terrace Campus.

Ticket prices are \$25 and \$17.50 for Don Dunstan Foundation donors, subscribers & concessions, and may be purchased by phone on +61 8 8303 3364 or online at: [www.mybookingmanager.com/2010LODOration](http://www.mybookingmanager.com/2010LODOration)

The Don Dunstan Foundation was established in 1999 with a view to perpetuating the memory of Don Dunstan and reflecting his life's work through fostering research, education and discussion on a broad range of issues, including social development and areas consistent with the Foundation's Deed of Trust, such as literature, the arts and food and wine.

The Foundation promotes visionary and progressive leadership and thinking within government and the private sector in South Australia, by furthering debate and action on key public policy issues.

The Don Dunstan Foundation is supported by the State Government, the University of Adelaide and Flinders University. It also relies on the support of individuals and organisations both public and private to continue with its work.

The Foundation recently launched its new strategic plan, with a focus on youth homelessness, Aboriginal employment and sex discrimination.

The Foundation's projects for 2010-2012 were unveiled at a ceremony at the University of Adelaide recently, where outgoing Trustees Chair the Hon. Greg Crafter was farewelled after 10 years in the role.

The new Chair is the Hon. Lynn Arnold AO, Chief Executive Officer of Anglicare SA.

Over the next three years, the Don Dunstan Foundation will undertake projects in: Aboriginal employment; refugee settlement; youth and young parent homelessness; climate change and its impact on Australia's most vulnerable people; and inspiring young people to improve the lives of the disadvantaged.

[www.dunstan.org.au](http://www.dunstan.org.au)

Right: Ray Martin AM  
Photo by Colin McDougall



# Super greenhouse goes green on energy

One of the world's newest and most sophisticated plant research facilities is set to receive a multi-million-dollar upgrade to boost its research output and save on energy use.

The Plant Accelerator at the University of Adelaide's Waite Campus is sharing in \$10 million in Federal Government funding awarded to the Australian Plant Phenomics Facility, which has one node in Canberra and one in Adelaide.

The funding – awarded as part of the Federal Government's Super Science Initiative from the Education Investment Fund (EIF) – will see \$5 million go towards the Plant Accelerator at the Waite Campus, with the other \$5 million going to the High Resolution Plant Phenomics Centre in Canberra.

The Plant Accelerator is a "super greenhouse", featuring a series of 50 hi-tech glasshouses and laboratories housing more than 1km of conveyor systems, and state-of-the-art imaging, robotic and computing equipment. The accelerator, which gets its name because of its capacity to accelerate the discovery of more productive and robust crops, was opened at the Waite Campus in January.

"This latest funding will further expand the research facilities at the Plant Accelerator, which will greatly assist our research efforts and provide enormous benefits to Australia's agricultural sector,"

said the Director of the Australian Plant Phenomics Facility, Professor Mark Tester from the University of Adelaide's School of Agriculture, Food and Wine.

"Because much of our research is aimed at improving crops under harsh environmental conditions, we see it as our duty to also help minimise our impact on the environment and reduce energy use as much as possible. This funding will help us to do that," Professor Tester said.

The \$5 million for the Plant Accelerator will go towards:

- new plant growth rooms and chambers, offering precise, controlled environmental conditions;
- automated and improved data analysis infrastructure, which will help accelerate the research outcomes for the facility's customers;
- a new gas-fired tri-generation plant to substantially reduce electricity costs (paying for itself in less than 10 years) and reduce the facility's carbon footprint (with 1,200 tonnes of CO<sub>2</sub> emissions abated per annum).

The Minister for Innovation, Industry, Science and Research, Senator Kim Carr, said the Australian Plant Phenomics Facility

had already established itself as a world-leading plant research facility, despite only being operational for a few months.

"Our investment, initially through the National Collaborative Research Infrastructure Strategy and most recently through the Super Science Initiative, has fostered greater international collaboration," Senator Carr said.

"Notable partnerships that have been formed include work with the International Rice Research Institute in the Philippines and the Scottish Crops Research Institute in Dundee.

"The facility has seen a quantum leap in the ability of Australian researchers to develop new crops that can provide answers to environmental problems such as increased salinity, and help boost not only Australian crops and agriculture, but world food production.

"I am delighted that this funding will further add to the facility's capacity to work smarter and at the same time yield significant environmental benefits by reducing the Accelerator's greenhouse footprint."

Story by David Ellis

Photo by Helli Meinecke





# Cool discovery brings mammoth blood back to life

A team of international researchers has brought the primary component of mammoth blood back to life using ancient DNA preserved in bones from Siberian specimens 25,000 to 43,000 years old.

