New views
on world’s smallest minds

Story on page 5
Year of the Student

2009 will be memorable for at least two things: the global financial crisis and swine flu. But for the University of Adelaide, 2009 is shaping up to be the Year of the Student.

On top of our biggest student intake at the start of the year, mid-year entry to the University has proven to be much more popular than expected. At the start of June 2009, our first preference undergraduate applications had increased by 25% over the same time last year, the largest increase in the State. All undergraduate preferences were up by 28%.

This is excellent news not only for the University, but also for the State and the nation, and it is pleasing to see that in tough economic times people are keen to invest in education.

Improving the community’s level of education and skills, and creating new knowledge and new thinking, will be incredibly important in helping Australia to emerge successfully from the current financial situation.

The real challenge for all Australian universities will be in encouraging continued interest in higher education and the value of that education to our shared future, especially in the face of an eventual upturn in the financial situation.

The ambitious target set by the Federal Government – that 40% of all 25-34 year olds should have a bachelor degree or greater by 2025 – will depend in part on what we do today to encourage participation in university-level education.

I say “challenge”, but it is also an opportunity.

At a time when more people are turning to education, we must develop a stronger culture of education in the community so that its value won’t be diminished the moment the stocks begin to rise again.

How do we do this? In part, by being innovative in what we offer to students, by providing them with a quality education, and in better understanding their needs.

For example, the University’s Summer and Winter Schools are a direct response to students’ increasing demand for courses.

Because students desire additional study opportunities, it is up to us to provide them – and we are doing so.

As the number of course offerings in our Summer and Winter Schools increases, we not only provide extra study options for domestic students, we also attract potential study abroad students.

It’s no wonder that enrolments in our Winter School courses for 2009 have been steadily increasing since the beginning of the year. More than 660 students are currently enrolled in our Winter School, an increase of 128% over the previous year.

This is just one example of innovation at the University of Adelaide aimed at responding to demand. The future holds many new opportunities for us to expand our educational pathways and to be responsive to individual needs.

For example, we expect that increasing numbers of students will come from rural and remote areas, low socio-economic backgrounds and other situations of potential disadvantage. We also anticipate that more mature age students will take up the opportunity to enter tertiary education, for professional reskilling and for personal enrichment.

These individuals will have a hunger for knowledge and new experience; their will to succeed in an increasingly challenging world must be met by our desire to help them do so. It is up to our sector to provide alternative pathways to university to accommodate the needs of these students, and to give them the quality educational experience that they deserve.

Attracting more students to our University is a sign of success, but it is only one sign of success. Our real achievement will be in understanding and adapting to the needs of the students and in providing them with the best possible education.

Through this, we will demonstrate to the community that every year is the Year of the Student.
Advance your prospects on us

With more than 300 scholarships available, there’s never been a better time to consider a postgraduate education.

The University of Adelaide is holding a Postgraduate Information Night on Friday 31 July. It’s a perfect opportunity to learn more about where graduate studies could lead you and what areas of study would suit you.

“The University of Adelaide is offering a huge range of postgraduate research scholarships for 2010, as well as a limited number of scholarships for postgraduate coursework, with scholarships available to both local and international students,” said the Dean of Graduate Studies, Professor Richard Russell.

“As one of the most research-intensive universities in Australia, the University of Adelaide offers a unique opportunity for graduate students. The University is the State’s powerhouse of research and innovation, and our academic staff and affiliates are widely regarded nationally and internationally.

“Postgraduate study is ideal for students coming to the end of their undergraduate degrees, as well as those who graduated some years ago. A postgrad qualification can be both personally and professionally rewarding for graduates of any age and background,” Professor Russell said.

Postgraduate research qualifications at the University of Adelaide include:
- Doctor of Philosophy (PhD);
- Professional Doctorate;
- Masters by research;
- Higher Doctorate.

The University also offers a wide range of postgraduate coursework programs. These qualifications include:
- Graduate Certificates;
- Graduate Diplomas;
- Masters degrees by coursework;
- Masters degrees comprising a combination of research and coursework;
- Industry-linked short academic programs of varying length.

Postgraduate Information Night
5.00pm-7.00pm Friday 31 July
Union House, North Terrace Campus, University of Adelaide
For more information and to register, visit: www.adelaide.edu.au or call +61 8 8303 5882.
ARE YOU UNDER 25, PASSIONATE ABOUT FILM AND INSPIRED BY GOTHIC CULTURE?

Then this is your chance to bring your vision to life on the big screen. The University of Adelaide is seeking productions with a Gothic theme for the Short Film Festival. Entries will be screened as part of our 2009 Open Day celebrations.

There are some fantastic prizes to win. So dive deep into your imagination, get the camera rolling or the animation moving and start telling your story!

Information about submissions for the 2009 competition is available on the Open Day website.

Screening/Judging:
Open Day, Sun 16 Aug 2009

www.adelaide.edu.au/openday
New views on world’s smallest minds

In the film When Harry Met Sally, a female diner watches Meg Ryan in faked ecstasy at the next table and famously says to the waiter, “I’ll have what she’s having.”

A recent study suggests that female fruit flies behave similarly to the diner: females go for males they have “observed” through glass in the company of other females, even if the male is in poor condition and much better physical specimens are available.

