Universities are unique organisations, concerned with the dual purpose of manufacturing and distributing knowledge.

Evaluating our performance in producing knowledge has just become more transparent, thanks to the Excellence in Research for Australia (ERA) initiative. How do we ensure that our capacity to distribute knowledge, the very purpose of education, matches our capacity to produce it? And what does distributing knowledge actually mean?

The Australian Higher Education sector has struggled with this notion for some decades. Recent governments appear to want universities to operate as both a tool for social engineering and a commercially driven, export revenue-earning sector, while employers and society at large judge us on our capacity to add value to our graduates.

To satisfy the most basic needs of students and employers, we must first ensure that knowledge transfer actually occurs. This is best done by focusing on learning outcomes, as opposed to teaching practices. In other words, universities must demonstrate a degree of flexibility and be willing to enhance the students’ capacity to absorb, interpret and comprehend the discipline-based information we offer them.

Many have argued that our purpose, as a university, should not be just to make students job-ready. I agree. This is too restrictive, amounting to little more than the imparting of skills soon to become obsolete in a fast changing world.

What we should aim to do, what we should thrive for, is to make our graduates ‘world-ready’.

Knowledge is a global construct. Countries are no longer economically independent. The future wealth and wellbeing of Australia depends on what happens in China. In this context, our mission, our contribution, our value proposition to society as well as to our students should be that graduates from the University of Adelaide are not only job-ready, not only life-ready, but absolutely world-ready.

To achieve this, we must embrace internationalisation in a more proactive way. Internationalisation is not about welcoming as many international students as we can, although creating a multicultural community of staff and students is very much part of the equation. To succeed in making our graduates truly world-ready, we must ensure that our curriculum is not only internationalised but also modular, so blocks of study can be taken by foreign students, just as courses offered by our international university partners should become ‘modules’, that local students can use to build their own pathway of learning.

Educational experiences abroad, be they study tours or whole semesters, should become the norm for University of Adelaide students rather than a challenge filled with unfamiliarity and uncertainty as they are widely perceived today.

We shall know we have achieved our objectives when students do not question ‘if’ but ask ‘when’ they will study abroad as part of their degree. Australia lags far behind the rest of the world when it comes to student mobility. Yet to equip our students as tomorrow’s global citizens, we must take the lead in developing relevant international learning experiences, thereby delivering genuine excellence in global education.

PROFESSOR PASCALE QUESTER
Deputy Vice-Chancellor and Vice President (Academic)
Gates scholarship takes Edward to Cambridge

A University of Adelaide graduate has been named among the world’s most brilliant students, winning one of the prestigious Gates Cambridge Scholarships.

Edward Yapp, 23, from Brunei, completed his double degree in Chemical Engineering (First Class Honours) and Finance at the University of Adelaide. His academic excellence earned him a University Medal and the honoured position of mace bearer for his graduation ceremony last April.

Even before he graduated, Edward had been awarded a Gates Cambridge Scholarship, one of the highly competitive scholarships for study at the University of Cambridge.

The scholarship will enable Edward to study for a PhD in Chemical Engineering.

“I never expected it, but I am really grateful for the opportunity. It will help me to challenge myself,” Edward said of his scholarship.

“I hope to complete my PhD at Cambridge in three or four years and enter the industry, where my knowledge and technical skills may be applied to real-world problems,” he said.

Edward, who was studying at the University of Adelaide on an international scholarship, said his time at the University was well spent.

“I got to know many excellent lecturers, in particular Dr Ken Davey and Dr Yung Ngothai, who showed concern for students. I was also recommended to be a part-time tutor, which I enjoyed very much,” he said.

In addition to his studies, Edward was involved in sports such as mountain biking, jogging, table tennis and basketball. He will begin his PhD at Cambridge in October.

The Gates Cambridge Scholarship was established from a US$210 million donation to Cambridge from the Bill & Melinda Gates Foundation.

To see more photos from the recent University of Adelaide graduation ceremonies, turn to pages 18-19.