Studies of recreated mammoth haemoglobin, published last month in *Nature Genetics*, reveal special evolutionary adaptations that allowed the mammoth to cool its extremities down in harsh Arctic conditions to minimise heat loss.

"It has been remarkable to bring a complex protein from an extinct species, such as the mammoth, back to life," said Professor Alan Cooper, Director of the Australian Centre for Ancient DNA (ACAD) at the University of Adelaide, where the mammoth haemoglobin sequences were determined.

"This is true palaeobiology, as we can study and measure how these animals functioned as if they were alive today."

Professor Cooper is an Australian Research Council Future Fellow and a member of the University's Environment Institute.

"We've managed to uncover physiological attributes of an animal that hasn't existed for thousands of years," said team leader Professor Kevin Campbell of the University of Manitoba, Canada.

"Our approach opens the way to studying the biomolecular and physiological characteristics of extinct species, even for features that leave no trace in the fossil record."

The project began over seven years ago when Professor Campbell contacted Professor Cooper, who was then based at the University of Oxford, to suggest resurrecting mammoth haemoglobin.

"At the time, I thought 'what a great idea' – but it's never

going to work," said Professor Cooper. "Still, bringing an extinct protein back to life is such an important concept, we've got to try it."

The team converted the mammoth haemoglobin DNA sequences into RNA, and inserted them into modern-day *E. coli* bacteria, which then manufactured the authentic mammoth protein.

"The resulting haemoglobin molecules are no different than 'going back in time' and taking a blood sample from a real mammoth," said Professor Campbell.

The team used modern scientific physiological tests and chemical modelling to characterise the biochemical properties that confer mammoths with physiological cold tolerance.

Team member Professor Roy Weber of the University of Aarhus, Denmark, who performed the physiological testing on the mammoth proteins, said the findings helped to show how the mammoth survived the extreme Arctic cold.

"Three highly unusual changes in the protein sequence allowed the mammoth's blood to deliver oxygen to cells even at very low temperatures, something that indicates adaptation to the Arctic environment," Professor Weber said.

"We can now apply similar approaches to other extinct species, such as Australian marsupials," said team member Dr Jeremy Austin, ACAD Deputy Director, who is currently using ancient DNA to study the evolution of the extinct thylacine (Tasmanian Tiger) and the endangered Tasmanian Devil.



For a more about the study, see the interview with Professor Alan Cooper on YouTube. Search YouTube for "environment institute mammoth" or visit: [www.youtube.com/watch?v=YN0Va1F\\_28A](http://www.youtube.com/watch?v=YN0Va1F_28A)

Story by Candy Gibson

Above: Professor Alan Cooper with a bone from a woolly mammoth



Right: Prehistoric mammoth skeleton at a museum in Zurich

Photo by iStock



## Public opinion sought on IVF funding

The University of Adelaide is recruiting people for a research project to explore their views on government funding for *in vitro* fertilisation (IVF) services.

Researchers from the University's Discipline of Public Health are looking for two separate groups to take part in a couple of forums this month discussing public funding for IVF.

A total of 16 people who have undertaken IVF between 2000 and 2007 are required for one session on Saturday 19 June, and another 16 members of the general public are needed for a forum on Saturday 26 June.

"It is important that the community has a voice in deciding how government funds are spent on healthcare," said Chief Investigator Professor Janet Hiller.

"Historically, the community has had very little chance to be involved in deciding what services should be funded and why. The aim of this project is to establish the best ways to incorporate patient and community views in developing health policy," Professor Hiller said.

IVF is being used as a test case for public opinion, but the research project is looking at a wide range of health services that are publicly funded.

"We are using IVF as a case study because there has been a lot of controversy surrounding public funding for this service in the past. Decision makers both in Australia and overseas continue to grapple with the appropriate level of subsidy for IVF."

Government expenditure on assisted reproductive services increased from approximately \$66 million in 2000 to about \$210 million in 2008, Professor Hiller said.