Can we say the fly has decided to “have what she’s having” on the basis of observation? Can we say she has “decided” or “observed” anything at all?

The short answer is, no. While most people think humans aren’t the only creatures with minds – and Darwinism suggests there are good reasons to believe that – there is no agreement in the cognitive sciences about where minds begin on the tree of life.

This month, scientists and philosophers from eight universities in four countries will meet at the small beach community of Carrickalinga, south of Adelaide, for an unusual, potentially groundbreaking multidisciplinary workshop. They are coming to explore the possibility of “mind” – traditionally thought of in terms of cognition, emotion and motivation – in very simple organisms, such as fruit flies, worms, and even bacteria.

The workshop is part of an Australian Research Council-funded project headed by Dr Jon Opie, Senior Lecturer and head of the Discipline of Philosophy, and postdoctoral fellow Dr Pamela Lyon, whose PhD thesis inspired the project. Dr Opie, a former McDonnell Foundation fellow in neurophilosophy, co-supervised Dr Lyon’s thesis, which won the 2006 Crawford Prize, the medal awarded for best PhD at the Australian National University.

“Pamela started looking at the behaviour of bacteria in the context of cognitive science, which was unusual,” said Dr Opie. “What struck me was the abstract similarity between the behaviour in these simple, single-celled organisms and the sorts of perception-driven behaviour we study in cognitive science. “When I looked closer at the details, I was even more surprised to see that some of the mechanisms at work in bacterial sensory systems are very similar to those we see in more complex animals. This I did not expect.”

The 12 participants at the workshop, which is also supported by the Faculty of Humanities and Social Sciences, include top international figures.

Professor Ralph Adolphs (California Institute of Technology) is a world leader on research into emotion and social cognition. Professor Colin Allen (Indiana University) helped pioneer the use of data on animal behaviour in cognitive science at a time when modelling human cognition was the focus of the field. Professor Janet Wiles (University of Queensland) heads one of the ARC’s major “Thinking Systems” programs. Professor David O’Carroll (University of Adelaide) is a leading researcher into the neurobiology of fly vision.

Others bring expertise in the role that model organisms play in biology, how concepts develop in neuroscience, and developing fruitful collaboration between philosophers and biologists.

Speaking on Radio National’s All in the Mind program last year, Dr Lyon suggested that bacteria might be cognitive. At the workshop, does she expect others to agree?

“What cognition is and what sorts of organisms have it are things for scientists to decide. Microbiologists talk about ‘memory’ and ‘communication’ and ‘decision making’ in bacteria. Are they right to do so? Who’s to say? This is just the beginning of the discussion,” she said.

Immediately after the workshop, a free public mini-conference called Minding Life will be held at the University of Adelaide, on Monday 20 July. Minding Life will enable some of the participants in the workshop to share their thoughts on these issues with the public.

For more information about Minding Life and cognitive biology, go to: www.hss.adelaide.edu.au/philosophy/cogbio/
Adelaide takes lead on industry-linked research

The University of Adelaide has become the number one university in the State for research in collaboration with industry.

This comes as 10 new research projects led by the University of Adelaide have been awarded more than $2.9 million in Federal funding.

The winning projects – spanning the fields of environment and ecology, water, agriculture, finance, health, genetics and marketing – were announced in Round 2 of the Australian Research Council’s (ARC) Linkage Projects scheme for 2009.

“This latest funding brings the total awarded for industry-linked research at the University of Adelaide this year to more than $7.2 million,” said the University’s Deputy Vice-Chancellor (Research), Professor Mike Brooks.

“It’s a welcome boost for collaborative research funding at the University, and it represents 60% of the total funding awarded under this scheme in the State this year.

“The gains in research funding demonstrate the University of Adelaide’s strong reputation for engaging with research partners such as industry and government, and meeting the needs of those partners in an applied and practical way. This is part of a trend that is seeing the University’s overall research earnings increasing year on year, including the basic research that underpins much of our innovation.

“Much of this research is aimed at addressing strategic needs for the State and the nation, which means our work can have a direct impact on the economy, the environment, and on society as a whole.”

Professor Brooks said the quality of the University of Adelaide’s research projects was outstanding, with a funding success rate over the last two rounds of 71%, well above the national average of 48% and the highest of any Group of Eight university.

Among the successful research projects to win funding in this Linkage Projects round were:

• a study of “environmental genomics”, looking at issues related to mining, climate change, water, crime and health – $500,000 to Professor Alan Cooper (ARC Federation Fellow, School of Earth & Environmental Sciences; and Director, Australian Centre for Ancient DNA);

• improved nitrogen use efficiency in cereal crops – $480,000 to Dr Brent Kaiser (Senior Lecturer, Discipline of Wine and Horticulture);

• reduced water consumption in commercial malting processes – $450,000 to Professor Geoff Fincher (Deputy CEO of the Australian Centre for Plant Functional Genomics (ACPFG)).

“Importantly, collaborative research projects attract cash and in-kind support from our other research partners. In the case of this latest round of funding, the winning projects also stand to collectively receive more than $6.3 million in contributions from our partners,” Professor Brooks said.