To view the range of scholarships available at the University of Adelaide, visit: ua.edu.au/scholarships

Story by David Ellis
Above: University of Adelaide Medallist and Gates Cambridge Scholar Edward Yapp was the mace bearer at his graduation ceremony in April
Photo by David Ellis
Professor Zuckermann, who holds an Australian Research Council (ARC) Discovery Fellowship, has vowed to make Adelaide a world centre for language revival.

His new role as Professor of Linguistics and Endangered Languages in the School of Humanities will involve both research and teaching, with the aim of establishing a new sub-discipline of linguistics – “revival linguistics”.

“Along with my colleagues Professor Peter Mühlhäusler and Professor Rob Amery, I shall be analysing how to resurrect languages that are no longer spoken or about to become extinct,” Professor Zuckermann said.

These include more than 100 Aboriginal languages that are “critically endangered”.

Professor Zuckermann said one of his goals was to raise the value of language diversity in today’s society, given the prediction that 90% of the world’s 6000 languages will disappear by 2100.

“From an Australian perspective, it is critical on a number of fronts that Aboriginal languages are revived and preserved. These fascinating, complex languages provide a sense of identity for Aboriginal people, reflecting a close interaction with their culture, heritage and history. Reclaiming and maintaining Aboriginal languages helps to empower some Indigenous people and give them a strong sense of pride and purpose,” Professor Zuckermann said.

Professor Zuckermann said Aboriginal traditions, spirituality, ecology and land were inextricably linked to their languages.

The multilingual Israeli academic is internationally renowned for his innovative and provocative approach to language revival (Modern Hebrew in particular), defining himself as an anti-purist.

“I don’t think we should be rigid about languages. They are forever changing and evolving and are the result of cross-fertilisation of numerous lects and languages.

“Even if you isolated a community on the moon without external influences, you would find in the space of several generations that their language would have altered significantly.”

Professor Zuckermann holds doctorates from Oxford and Cambridge universities and has taught at universities in the United Kingdom, United States, China, Israel, Singapore, Slovakia and Australia. He has also been a senior research fellow in Italy and Japan.

He has published several books and numerous articles in eight different languages.

Professor Zuckermann has also consulted to the Oxford English Dictionary and Oxford University Press, among many others, and delivered hundreds of keynote speeches, plenary conference papers and public lectures.

Although he officially started at the University of Adelaide in February, Professor Zuckermann spent the first three months of his appointment as a Distinguished Visiting Professor at Shanghai International Studies University.

“I hope to make Adelaide known in the world as the place where revival linguistics emerged as a new paradigm of linguistics,” he said.

“We have the core expertise here – with strengths in Kaurna, Israeli and creole languages – and with the help of the Mobile Language Team, established in 2009 through Federal Government funding, we can go a long way towards supporting and reviving Aboriginal languages in South Australia as a first step,” Professor Zuckermann said.

To read more about the University of Adelaide’s work supporting Aboriginal languages and resources in South Australia, visit: ua.edu.au/linguistics/mlt

The University of Adelaide offers both undergraduate and postgraduate linguistics degrees. If you’re interested visit: ua.edu.au/programs/2011

Story by Candy Gibson
Main image: photo by Stock
Inset: Professor Ghil’ad Zuckermann
Photo by Candy Gibson

Endangered languages have a new champion

The University of Adelaide has appointed Australia’s first Chair of Endangered Languages – Israeli-born, Oxford-education linguist Ghil’ad Zuckermann.
Brain tumour lab aims to cut cancer deaths

A new brain tumour research lab has opened at the University of Adelaide.

The lab will be used to investigate the causes behind brain cancer, which is one of Australia’s most aggressive and least understood cancers, killing one Australian every six hours.

A generous donation from Santos to the NeuroSurgical Research Foundation (NRF), along with additional money raised by South Australia Police, will fund the Dean Bowman Brain Tumour Laboratory.

The laboratory is named in honour of one of Santos’ senior executives who died from a brain tumour in 2010.

“Brain cancer is the leading cause of cancer death in people aged under 40, yet research into this area is badly needed as survival rates have not improved in two decades,” said Professor Bob Vink, the Chair of the NeuroSurgical Research Foundation and Head of the School of Medical Sciences at the University of Adelaide.