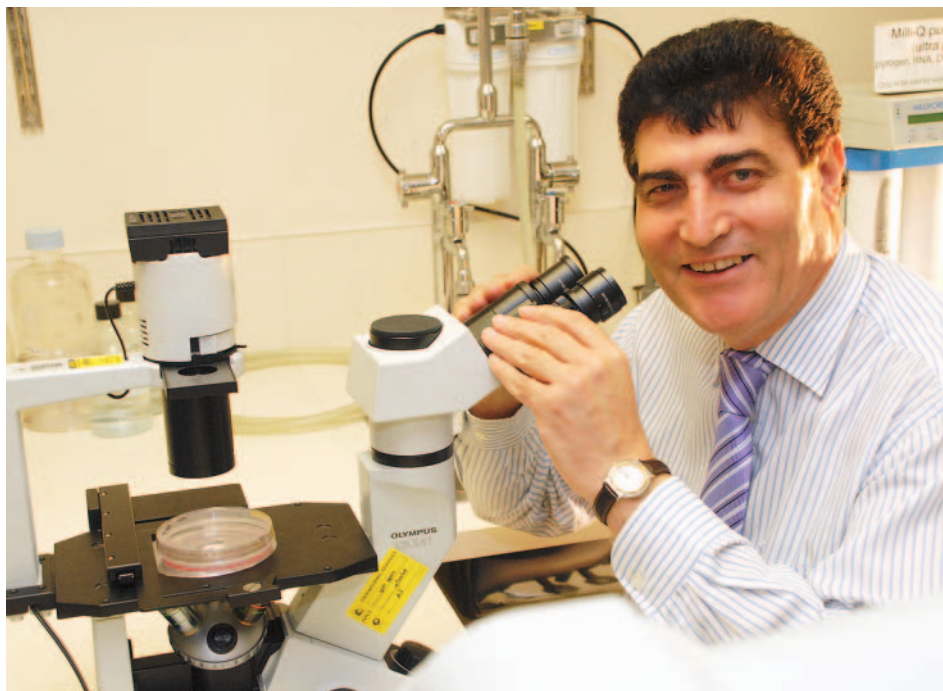
"Government decisions about healthcare funding can have a significant impact on the community. For every service that is funded, another must miss out and so it is important that the community has a say in this process."

Forum participants will be provided with a range of information about IVF and invited to share their views on how this should influence public funding.

People interested in taking part must live in South Australia (city or rural), be 18 years or older, of either sex, not currently pregnant, nor undertaking IVF at present. Participants will also receive financial compensation for their time.

For more information contact 8313 0938 or 0435 821 147 or email: [astutehealth@adelaide.edu.au](mailto:astutehealth@adelaide.edu.au)

Story by Candy Gibson



## Blood test for newborns to detect allergy risk

A simple blood test can now predict whether newborn babies are at high risk of developing allergies as they grow older, thanks to research involving the University of Adelaide.

Professor Tony Ferrante, an immunologist from SA Pathology and the Children's Research Centre at the University of Adelaide, said the new marker may be the most significant breakthrough in allergy testing for some decades.

"A protein in the immune cells of newborns appears to hold the answer as to whether a baby will either be protected, or susceptible to the development of allergies later on," Professor Ferrante said.

Amounts of the cell signalling protein, called protein kinase C zeta, are much lower in children at risk of allergies.

Professor Ferrante said the blood test was far more effective than previous indicators, such as a family's clinical history, or measuring the allergy-inducing antibody IgE.

In collaboration with Professor Susan Prescott from the University of Western Australia and Princess Margaret Hospital for Children, Professor Ferrante's research team has refined the new marker for allergy risk, originally discovered in 2007, but now modified to a simple and manageable blood test at birth.

The researchers are also looking at whether fish oil supplements given to both pregnant women and those who have just given birth can reduce the risks of the children developing allergies.

"There is evidence that the levels of this important protein increase with fish oil supplementation to protect against allergy development," Professor Ferrante said.

Australia has one of the highest allergy rates in the world, with 40% of children now suffering from allergic diseases, including food allergies, eczema, asthma and hay fever. These conditions frequently persist into adulthood, placing a heavy burden on the healthcare system.

The studies and clinical trials have been funded by the Channel 7 Children's Research Foundation and the National Health and Medical Research Council.

Professor Ferrante is SA Pathology's Head of Immunology at its Women's and Children's Hospital campus and Professor in the School of Paediatrics and Reproductive Health at the University of Adelaide.

He has been a leader in his field for more than 20 years and leads the Developmental and Genetic Immunology Program of the Children's Research Centre.

Story by Candy Gibson

Above: Professor Tony Ferrante  
Photo by Chris Sprod, courtesy of the Women's and Children's Hospital

# Sex of baby drives response to pregnancy stress

University of Adelaide research is showing that the sex of the baby determines the way it responds to stressors during pregnancy and its ability to survive pregnancy complications.



Male and female babies during pregnancy show different growth and development patterns following stressors during pregnancy such as disease, cigarette use or psychological stress.

The research is being carried out by the Robinson Institute's Pregnancy and Development Group, based at the Lyell McEwin Hospital and led by Associate Professor Vicki Clifton.

"What we have found is that male and female babies will respond to a stress during pregnancy by adjusting their growth patterns differently," said Associate Professor Clifton.