Story by David Ellis
Photo by Randy Larcombe
The University of Adelaide has been awarded $1.6 million from the State Government to establish a new, world-class centre for geothermal energy research.

The funding – announced recently at the University of Adelaide by the Premier, the Hon. Mike Rann – will be provided over two years to help establish the new South Australian Centre of Excellence for Geothermal Research.

“It is an honour that the State Government has chosen the University’s new geothermal energy centre as the first project to be funded by the Renewable Energy Fund,” said the Vice-Chancellor and President, Professor James McWha.

“This funding will enable the University to establish a world-class centre that will play a key role in helping to deliver a geothermal energy future for South Australia.

“The University of Adelaide’s expertise in geothermal energy is broad and deep. It includes strong industry links and a very strong collaboration with State Government through PIRSA (Primary Industries and Resources South Australia).

“This new centre will be vitally important in helping the State to achieve its renewable energy production target of 33% by 2020,” Professor McWha said.

Professor Richard Hillis, Head of the Australian School of Petroleum, is the interim director of the new South Australian Centre of Excellence for Geothermal Research at the University of Adelaide.

“South Australia is uniquely positioned to be at the forefront of Australia’s geothermal industry.” Professor Hillis said.

“The State is endowed with the nation’s most significant source of hot rocks. It is also home to the majority of geothermal licences in Australia and to the most advanced geothermal projects.

“The new centre will conduct research into enhanced geothermal systems, and in power systems that provide an economically and environmentally viable delivery of geothermal energy.

“The centre will enable South Australia to remain at the forefront of research and development in geothermal energy, and our work will result in major benefits for industry, the community and the environment,” Professor Hillis said.

Above (centre): Premier Mike Rann announcing $1.6 million in funding for the new South Australian Centre of Excellence for Geothermal Research. He’s flanked by Bruce Carter, Chair of the RenewablesSA Board (left) and Vice-Chancellor and President Professor James McWha.

Photo by David Ellis

Below: South Australia has the nation’s most significant source of hot rocks, such as those found at the Flinders Ranges.
As part of its commitment to reconciliation, the University constructed three flagpoles on the North Terrace Campus between Bonython Hall and the Ligertwood Building. These flagpoles overlook two of Adelaide’s busiest roadways: North Terrace and Pulteney Street.

The event on Friday 29 May saw the Australian, Aboriginal and Torres Strait Islander flags flown in this prominent location as a symbol of reconciliation.

“The University of Adelaide is committed to reconciliation, and to the principles of diversity, equity and social justice,” said Vice-Chancellor and President Professor James McWha.

“Flying the Aboriginal and Torres Strait Islander flags along with the Australian flag symbolises our commitment, and an acknowledgement of a shared future for Aboriginal and non-Aboriginal people. Events such as this help to remind us all that reconciliation is ongoing, that it requires a commitment from everyone, and that it should be a visible part of our community,” Professor Roger Thomas, Director of the University’s Centre for Australian Indigenous Research & Studies, said the Aboriginal flag had a special link with the University of Adelaide.

“The flag’s designer, Harold Joseph Thomas – a Luritja man originally from Central Australia – studied social anthropology at the University of Adelaide. This was after his formal training at the South Australian School of Art,” Professor Thomas said.

“Last year’s National Apology to the Stolen Generations has given impetus to the process of reconciliation in Australia. More recently, the Australian Government has endorsed the United Nations Declaration on the Rights of Indigenous Peoples. Today’s event at the University reaffirms the importance of Aboriginal and Torres Strait Islander people and culture to the University community,” he said.

The flag-raising event was opened by Kaurna Aboriginal leader Uncle Lewis O’Brien. Other key people who attended the event included Aboriginal leader Professor Lowitja O’Donoghue AC CBE, President McWha, the University’s Chancellor, the Hon. John von Doussa QC, Jardine Kiwat, 2002 NAIDOC South Australian Aboriginal & Torres Strait Islander of the Year and former University staff member, and Richard Bosworth, a member of the Stolen Generations and the University’s first Aboriginal PhD student in Science.

All staff and students were invited to attend the flag-raising event, which included a free barbecue lunch at the conclusion of the ceremony and performances by the Centre for Aboriginal Studies in Music (CASM).

Story by David Ellis

Above: Professor Roger Thomas
Below: Performers from the Centre for Aboriginal Studies in Music help to celebrate National Reconciliation Week
Photos by David Ellis
Agriculture degree reflects changes in rural sector

The new three-year Bachelor of Agricultural Sciences degree will offer a combination of laboratory training and field work at both Waite and Roseworthy campuses.

The changing face of the rural sector and an impending global food crisis has prompted the University of Adelaide to offer a new agricultural degree more relevant to the industry.

From next year the University will merge its existing Bachelor of Agriculture degree with the Bachelor of Science (Agricultural Science) degree, based predominantly at the Waite Campus.

The merger would give students a more scientific approach to agriculture without sacrificing the practical strengths of the existing course at Roseworthy, said the Executive Dean of the Faculty of Sciences, Professor Bob Hill.

"The new three-year Bachelor of Agricultural Sciences degree will offer a combination of laboratory training and field work at both Waite and Roseworthy," Professor Hill said.