Professor Vink said the new laboratory, which opened last month, would provide world-standard equipment and fund much-needed research into brain cancer, which has an almost 100% fatality rate.

“More than 1400 people die of brain cancer each year in Australia and it accounts for more than one third of cancer deaths in children aged under 10,” Professor Vink said.

“The establishment of this research laboratory will allow us to really focus our research on brain tumours, and more specifically how brain tumours enter the brain and subsequently gain a foothold.

“By preventing cancer cells from other parts of the body entering the brain, we hope to reduce the impact of brain cancer and save lives in the process.”

An annual cycling event launched by South Australia Police to support the NRF has raised $160,000 in the past two years, some of which will be used to outfit and run the new Dean Bowman Brain Tumour Research Laboratory.

“Having the latest equipment is vital if we want to remain at the cutting edge of medical research and maintain our five-star world rating in clinical health research,” Professor Vink said.

The University of Adelaide established Australia’s first Chair of Neurosurgical Research in 1992 with funding from the NRF. The first Chair was Professor Nigel Jones and Professor Vink has been the NRF Chair since 2004.

For more information about the NeuroSurgical Research Foundation or to make a donation, go to: nrf.com.au

Story by Candy Gibson
Image by Miranda Knox

Complementing the University of Adelaide’s recent confirmation as an outstanding research institution in the field of Health Sciences, we acquired six new works by artist Cheryl Hutchens.

Hutchens is an Adelaide-based textile artist whose interest in making artworks with fabric and fibre can be traced back to her childhood.

The work pictured here is a most intriguing representation of infectious diseases, all stitched in cotton thread on calico. Hutchens uses a variety of embroidery stitches closely depicting the formations of bacteria and viruses as seen under the microscope.

The work was brought to our attention by an emerging curator, Nerina Dunt, a graduate of the Art History program at the University of Adelaide, who curated an exhibition of Hutchens’s work – Break, suffer, heal – in the Barr Smith Library last March.

If you wish to arrange a viewing of the work, please email us at: art.heritage@adelaide.edu.au
Year of Chemistry

Staff and students from the University of Adelaide are joining in the celebrations for the International Year of Chemistry (IYC 2011).

“IYC 2011 aims to increase the public’s understanding and appreciation of chemistry, including sparking the interest of young people and generating enthusiasm for the creative future of chemistry,” said the Head of Chemistry at the University of Adelaide, Associate Professor Greg Metha.

“In Australia, IYC 2011 will feature a program of public events, tours and exhibitions spearheaded and hosted by the Royal Australian Chemical Institute and its partners, including the University of Adelaide.”

Among the many events being planned for the rest of the year, University staff, students and graduates in chemistry will play a leading role in the following:

Wednesday 29 June
A hands-on chemistry demonstration for Years 9 and 10 students as part of Aim for Adelaide, an event for students from Fairway schools.
Venue: University of Adelaide

1-29 August
Periodic Table travelling art exhibition. The University’s School of Chemistry & Physics and the Faculty of Sciences have sponsored the element “Uranium”.
Venue: South Australian Museum

Friday to Sunday 5-7 August
A chemistry presentation over three days will be held jointly by the University of Adelaide, Flinders University and University of South Australia as part of Science Alive!
Venue: Wayville Showgrounds

Sunday 21 August
Open Day at the University of Adelaide will feature fun and educational displays of slime, liquid nitrogen and sugar chemistry, as well as talks on what careers studies in chemistry can lead to.

Tuesday to Wednesday 27-28 September
Special chemistry demonstrations and presentations by chemistry graduates highlighting their careers, as part of Maths Science Life Impact, a University event for Year 9 students.
Venue: University of Adelaide

For more information about IYC 2011, and to see videos of students talking about the exciting work they’re involved in, go to: ua.edu.au/chemistry/iyc
You can also contact the Head of Chemistry, Associate Professor Greg Metha: greg.metha@adelaide.edu.au
or 08 8303 5943

Small solution to a big problem

Nanochemistry could hold the key to one of the biggest challenges in the fight against greenhouse gases: how to capture, separate and transform them.