"The male, when mum is stressed, pretends it's not happening and keeps growing, so he can be as big as he possibly can be. The female, in response to mum's stress, will reduce her growth rate a little bit; not too much so she becomes

growth restricted, but just dropping a bit below average.

"When there is another complication in the pregnancy – either a different stress or the same one again – the female will continue to grow on that same pathway and do okay but the male baby doesn't do so well and is at greater risk of pre-term delivery, stopping growing or dying in the uterus."

Associate Professor Clifton said this sex-specific growth response had been observed in pregnancies complicated by asthma, pre-eclampsia and cigarette use but was also likely to occur in other stressful events during pregnancy such as psychological stress.

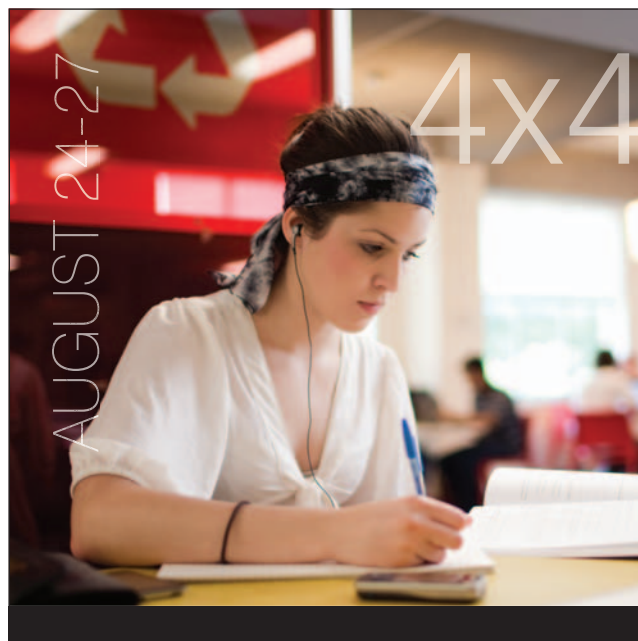
She said this sex-specific growth pattern was a result of changes in placental function caused by the stress hormone cortisol.

In female babies, increased cortisol produces changes to the placental function which lead to the reduction in growth, but the increased cortisol levels in a mother carrying a male baby doesn't produce the same changes in placental function.

Associate Professor Clifton said this research could lead to sex-specific therapies in pre-term pregnancies and premature newborns. It was also important in helping obstetricians more accurately interpret growth and development of the fetus in at-risk pregnancies.

"We are looking at what events during pregnancy cause changes in how the baby grows, what's behind this and ways in which we can improve the outcomes for pregnant women and their babies," she said.

Story by Robyn Mills



## Master Classes for Advanced Creative Writers

The Creative Writing Program at the University of Adelaide presents a 4-day series of Master Classes for Advanced Creative Writers. Participants will have the rare opportunity to work with four of Australia's finest writers:

**Helen Garner** on creative non-fiction, **Gail Jones** on fiction, **Brian Castro** on life-writing, **Jill Jones** on poetry.

**Places:** Strictly limited to 15 participants

**Cost:** \$700 for four days

**When:** Tuesday 24 to Friday 27 August

For more information please visit:  
[www.hss.adelaide.edu.au/creativewriting/](http://www.hss.adelaide.edu.au/creativewriting/)  
 or email [creativewriting@adelaide.edu.au](mailto:creativewriting@adelaide.edu.au)



CRCOS Provider Number 001234

Life Impact | The University of Adelaide



## \$2 million in scholarships

For the first time, students who want to start a PhD or Masters by Research in the mid-year intake at the University of Adelaide are being offered one of 30 new scholarships.

The new Mid-year Entry Research Scholarships are valued at \$22,500 a year for three years (tax free) – with a total scholarships commitment of more than \$2 million.

They are offered across all research disciplines at the University.

“Scholarships provide vital support to our students, giving them the best possible chance of gaining a quality educational experience,” said the University’s Vice-Chancellor and President, Professor James McWha.

“As a leader of research and innovation, the University of Adelaide is in a unique position to foster research that is critical to the future of our community and for industry.

“These new scholarships represent an excellent opportunity for researchers to begin their PhD or Masters degrees while also receiving significant financial support.”

Professor McWha said mid-year entry was an ideal way for students to take the next step in their studies.

“It’s all about offering flexibility,” he said. “There are a number of students who complete their Honours degrees part-way through the year. For those students, there is no need to wait until the following year to start their PhD or Masters by Research – they can jump right into it now and get started.

“By offering students the flexibility they need, and more than \$2 million in scholarships to support their studies, the University of Adelaide is making yet another major contribution to Australian research and innovation.”

The scholarships are available to Australian citizens and permanent residents.