"The Waite Campus is one of the premier plant research facilities in the world and our students will be able to take advantage of that."

Veterinary science, animal science and practical agronomy classes will still be taught at the Roseworthy Campus, which is experiencing a surge in student numbers for the animal-based degrees.

"We have no intention of divorcing the agriculture students from Roseworthy but we need to respond to industry needs for a more scientific approach to agriculture.

"In recent years agriculture has failed to attract sufficient students across Australia. Part of that may be due to the drought but part of it is because the courses need to be more relevant," Professor Hill said.

"Agriculture is critical to the future of the world and with the impacts of climate change and an impending global food crisis on the horizon, it is critical that we train students in a different way to meet these challenges."

The decision has received widespread support from the rural sector, including the Lucas Group, an agribusiness consulting firm specialising in recruitment.

Managing Director Geoff Lucas said the University’s decision to merge the two degree programs will give staff and students more resources.

"Falling enrolments demanded a compromise and the University has responded in a positive way,” he said. “It is up to the industry, not the University, to put more money and resources into promoting agricultural education because otherwise we will fall behind the rest of the world.”

The new program will broaden the agricultural career path available to the University’s graduates and includes a number of interstate field trips and a 12-week internship.

"The Waite and Roseworthy campuses are recognised as centres of excellence in agricultural science and this reputation underpins the new Bachelor of Agricultural Sciences," Professor Hill said.

The program will train students in the physical, biological, technological and economic bases of modern agricultural systems, with graduates equipped to solve industry problems and apply new technology in their areas of specialisation.

Story by Candy Gibson
Photo by Randy Larcombe

Art & Heritage Collections

The most exciting part of Art & Heritage Collections’ work is the way in which the nexus between collections, art and culture, and the academic disciplines is utilised to present innovative projects to both the University and the broader community.

To celebrate NAIDOC week, Art & Heritage Collections collaborated with the University Library’s Special Collections and the Discipline of Linguistics to present a display on Endangered Languages: disappearing diversity.

This was drawn from the holdings of the Library and personal collections of University academics working in this area.

A symposium discussing the same theme will be held on Thursday 9 July in the Ira Raymond Room, Barr Smith Library (see the Coming Events on page 19 for more information).

Projects such as these ensure that University collections play an important part in the cultural landscape of South Australia.

Above: Gugada Interactive Talking Dictionary and Gugada Language Cards Wirangu, held in the Special Collections, but used as teaching tools within the community

Mima Heruc, Manager, Art & Heritage Collections

Art & Heritage Collections

The University of Adelaide

AGRICULTURAL SCIENCE
Rural networks have impact on men: researcher

A new study at the University of Adelaide’s School of Psychology is investigating how important social support and community networks are for the happiness of rural men.

Honours student Stephanie Kutek (pictured) is conducting research on the subjective well-being of rural men in South Australia.

She is examining the influences of social support and sense of community on the levels of satisfaction with life that rural men experience.

“Rural men often have poorer health outcomes than both urban men and rural women. The rates of suicide among rural men are of particular concern as these have been steadily increasing over the past 20 years,” said Ms Kutek.

“Social support and sense of community have been found to be protective of mental health in rural communities.

“However, with the current challenges facing rural towns, including decreasing populations and economic difficulties, many local services and amenities in rural Australia are being disbanded in areas where local community organisations and sporting groups are already struggling to keep going.

“These changes have the potential to impact the health and well-being of rural residents.”

Ms Kutek’s study is looking at men over the age of 18 and currently living in a rural area.

“I hope that this study will provide further evidence showing that greater levels of social support and sense of community boost levels of well-being.

“Hopefully, this will have an impact on the services available to rural men and, in turn, help rural men find more satisfaction with their lives,” Ms Kutek said.

For more information about research in the School of Psychology, visit: www.adelaide.edu.au/psychology

Investment needed in green industry

Australia will need to invest heavily in green industries if it wants to keep pace with the new economic paradigm of the 21st century.

That’s according to the Executive Director of the new Environment Institute at the University of Adelaide, Professor Mike Young.

Professor Young said governments and industries around the world were changing their investments and business models to comply with environmental needs.

“There is enormous global investment in new ways of recycling water, in renewable energy and environmental monitoring and unless Australia follows suit, its economy will be left behind,” he said.

Professor Young is in charge of four centres and two programs at the University of Adelaide’s new Environment Institute, which was officially launched on the eve of World Environment Day last month at the National Wine Centre by the SA Minister for Environment and Conservation, the Hon. Jay Weatherill.

Minister Weatherill and Professor Young were among several speakers, including the Federal Member for Port Adelaide, Mr Mark Butler, Professor Robyn Williams from the ABC’s Science Show, and the University’s Vice-Chancellor and President, Professor James McWha.

The Environment Institute brings together expertise in economics, water, renewable energy, environmental change, biodiversity, engineering and policy to develop new solutions to the world’s most pressing environmental problems.

The Director of Climate Change in the Environment Institute, Professor Barry Brook, said Australia must be bold in developing new energy solutions.

“Australia is one of the countries that have the most to lose from global warming, yet we are also perfectly placed to establish ourselves as a renewable energy leader on an international scale,” he said.