A team of leading scientists from some of Australia’s top universities and research institutes, including the University of Adelaide, have joined forces to develop a chemical solution to carbon dioxide. Awarded $6 million from the CSIRO’s Science and Industry Endowment Fund (SIEF), the team will explore how smart nanomaterials – combining both metal ions and organic molecules – can be used to capture and separate CO2, and then convert it into something more useful and less damaging to the environment.

The five-year research project, called Solving the Energy Waste Roadblock, is led by the University of Sydney and involves two staff from the University of Adelaide’s School of Chemistry & Physics, Dr Christian Doonan and Dr Chris Sumby.

“There have been some very exciting developments in nanomaterials in recent years that may enable us to utilise these materials in ways not realised before,” Dr Doonan said.

“To give you an example of the kinds of materials we’re talking about, if we had just one teaspoon of them and tried to unravel them, they would easily cover the surface of an entire tennis court.

“The specific materials we’re looking at are known as metal-organic frameworks. These are very complex, very light materials with many ‘holes’ or ‘pockets’. They have an incredible capacity to draw in and store gases such as carbon dioxide, and are able to trap a large amount of the gas in a very small space,” he said.

While one part of the project focuses on the exact composition of the metal-organic frameworks being used to capture the carbon dioxide, another part of the project will look at how to give those materials catalytic properties so that, when trapped, the carbon dioxide can be converted into something useful.

This could involve converting CO2 into substances such as feedstocks for agriculture, hydrocarbon fuels, or materials that could be helpful in making solar cells.

“There are a range of possibilities available to us,” said Dr Sumby.

“Once we’ve done our work on the chemistry, other collaborators on the project will investigate how to scale up the results and apply it to industry – such as for the removal of carbon dioxide from the flues of power plants, or in other industries.

“It’s an exciting area of research, and one that we hope will make a significant and lasting impact on the greenhouse gas situation our world is currently facing,” he said.

The collaborative partners in this project are: CSIRO, the University of Sydney, Monash University, the University of Melbourne, the University of New South Wales, the University of Adelaide, the Australian Nuclear Science and Technology Organisation (ANSTO) and the CRC for Greenhouse Gas Technologies.

Story by David Ellis
New life for Adelaide’s riverbank

A University of Adelaide architect is playing a lead role in the future of one of Adelaide’s most important locations – the Riverbank Precinct.

Professor Ian McDougall, from leading architectural and urban design firm Ashton Raggatt McDougall (ARM), is heading the consortium of consultants who have been commissioned by the South Australian Government to create a Master Plan for Adelaide’s Riverbank.

Professor McDougall has joined with Kevin Taylor of Taylor Cullity Lethlean, one of Australia’s leading landscape architects, and Andrew Russell of Aurecon, a world-class infrastructure and specialist consultancy, to form the leadership team on the project.

“Adelaide’s Riverbank is one of the most significant public precincts in Australia,” said Professor McDougall, who is Professor of Architecture and Urban Design at the University of Adelaide.

“The Riverbank Precinct is the location for the South Australian Parliament, the seminal Festival Centre Arts complex, SKYCITY Casino and the Adelaide Convention Centre. A large part of the precinct is built over the Adelaide Central Railway Station, and its river frontage comprises the Historic Elder Park and surrounds. To the north, Adelaide Oval has begun a substantial redevelopment as a cricket and football venue.

“In connecting to the Riverbank Precinct, the city’s northern edge will become a revitalised public playground,” he said. “The State Government described the Master Plan consortium as ‘world class’ and said it had the experience and track record to bring out the best the precinct had to offer. The aim was to ‘create a place that is enticing, internationally recognised and ultimately South Australian’.

“Unleashing the potential of the Riverbank Precinct will make a considerable contribution forging Adelaide’s identity as a 21st Century city,” said the Minister for Transport and Infrastructure, the Hon. Patrick Conlon. “The Riverbank Precinct Master Plan comes at a time when Adelaide is rapidly evolving into a city with an enormous future.