For more information about the scholarships or to apply, potential students can visit: [www.ua.edu.au/scholarships/mid\\_year](http://www.ua.edu.au/scholarships/mid_year)

*The closing date for applications is Friday 4 June 2010.*



## Brain speed linked to quality of life

Researchers at the University of Adelaide are seeking women aged 60 and over for a new study into whether a quick mind can benefit people’s quality of life while ageing.

The researchers, in the University’s School of Psychology, are aiming to recruit 200 women to take part in the study, which could hold important clues about the impact of the brain’s processing ability on our daily lives.

“Our previous studies have shown that elderly people with slower processing abilities are more likely to experience cognitive decline and problems in their everyday lives,” said Research Associate Dr Tess Gregory.

“Those who show marked changes in their processing speed over a short period of time are also more likely to experience these problems.

“For example, people with slower speed of processing experienced more problems with cognitive outcomes, such as poorer memory and reasoning skills, as well as everyday functioning, including financial management, management of medications and food preparation. This can have a big impact on people’s lives, which is why we need to better understand the processes involved,” Dr Gregory said.

The Adelaide researchers are investigating a specific measure of brain processing speed that has been developed in the School of Psychology, called Inspection Time (IT).

“Although we now know that older people with a slow Inspection Time are more likely to have problems with their memory and everyday functioning in the future, we still don’t know with accuracy what

a ‘slow inspection time’ for an individual at a specific age is,” said Professor Ted Nettelbeck, one of the leaders of the research along with Associate Professor Nick Burns (also from the School of Psychology) and Professor Gary Wittert (Discipline of Medicine).

“Over the past three years we’ve been collecting IT scores from men in a large study to help answer this question. But as men and women get older, their IT scores vary. We now need to compare those results by studying women.”

Professor Nettelbeck said this research may help to identify people who have a slow IT for their age who may therefore be at risk for future problems in memory or everyday functioning.

“If we can identify these individuals early, there may be opportunities to intervene before problems arise,” he said.

**Women aged 60+ years who are living in metropolitan Adelaide are needed to volunteer for the study. It will involve completing a cognitive task and a brief questionnaire, which will take a total of 30 minutes.**

**To take part in the study, women should call Dr Tess Gregory on (08) 8303 3055 and leave their contact details.**

Story by David Ellis  
Photo by Ginny Austin

# DVD offers students a visual textbook

A new DVD launched in Adelaide is the first resource of its kind to help teach university and TAFE students the practical techniques and applications of molecular biology.



The DVD – called *Introduction to Molecular Techniques: Theory & Practice* – is designed as a “visual textbook” for tertiary students.

The DVD contains more than two hours of video footage and animations, helping students to understand theoretical concepts, and demonstrating complex techniques step-by-step in the laboratory.

Medical, veterinary and agricultural examples are all included. The DVD also contains a printable manual.

It can be used both by lecturers to introduce practical work and theoretical concepts and by students as revision or resource material.

The commercially available DVD is the result of an eight-year collaboration between the University of Adelaide, the Molecular Plant Breeding Cooperative Research Centre and TAFE SA Veterinary and Applied Science Centre (VASC).

“This project involved scientists from

industry, University and the vocational sector joining together to produce an educational tool that did not exist anywhere in the world,” said Dr Amanda Able from the University of Adelaide’s School of Agriculture, Food & Wine. Dr Able was one of the leaders of the DVD project along with Leanne Coombe (TAFE SA VASC) and Dr Heather Bray (Molecular Plant Breeding CRC).

“We set out with the goal of making this DVD so that it would add to students’ experience, giving them both the theory and the technical instruction, so they could see how and why they do things in the lab.

“We also included troubleshooting tips showing common mistakes – what happens when it goes wrong and what to do about it.

“This is a resource that students, their lecturers and teachers can come back to time and again,” she said.

“We believe the DVD would be of interest to many university and TAFE-level students around Australia and overseas, as well as to

secondary school science teachers who could use it for professional development purposes.”

*Introduction to Molecular Techniques: Theory & Practice* was launched at the National Wine Centre last month by the Chief Executive of DFEEST, Mr Raymond Garrard, and the Vice-Chancellor and President of the University of Adelaide, Professor James McWha.

**The DVD costs \$215 (plus postage) and is available at the discount price of \$95 for staff and students of the University of Adelaide and TAFE SA. It can be purchased from: [www.moleculartechniques.com.au](http://www.moleculartechniques.com.au)**

Story by David Ellis

Above: PhD student Artruro de Lucas-Arbiza (Molecular Plant Breeding CRC) selecting ryegrass cultivars for a DNA extraction, as part of a shot for the DVD

Photo courtesy of the Molecular Plant Breeding CRC

## Print & Post quality clean fast



short run

transactional

volume

post

**lane**  
PRINT&POST

South Australia's largest privately owned dedicated Printing, Mailing and Distribution Company.