Minister Weatherill said the South Australian Government led the nation in attracting investment for alternative energy sources such as geothermal energy, wind power and solar energy.

“We will continue to support research and investment in the green sector but it is up to all of us, not just governments, to lead the way. How we make our purchasing and investment decisions and where we apply our creative energies will determine how well Australia takes advantage of the new economic realities.”

Full details about the launch of the Environment Institute, including a promotional video and podcasts of speeches given on the night, can be found at: www.adelaide.edu.au/environment

Story by Robyn Mills and Sandhya Rughoo

Story by Candy Gibson

Photo by iStock
Announced at a lunch with Prime Minister Kevin Rudd in Canberra last month, Professor Monro is the winner of The Weekend Australian Magazine’s Next 100 Emerging Leaders series in the Science category.

The national newspaper chose 100 emerging leaders in 10 key areas of national life, and profiled them in the newspaper over 10 weeks starting in April. The top 10 leaders – the winners in each category – were profiled in the paper on the weekend of 20-21 June.

Professor Monro, 36, is the Director of the University of Adelaide’s new Institute for Photonics and Advanced Sensing and Director of the Centre of Expertise in Photonics. This is the latest in a number of prestigious awards and recognition she has received since starting at the University of Adelaide in early 2005 as the inaugural Chair of Photonics.

Last year she was named Physical Scientist of the Year – one of the five Prime Minister’s Science Prizes – after earlier in the year being awarded one of the 2008 Australian Research Council Federation Fellowships.

Professor Monro has created a new class of optical fibres with innovative potential applications in medical research, defence, industry and environmental science. She is regarded as one of the world’s leaders in optical fibre technology.

This new class of optical fibres, containing air holes and made from soft glass, is broadening the role of optical fibres from communications to areas such as diagnostics – detecting trace quantities of chemicals or biomolecules – and a variety of medical and defence applications.

Professor Monro’s work has received support from both State and Federal governments, as well as the Defence Science & Technology Organisation.

The University’s new Institute for Photonics and Advanced Sensing brings together research in optical fibres, lasers, luminescence, chemistry, proteomics and virology to develop new technologies focusing on some of the big problems in health, the environment, industrial processes and defence. With the specialised laboratories under construction later this year, the Institute’s facilities will be unrivalled in the world.

Professor Monro is a member of the South Australian Premier’s Science & Research Council, a founding steering member of the Royal Institution of Australia, and member of the 2008 community consultation panel for the Defence White Paper. In 2007, she was awarded the ‘Women in Physics Lecture’ by the Australian Institute of Physics and, in 2006, a Bright Spark award for Australia’s Top 10 Scientific Minds under 45 by Cosmos magazine.

The University of Adelaide had three of its scientists in the list of 10 Emerging Leaders in Science. The others were Associate Professor Sarah Robertson and Professor Mark Tester.

Story by Robyn Mills

Professor Tanya Monro
Photo by Kelly Barnes, courtesy of The Australian
Chronic diseases among older, lower income and obese Australians have increased markedly in the past 15 years, according to University of Adelaide researchers. Diabetes, high cholesterol and high blood pressure have escalated among these groups since the 1990s, researchers from the University’s School of Medicine have established after examining data from two Australian National Health Surveys.

Co-author Dr Evan Atlantis presented the findings at the 2009 Heart Foundation Conference in Brisbane. Early career research fellow Dr Atlantis and his colleagues, biostatistician Ms Kylie Lange and Professor Gary Wittert, Head of the University’s School of Medicine, co-authored a paper on their findings, recently published in the international journal Obesity Reviews.

Dr Atlantis said health surveys done in 1989-1990 and 2004-05 showed that people aged 60 and over, those in the lowest 40% for income distribution and obese Australians are at much greater risk of chronic disease.

He said the findings were concerning in light of Australia’s ageing population, and required more research to understand why disease rates have increased in select groups.

“Roughly two-thirds of Australians are now at least overweight and/or don’t engage in sufficient physical activity levels for health benefits. These Australians are likely to be hit hardest with rising rates of chronic diseases,” Dr Atlantis said.

The University of Adelaide researcher has called for government policies that influence the quality and content of Australia’s food supply and increase opportunities for more recreational physical activity.

“DNA looping is responsible for controlling the expression of genes in cells. It is believed to play a key role in a number of diseases, including many cancers. The looping occurs due to the binding of proteins to different regions of the DNA. These proteins interact with each other so that the DNA loops in between them. The funding, from the Human Frontier Science Program based in France, has been awarded to Dr Keith Shearwin and Dr Ian Dodd in the University’s School of Molecular and Biomedical Science. Their research aims to discover how the correct DNA loops are formed to ensure that the right gene is turned on at the right time and place.

This will be done by comparing DNA looping inside the cell with looping in the test tube and with predictions obtained through computer simulation.” Dr Shearwin and Dr Dodd will design the DNA sequences that will be used for the project and will be testing DNA looping inside the cell.

“It is basic research which underpins applied science. Understanding how genes are controlled has huge implications for health and for anything that depends on biology, not only for humans but also all sorts of organisms,” Dr Dodd said.