“The Riverbank is one of the most underutilised visual identities of South Australia and seeing it reach its potential as a cultural and social hub has always been high on this government’s agenda.” Tourism Minister the Hon. John Rau said the Riverbank and Adelaide Oval redevelopments were the most exciting thing to happen to the city for a long time.

“The Master Plan will further enhance the developments we have already supported including the upgrade of Adelaide Oval, the extension of the Adelaide Convention Centre and construction of the new Royal Adelaide Hospital,” Minister Rau said.

Professor McDougall is a founding director of ARM and has been involved in the master planning of Melbourne Docklands and the Melbourne Recital Centre. He is currently working on the revamping of the Melbourne Arts Centre and the Master Plan for Melbourne’s Southbank Cultural Precinct Redevelopment. ARM is also currently involved with the West Australian Government on development of the Perth Waterfront on the north bank of the Swan River.

Taylor Cullity Lethlean are the urban designers behind the upgrade of North Terrace.

The School of Architecture, Landscape Architecture and Urban Design regularly hosts leaders in the urban planning industry as part of the Speaker Series. To view past presentations visit: ua.edu.au/architecture/speaker-series
Thank you to our volunteers

The work of the University of Adelaide’s 1600 volunteers was applauded recently at the University’s annual Volunteer Recognition event.

The University of Adelaide Volunteer program, under the patronage of Mrs Lindsay McWha, provides an integral link between the University and the wider community and adds to the richness of university life by involving a diverse range of people in a variety of activities.

Run by Development & Alumni, the annual Volunteer Recognition event coincided with National Volunteer Week in May. A morning tea was held in Bonython Hall, hosted by Mrs McWha and attended by a large number of volunteers from all campuses of the University.

The annual event marked the University’s celebration of National Volunteer Week and acknowledged and thanked the University’s volunteers for the valuable assistance they provide throughout the year.

Above: Volunteers who attended the recognition event included (from left) Ekaterina Loy (Radio Adelaide), Nisia de Souza (peer mentor, International Student Centre), Dylan Lin (Confucius Institute), Kevin Yang (peer mentor, ISC), Michelle Liu (Confucius Institute), Georgina Haftah (peer mentor, ISC), and Elizar (peer mentor, ISC).

Photo by John Hemmings

Wind farms take evolutionary approach

Evolution is providing the inspiration for new research to find the best placement of turbines to increase wind farm productivity.

Dr Frank Neumann from the University of Adelaide’s School of Computer Science is using a ‘selection of the fittest’ step-by-step approach, called ‘evolutionary algorithms’, to optimise wind turbine placement.

This takes into account wake effects, the minimum amount of land needed, wind factors and the complex aerodynamics of wind turbines.

“Renewable energy is playing an increasing role in the supply of energy worldwide and will help mitigate climate change,” said Dr Neumann. “To further increase the productivity of wind farms, we need to exploit methods that help to optimise their performance.”

Dr Neumann said the question of exactly where wind turbines should be placed to gain maximum efficiency was highly complex.

“An evolutionary algorithm is a mathematical process where potential solutions keep being improved a step at a time until the optimum is reached,” he said.

“You can think of it like parents producing a number of offspring, each with differing characteristics.

“As with evolution, each population or ‘set of solutions’ from a new generation should get better. These solutions can be evaluated in parallel to speed up the computation.”

Other biology-inspired algorithms to solve complex problems are based on ant colonies.

‘Ant colony optimisation’ uses the principle of ants finding the shortest way to a source of food from their nest.

“You can observe them in nature – they do it very efficiently, communicating between each other using pheromone trails,” Dr Neumann said.

“After a certain amount of time, they will have found the best route to the food – problem solved. We can also solve human problems using the same principles through computer algorithms.”

A Senior Lecturer in the School of Computer Science, Dr Neumann has come to the University of Adelaide this year from Germany, where he worked at the Max Planck Institute. He is working on wind turbine placement optimisation in collaboration with researchers at the Massachusetts Institute of Technology.

“Current approaches to solving this placement optimisation can only deal with a small number of turbines,” Dr Neumann said. “We have demonstrated an accurate and efficient algorithm for as many as 1000 turbines.”