CALL 08 8179 9900 and speak to an Account Manager about your next print project. [www.laneprint.com.au](http://www.laneprint.com.au)



### Our commitment to the environment

Lane Print & Post is committed to the care and protection of the environment. We have long been certified to world's best practice standards ISO9001:2000 and are in the process of conforming to ISO14001:2004 Environmental Management Systems Certification.

- ✓ sustainable offset paper products
- ✓ ctp water saving technology
- ✓ 55% less energy use through perfecting printing
- ✓ vegetable based inks
- ✓ varnish free print
- ✓ 100% degradable food grade mailing plastic
- ✓ full plant recycling
- ✓ personal ownership and staff commitment to the environment



# Scholars add to rise in law research

Postgraduate research is on the rise in the Adelaide Law School with scholarships providing much-needed support.

Senior members of South Australia's legal profession and University of Adelaide staff and students gathered at the Supreme Court recently to welcome new postgraduate research students awarded the Zelling-Gray Scholarships in Law.

The University of Adelaide Law School has more than doubled its number of postgraduate research students in the past two years.

In 2008 there were four PhD candidates and two Master of Laws (Research) students. This year there are 14 PhD and two MPhil candidates.

The Zelling-Gray Scholarships were introduced in 2008 combining generous donations from the late Honourable Dr Howard Zelling AO CBE, current Supreme Court Judge the Honourable Justice Tom Gray, and the Law Foundation of South Australia, and supplemented by the University.

Dean of Law Professor Rosemary Owens said the scholarships provided significant support to encourage postgraduate research in law. A single scholarship is worth up to \$22,000 per year, though in recent years the fund has been used to supplement the holders of other Commonwealth or University scholarships.

The scholarships are offered for full-time postgraduate students in the areas of constitutional law, administrative law, commercial law, legal history, law reform and comparative law.

"The scholarships are an additional incentive and provide valuable support for scholarly individuals who are keen to make an impact in these areas of law, all of which are increasingly central to our immediate society," Professor Owens said.

"We are very appreciative of the generous contributions from Justice Gray and the Law Foundation.

"It's important that Adelaide Law School, as one of the country's most respected law schools, continues to advance legal knowledge and understanding through research.

"This support from the law profession signals the increasing recognition of the importance of understanding law, as much as practising law, and we see it as an endorsement of the Law School and its research strength."

The 2010 recipients of the Zelling-Gray Scholarship and their research topics are:

- **Adam Webster** – *Litigation between states: Do states have a common law right to water?*

- **Kate Bradbury** – *A legal regime for ocean energy: An analysis of the legal issues associated with offshore renewable energy and the formulation of appropriate international and domestic legal mechanisms for its deployment*

- **Gabrielle Appleby** – *The constitutional role of the Solicitor General*

- **Vanessa White** – *Law and ethics of assisted reproductive technology*

Members of the law profession at the recent welcome included Chief Justice of the Supreme Court the Honourable John Doyle, Supreme Court Judge the Honourable Justice Margaret Nyland and Justice Tom Gray, scholarship benefactor.

The late Justice Zelling was a graduate of the University of Adelaide Law School (Bachelor of Laws, 1938 and LLB (Honours) in 1941). He was a Supreme Court Judge, a prominent member of the law profession, lectured at the University of Adelaide for many years and was awarded the title Doctor of the University in 1983.

Story by Robyn Mills

Above: Zelling-Gray Scholars past and present (from left): Vanessa White, Kate Bradbury, John Gava, Gabrielle Appleby, Beth Nosworthy, and Adam Webster

Photo by Michael Mullan



## Taste of industry pays off

The University of Adelaide's Student and Industry Program continues to go from strength to strength.

Coordinated by the University's Development and Alumni office, the Student and Industry Program (SIP) is now in its third year and has seen more than 700 students from all areas of the University network with over 320 alumni and industry representatives from more than 250 companies.

Discipline-based events ranging from Physics and Psychology through to Accounting and Architecture allow students to talk one-on-one with industry leaders and professionals in an open and friendly environment, helping to deepen their understanding of career possibilities and their professional knowledge in their chosen field.

One student who has benefited from her SIP participation is Erin Jingzhi Chen, a current second-year Bachelor of Wine Marketing student from Nanjing, capital of the Chinese province Jiangsu on the country's eastern coast.

After meeting with Hugh Matthews, the export manager for Yabby Lake winery, at the Wine SIP event in 2009, she was able to obtain a three-month internship at Yabby Lake's cellar door in China's third-largest city, Guangzhou, during her 2009-10 summer vacation.