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“DNA looping is responsible for controlling the expression of genes in cells. It is believed to play a key role in a number of diseases, including many cancers. The looping occurs due to the binding of proteins to different regions of the DNA. These proteins interact with each other so that the DNA loops in between them. The funding, from the Human Frontier Science Program based in France, has been awarded to Dr Keith Shearwin and Dr Ian Dodd in the University’s School of Molecular and Biomedical Science. Their research aims to discover how the correct DNA loops are formed to ensure that the right gene is turned on at the right time and place.

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Action on climate change starts early at Waite

Youngsters at the Waite Campus Childrens Centre are learning from an early age that “green is good”.

The centre has introduced a range of green initiatives over the past two years as part of its aim to achieve a sustainable future for children.

The push to “go green” originally came from the centre’s Sustainable Futures for Children Committee, formed in early 2007. This resulted in the centre choosing internationally respected, Australian-based carbon reduction and management company Climate Friendly, to help implement a long-term carbon footprint measurement and offset strategy.

“As a first step, we measured emissions associated with the operation of the centre, including electricity, natural gas, air travel, paper, and waste emissions,” said the Director the Waite Campus Childrens Centre, Kaarin Wilkinson.

“We opted to offset our unavoidable greenhouse gas emissions by purchasing GreenPower and VCS renewable energy carbon credits – GreenPower for electricity emissions, and renewable energy carbon credits sourced by Climate Friendly from the Gudhepanchgani wind farm, India, for all other emissions sources.

“Last year we offset 37.7 tonnes of emissions, and the centre has now committed to offsetting another 28.2 tonnes of emissions for 2009,” Ms Wilkinson said.

As part of its aim to achieve a sustainable future for children, the Waite Campus Childrens Centre has installed rainwater tanks that will save 225,000 litres annually.

“The rainwater tanks are interconnected and act like one large tank, collecting water from the southern and western roof areas,” Ms Wilkinson said.

“Rainwater is used in areas of the centre that have high daily demand, such as toilets and the laundry. The installation of water-efficient taps and toilets, a water-efficient washing machine and dishwasher also reduce water use.

“The children’s sandpit area has its own rainwater tank with a gauge that allows children to see when the tank is full and to monitor water usage. This supports children’s appreciation of water as a finite resource,” she said.

In the coming months, the children’s centre will also be installing grid-connected solar panels with a real-time display showing the energy they generate.

For more information about the green initiatives at the Waite Campus Childrens Centre, contact Kaarin Wilkinson: +61 8 8303 6560.

Above: Ben and Edwin are among the many students at the Waite Campus Childrens Centre to get hands-on experience of green initiatives
Photo by the Department of Education and Children’s Services

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Applications for the 2010 program close Wednesday 2 September 2009
With the theme Pushing the Limits, the 6th Adelaide Festival of Ideas will be held in Adelaide from Thursday to Sunday, 9–12 July.

The event features more than 40 leaders in their fields from Australia and overseas, who will discuss and engage with the public on major topics of concern today, including genetic engineering, population, water, health, astrophysics and freedom of speech.

The festival is widely accessible to the public, with more than 50 free daytime sessions and three ticketed evening sessions.

Among the Australian speakers is Professor Chris Mortensen, Emeritus Professor of Philosophy at the University of Adelaide.

This year’s event is dedicated to a great Australian medical scientist, Professor Frank Fenner.

Professor Fenner graduated in medicine from the University of Adelaide in 1938 and completed his Doctor of Medicine degree in 1942. He has had an outstanding career as a microbiologist and world expert on pox virus. He conducted pioneering studies to investigate how common virus infections spread through the body and produce disease, and he played a major role in the introduction of myxoma virus to combat Australia’s rabbit plagues, which were causing great harm to the agricultural industry and the environment.

Professor Fenner was Chairman of the Global Commission for the Certification of Smallpox Eradication. Smallpox was one of the world’s most virulent viruses, responsible for millions of deaths and leaving many surviving victims with disfiguring scars. In 1980 Professor Fenner announced the eradication of smallpox to the World Health Assembly.

He has received numerous awards and honours including the Japan Prize – a prize for applied science regarded as the equivalent of the Nobel Prize. He has been made a Companion of the Order of Australia, a Commander of the Order of St Michael and St George and a Member of the British Empire.


In 2007, Professor Fenner was awarded a Doctor of the University (honoris causa) from the University of Adelaide.

For more information about the Festival of Ideas, including a full list of speakers and the program, please visit: www.adelaidefestivalofideas.com.au

Above: Professor Frank Fenner with sister Winifred at a University of Adelaide graduation ceremony in 2007

Photo by Candy Gibson

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Young offenders’ health critical to rehabilitation

New research at the University of Adelaide is helping to provide a clearer picture of the all-important health needs of young offenders.

“Health – both mental and physical health – is an issue that has a serious impact on young offenders,” said Dr Anne Wilson, Senior Lecturer in the Discipline of Nursing and lead author of the study.

Dr Wilson and Phillip Tully, a PhD student in the School of Psychology, conducted a review of previous research into the health of young offenders undertaken in Australia, the US, the UK and Europe since 1997. Among the issues considered by the review were the health needs of young offenders, their utilisation of health services, and the kinds of programs and interventions that would assist them when discharged from secure care.

The results of the review have been published in the Australian Journal of Primary Health.

“The health of young offenders and detained adolescents is commonly poorer in comparison with the general youth population. Previous studies document the growing concern for health issues regarding young offenders, including their risk-related behaviours, mental health, social and family problems, and other physical health deficits,” Dr Wilson said.

Figures from the Australian Institute of Criminology show that the incarceration rates in juvenile correctional facilities have remained stable at 44 per 100,000 for males and five per 100,000 for females. “But the underlying problems affecting these young offenders need to be addressed as a priority, if they are to be successfully rehabilitated and reintegrated into the community,” she said.

The key issues for young offenders are mental, physical and social aspects of health.

“Mental health, grief or trauma are among the most common issues impacting on young offenders, with the high prevalence of mental health disorders consistent among both male and female juvenile offenders,” Dr Wilson said.

“Youth who are detained in secure care show significantly higher rates of mental health issues than young offenders who are not detained.”

The review identified various factors for successful mental health and trauma care, including: improving existing mental health services; identifying mental health problems with a high-quality screening process; ongoing support within and outside of secure care; improving the availability of services; and linking offenders directly to primary health or mental health services on release.

“The poor level of physical health experienced by young offenders in secure care is largely unsurprising given adolescent offenders’ more frequent substance abuse, head injury, exposure to direct trauma injuries or exposure to violence, hepatitis C infection and liver disease, and exposure to sexually transmissible diseases,” Dr Wilson said.

For young female offenders, high-risk sexual behaviour leads to higher rates of pregnancy among youth, with estimates suggesting between 1% and 9% of detained youth are pregnant.

“The reality is that many of these young women give birth while in custody, which is of great concern to health professionals. Consequently, sexual health, obstetric and gynaecological care have been identified as essential health needs for female offenders. Bodyweight and eating disorders are also issues among young female offenders.”

Dr Wilson said improving young offenders’ access to health care could go some way to addressing their poor physical health status.

“However, additional social factors, such as education, peer support and family support, are likely to determine whether young offenders access the services they need.

“There is little doubt that those released from secure care face immense challenges to maintaining their health and well-being,” she said.

Dr Wilson said effective planning is needed to address ongoing health issues for young offenders.

“By utilising a comprehensive screening measure, individual plans can be formulated upon the offender’s admission to secure care, with a view to looking ahead to their eventual discharge and their return to society.”

Story by David Ellis
Photo by Daniel Camilleri
Lumen sheds light on our graduates

Too many Australians remain unable to live free from violence, harassment and discrimination.

That’s the view of former Federal Court judge and University of Adelaide Law and Arts graduate the Hon. Catherine Branson QC, who became President of the Australian Human Rights Commission last year.

A comprehensive interview with Ms Branson is the cover story of the latest issue of the University of Adelaide alumni magazine, Lumen.

In Lumen, Ms Branson talks about the need for more work to be done in Australia on human rights protection for indigenous Australians, people with disabilities, asylum seekers and others.

And, she says, less blatant forms of discrimination remain pervasive in Australia. “For example, discrimination can occur when workplaces unnecessarily fail to provide family-friendly working arrangements; and when assumptions are made, rather than questions asked, about what a person with a disability can do,” she says.

The Winter 2009 Lumen also celebrates the 120th birthday of the Adelaide Medical Students’ Society, the oldest and most active student society on campus with an illustrious list of past presidents including Lord Howard Florey.

Lord Florey’s contribution and that of thousands of other medical students is being honoured as part of the birthday celebrations and Lumen outlines some of the Society’s recent charitable works including self-funded placements at a hospital in the remote highlands of Papua New Guinea.

Other graduates profiled in this issue include National Farmers Federation Chief Executive Officer Ben Faragher, who talks about his passion for agriculture and his time at the University’s Waite Campus, “the best in the country”, and Engineering graduate Drew Ward, Chief Executive of the Australian Grand Prix Corporation.

Drew Ward had senior organisational roles for both the Sydney 2000 Olympic Games and the 2006 Melbourne Commonwealth Games and is now overseeing the Australian Formula 1 Grand Prix and the Australian Motorcycle Grand Prix.

Lumen also hears from Kristina D'ryza, who has forged an international career from spotting trends, Sir Donald Bradman’s vocalist grand-daughter Greta Bradman, and the University’s first Ramsay Fellow, Dr Kate Wegener.

Lumen is published twice-yearly and goes to 55,000 members of the University’s Alumni community. Alumni can keep track of some of their old course-mates in ‘Alumni – on the move’ and keep up with other Alumni happenings.

For any alumni who would like to be put on the mailing list, please email: alumni@adelaide.edu.au

Lumen can be read online at: www.adelaide.edu.au/lumen

Story by Robyn Mills

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University says thank you to volunteers

The University of Adelaide has paid tribute to its 1600-plus volunteers, recognising their contribution in a ceremony at Bonython Hall attended by the South Australian Governor, His Excellency Rear Admiral Kevin Scarce AC, CSC.

The morning tea event was held to thank the University’s volunteers who, in 2008, contributed more than 156,000 hours of their time to the University.

The Patron of the University’s Volunteer Program, Mrs Lindsay McWha, said this time equated to around $3.5 million in paid hours.