Erin said the internship helped her gain valuable exposure to the burgeoning Chinese wine market.

"I learnt a lot from the experience – I realised just how big the Chinese market is," she said.

"There's a strong demand for wine in the Chinese market, not only among the upper class but also the emerging middle class."

Erin's role in Guangzhou was providing

a wine education service, such as hosting lectures and parties, including one at Zhongshan University. Upon her return, she also helped Yabby Lake provide a tour of its Mornington Peninsula winery for Chinese VIPs.

"I've built up a good network of contacts in Guangzhou and I've also become more confident in my public speaking," she said.

"Attending the SIP may turn out to be one of the best things I did while studying at Adelaide!"

For Hugh Matthews – himself a University of Adelaide graduate (with a Graduate Diploma in Wine Business in 2000) – and Yabby Lake, the opportunity to participate in the relevant SIP led to an unexpectedly valuable outcome.

"I initially viewed it (the SIP) as an opportunity to give back to an industry which has given me my career – but it ended up evolving into something really beneficial for our company," he said.

"Yabby Lake is expanding rapidly in China, and we're acutely aware of the need for good wine marketing skills. We are very happy with Erin and how she has developed her skills and knowledge, and we're keen to keep working with her as other opportunities come up."

**For more information about SIP and its 2010 events, please visit:**  
[www.alumni.adelaide.edu.au/sip](http://www.alumni.adelaide.edu.au/sip)

Story by Ben Osborne

Above: Bachelor of Wine Marketing student Erin Jingzhi Chen has benefited from the University's Student and Industry Program

Photo by Ben Osborne

## Alumni

PRIVILEGES

Adelaide alumni have access to a range of exclusive benefits, services and discounts – and each month we bring you the pick of the bunch for a featured special.



### Special Offer of the Month: Warming Winter Reds with Bonus Decanter


Premium Wines Direct are pleased to give alumni a bonus Tyrrell's wine decanter, valued at \$25, when they purchase a six-bottle pack of warming winter reds during June.

Offer only available while stocks last.

Get in quick to take advantage of this exclusive alumni privilege!

For further details on accessing this offer, and to check out the full Alumni Privileges Package, log on to: [www.alumni.adelaide.edu.au/privileges](http://www.alumni.adelaide.edu.au/privileges)





## Research Tuesdays

SHARING GREAT RESEARCH  
WITH THE COMMUNITY



## Feeding Anxiety: The World Food Crisis Forum

- **ASSOCIATE PROFESSOR RACHEL ANKENY**  
School of History and Politics
- **PROFESSOR ROGER LEIGH**  
School of Agriculture, Food and Wine
- **PROFESSOR RANDY STRINGER**  
School of Agriculture, Food and Wine

If the growing body of experts is right, dwindling global food security poses a significant threat to much of humanity.

Influenced by numerous factors, including climate change, population growth and rising fuel costs, it has the potential to cause widespread famine and civil unrest. Indeed, in many countries, it already is.

In this public forum, leading University of Adelaide thinkers on the topic will explore the most critical issues surrounding the crisis and invite questions from the floor.

Is it a problem of supply or access? What ethical questions does it raise about our own consumption? Can scientists enhance yields, and is modern high-production agriculture necessarily the best way forward?

Don't miss this special event.

**WHEN:** Tuesday 8th June, 5.30pm–7.00pm

**WHERE:** Lecture Theatre 102, Napier Building, North Terrace Campus

**ADMISSION FREE, BOOKINGS ESSENTIAL**

Register online: [www.adelaide.edu.au/researchtuesdays](http://www.adelaide.edu.au/researchtuesdays) or call: 8303 3692

### Medicine 125th Historical Exhibition

*From Audacious Outpost to International Impact: 125 years of excellence in medical education.* Revisit the past and experience the Medical School's impressive history showcased in this exhibition.

[www.health.adelaide.edu.au/medicine125](http://www.health.adelaide.edu.au/medicine125)

**When:** open now until 4 September, during Library opening hours

**Where:** Barr Smith Library, North Terrace Campus

**Cost:** Free – all welcome

### MBA Alumni Association (MBAAA) – Networking Breakfast

**When:** after 7.30am Wednesday 2 June (first Wednesday of every month)

**Where:** East Terrace Continental Café (between North Terrace and Rundle Street, Adelaide)

The MBAAA Executive Committee welcomes contact from MBA alumni and current students.