“This is of significant benefit to the University and should be formally acknowledged,” she said.

“The University of Adelaide actively encourages and promotes the culture of volunteering. We recognise that volunteers are a valuable resource and do so much to enhance the University’s programs, activities and community relations,” Mrs McWha said.

There is a long history of volunteering at the University of Adelaide in many forms, including: the Florey Medical Research Fund; the Barr Smith Library Volunteer Group; the Alumni chapters; the award-winning Radio Adelaide; the Waite Campus; the Don Dunstan Foundation; the Theatre Guild, and many others.

“There are a lot of people who have been volunteering at the University for decades,” Mrs McWha said. “Many are graduates and former staff who have enjoyed their time here and want to continue to be involved.

“It’s a good way to learn more about the University community, meet more people, find out how the place works and enjoy just making a contribution, however small.”

The Minister for Volunteers, the Hon. Tom Koutsantonis, joined the Governor and the University of Adelaide’s Vice-Chancellor and President, Professor James McWha, and Lindsay McWha to acknowledge the volunteers.

“The University of Adelaide’s volunteers reflect the great volunteering spirit in South Australia,” Mr Koutsantonis said.

“About 600,000 South Australians donate their time and skills to help others and we salute their huge contribution to the State. Every day volunteers improve our environment, culture, welfare, education, safety and health,” he said.

Story by Candy Gibson

Above (from left): The South Australian Governor, His Excellency Rear Admiral Kevin Scarce AC, CSC, with Florey Medical Research Foundation volunteer Dorothy Rogers, the Patron of the University’s Volunteer Program, Mrs Lindsay McWha, and the Vice-Chancellor and President, Professor James McWha

Photo by John Hemmings
South Australia’s top award for an arts graduate has been won by a talented flute player from the University of Adelaide’s Elder Conservatorium of Music.

Anouvong Liensavanh, who graduated last year with a Bachelor of Music (Honours) specialising in classical flute, has won the $5000 Bendigo and Adelaide Bank Award.

The 21-year-old musician is considered to be among the most exciting performers to emerge from the Elder Conservatorium in recent years, and has shown great commitment and initiative in his studies and early career. He was presented with the $5000 award at the Helpmann Academy’s Maestros & Apprentices fundraising dinner last month.

In addition to his experience as a soloist, Anouvong has performed with numerous orchestras over the past four years, including the Elder Conservatorium Wind and Chamber Orchestras, the Norwood Symphony Orchestra and the Australian Youth Orchestra. He also played with Co-Opera’s regional tour of La Traviata as Principal Flute.

Anouvong recently ranked an impressive 2nd in the flute auditions at Yale University in Connecticut, USA. While this Ivy League college only admits one flute player each year, Anouvong was thrilled at the result, and has since been accepted into the Masters course at the Royal College of Music in London, England.

Through its sponsorship of the State’s leading award for an arts graduate, the Bendigo and Adelaide Bank aims to provide meaningful support for talented South Australians pursuing a career in the arts.

“Anouvong is a talented musician who is already making a significant impact internationally. I am sure we are all witnessing the beginning of a major international career, starting right here in Adelaide,” said Jamie McPhee, Chief Executive, Partner Advised Bank, Bendigo and Adelaide Bank.

“We take great pride in enhancing the lives of South Australians by supporting artistic, cultural and business activities which we hope will help create a brighter future for South Australians, particularly our young people.”

The Bendigo and Adelaide Bank winner was chosen from a select field of outstanding 2008 graduates from each of South Australia’s major arts institutions: Adelaide Centre for the Arts (TafeSA), Adelaide Central School of Art, Elder Conservatorium of Music (University of Adelaide), Flinders Screen Production and Drama Centre (Flinders University), South Australian School of Art (UniSA) and Vizarts, O’Halloran Hill (TafeSA).

Proceeds from the Maestros & Apprentices black-tie dinner – this year themed Starry, Starry Night – provide significant benefits to students and recent graduates from the Helpmann Academy’s partner schools, by assisting with funding for projects, facilitating visiting artists, student exchanges and creating performance and exhibition opportunities both in Australia and abroad. The event has grown enormously in popularity since it began in 1996, and is a showcase of the very best of South Australia’s food, wine and emerging creative talent.
Rising to Global Power
How Australia could supply the whole world’s energy needs

Future energy supply is a major global problem. Although no-one knows exactly when oil production will cease, its days are undoubtedly numbered and its environmental shortcomings well recognised.

Clearly, however, any alternatives that involve extracting resources from the earth will be similarly unsustainable, at best only temporarily deferring the problem. So where does the answer lie?

According to the University of Adelaide’s Professor Derek Abbott, it could be right here in Australia.

In this exciting presentation, he examines the question of how – by expanding our vision to consider energy supply on a massive scale – an Australian collaboration between electrical engineers, economists and chemical engineers could potentially power the entire world.

Derek Abbott is a Professor in the University of Adelaide’s School of Electrical and Electronic Engineering. He is a former winner of the Premier’s SA Great Award in Science and Technology (2004) and has received scientific reportage in New Scientist, Nature, Scientific American and more.

WHEN: 5.30-6.30pm Tuesday 14 July
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