If you are interstate or overseas and are interested in coordinating or participating in networking gatherings with MBA alumni colleagues living in the same city, contact the Executive Committee on: [mbaaa\\_committee@adelaide.edu.au](mailto:mbaaa_committee@adelaide.edu.au)

### Centre for Automotive Safety Research seminar series

*Motorcycling Issues in Road Safety* by Dr Matthew Baldock

The Centre for Automotive Safety Research invites you to a series of seminars addressing major topics in the fight to reduce road trauma and highlighting the latest research.

<http://casr.adelaide.edu.au>

**When:** 4.00pm Wednesday 2 June

**Where:** Art Gallery Auditorium, Art Gallery of South Australia, North Terrace, Adelaide

**Cost:** Free

**RSVP:** Please register your attendance with Leonie Witter on 8303 4114 or email: [leonie.witter@adelaide.edu.au](mailto:leonie.witter@adelaide.edu.au)

### 2010 Lowitja O'Donoghue Oration – Ray Martin

Walking Together on the Journey of Healing, presented by renowned journalist Ray Martin AM.

(See story on page 7 for more details)

**When:** 7.00pm Wednesday 2 June

**When:** Bonython Hall, North Terrace Campus

**Cost:** \$25 or \$17.50 for Don Dunstan Foundation donors, subscribers & concessions.

Call 8303 3364 or purchase online at:

[www.mybookingmanager.com/2010LODOration](http://www.mybookingmanager.com/2010LODOration)

### Reconciliation Week Event

In the spirit of Reconciliation Week, the Vice-Chancellor & President, the Gender Equity and Diversity Committee and the Centre for Australian Indigenous Research and Studies, Wilto Yerlo, invite all staff and students to celebrate this important occasion.

A panel forum will feature Professor Roger Thomas, Director of the University of Adelaide's Centre for Australian Indigenous Research and Studies, the Vice-Chancellor and other key staff and community members, discussing what reconciliation means to them and to the University.

Following the forum you are invited to enjoy a free BBQ and live music by the Centre for Aboriginal Studies in Music (CASM).

**When:** Thursday 3 June. Welcome and Forum: 11.00am–12.00pm. BBQ: 12noon–1.00pm

**Where:** Welcome and Forum: Bonython Hall. BBQ: Goodman Lawns.

**Cost:** Free – all welcome

### Lunchtimes at ELDERHALL

Adelaide's favourite lunchtime series of music concerts continues in June. Concerts this month include performances from the Elder Conservatorium Jazz Orchestra, the Australian String Quartet, Elizabeth Koch, Minas Berberyana and Suzanne Handel from the Adelaide Symphony Orchestra, Peter Handsworth, Keith Crellin and David Lockett.

[www.elderhall.adelaide.edu.au](http://www.elderhall.adelaide.edu.au)

**When:** 1.10pm every Friday from 4–25 June

**Where:** Elder Hall, North Terrace Campus, University of Adelaide

**Cost:** Tickets \$7, available at the door from 12.30pm on the day of the concert

### Friends of the University of Adelaide Library

Lee Gutkind, the godfather of creative non-fiction, presents *Truckin' with Sam*

**When:** 6.00pm for 6.30pm Thursday 10 June

**Where:** Ira Raymond Exhibition Room, Barr Smith Library, North Terrace Campus

**Cost:** Free and open to the public (gold coin donation invited)

**RSVP:** Bookings by Tuesday 8 June to [robina.weir@adelaide.edu.au](mailto:robina.weir@adelaide.edu.au) or 8303 4064

### Healthy Development Adelaide (HDA)

*Disability Research in SA: identifying and meeting the needs of our children.* Sponsored by Novita Children's Services.

The speakers for this event are Professor Michael Sawyer (WCH/University of Adelaide), Dr Julie McMillan (Flinders University), Dr Pammi Raghavendra (Novita Children's Services) and Ms Kelly Vincent (Yes But Syndrome/MLC, Dignity for Disability).

[www.adelaide.edu.au/hda/events](http://www.adelaide.edu.au/hda/events)

**When:** 4.15pm–7.00pm Thursday 17 June

**Where:** Institute Building Lecture Theatre, State Library of South Australia, Adelaide

**Cost:** Free – all welcome. Seats limited – please book.

**RSVP:** by Thursday 10 June to [anne.jurisevic@adelaide.edu.au](mailto:anne.jurisevic@adelaide.edu.au) or call 8303 8222

### Fridays Uncorked 2010

The National Wine Centre of Australia invites you to celebrate the end of the week with a series of Fridays Uncorked. Sponsored by Annie's Lane wines.

[www.wineaustralia.com.au](http://www.wineaustralia.com.au)

**When:** 4.30pm Friday 18 June

**Where:** National Wine Centre of Australia, corner of Hackney and Botanic Roads, Adelaide

**Cost:** FREE including cocktail food