The researchers are now looking to finetune the algorithms even further using different models of wake effect and complex aerodynamic factors.

If you’re interested in studying computer science at the University of Adelaide, visit: ua.edu.au/programs/2011

Story by Robyn Mills

Photo by Steve Ford Elliott
Almost 140 trained students are giving up their own time to help first-year students settle into university life. They help new students make the most of services and advice available, foster friendships – and personally guide them through the first uncertain weeks.

There are eight peer networking programs, at least one in each of the University’s five faculties, as well as SmoothStart, which offers extra support for students from rural, interstate and other schools with low university participation rates.

On top of those, the School of Economics this year is trialling the first Peer Assisted Study Session (PASS) program in Principles of Microeconomics 1, with student leaders running weekly group study sessions to help students learn academic skills while absorbing the knowledge they need.

Vice-Chancellor and President Professor James McWha presented certificates of acknowledgement to the peer mentors and PASS leaders in recognition of their significant contribution.

Ben Luks is completing an Honours degree in Commerce (Marketing) and is a mentor in the Business School’s ‘Bee Connected’ peer networking program.

“Being involved in the mentoring program has given me the opportunity to positively influence the outlook and abilities of students entering the University,” Ben said. “While first-year students can benefit from ‘sages on stages’, mentoring programs also provide them with ‘guides by their sides’.”

Director of Student Support Services Sally Hebenstreit said transition to university can be daunting.

“Research has demonstrated that the first-year experience, especially the first weeks, can be pivotal in establishing the positive attitudes, approaches to learning and motivation that contribute to students’ success,” Ms Hebenstreit said.

“The peer networking programs offer a bit of a safety net. Having a peer mentor to foster friendships and guide them through those first difficult weeks helps remove feelings of being overwhelmed and isolated.”

SmoothStart has consistently demonstrated higher retention rates and increased satisfaction.

New student Marnel Du Bruyn, who went to Charles Campbell Secondary School and is now studying for a double-degree in Civil & Environmental Engineering and Finance, said: “It’s extremely hard to step into a new stage in your life and not know what to expect.

“Having a mentor give me advice on even the basics of uni life eliminated some of that uncertainty.

“And, most importantly, SmoothStart has been the fundamental building block for great friendships.”

Students helping students was the focus of the University’s first Peer Mentor Presentation Ceremony held in Bonython Hall last month.

Story by Robyn Mills

Above: Student mentor Ben Luks (centre) meets with SmoothStart students Lydia Karl (left) and Marnel du Bruyn

Photo by Robyn Mills
Professor John Spencer from the Australian Research Centre for Population Oral Health (ARCPOH) will lead a national study over the next four years to investigate why the system is failing Australia’s children.

“Despite a substantial level of resources – approximately $1 billion dollars annually – being directed to dental services for children in Australia in the last decade, their oral health is still a major public health problem,” Professor Spencer said.

“After several decades of improvement, child oral health has worsened and inequalities have widened.”

Latest statistics show that dental restorations and extractions are the most common reason for hospital admissions among Australian children under 14 years of age.

In 2006 nearly 27,000 children – 8114 of whom were pre-schoolers – were admitted to hospital for dental work.

“In this study we will be looking at how dental services for our children are organised and delivered, comparing the use of private dentists and school dental services and the outcomes for child oral health,” Professor Spencer said.

“Public programs like the school dental services are not reaching as many children, yet private dental services may be out of the financial reach of many families.”

The nationwide study will also document current levels of oral health and its variation across the child population.

“The challenge is to identify and eliminate barriers to dental health services in Australia, improving service delivery, reducing risks and promoting healthy diets,” Professor Spencer said.

Thanks to funding from an NHMRC Partnership Project Grant, his team from ARCPOH at the University of Adelaide will partner with all eight State and Territory public dental authorities in the research project. The partners are committing a further $1.7 million to the national study, making the total funding for the study $3 million.

A representative sample of approximately 32,000 children aged 5-14 years old will be drawn from a mixture of public and private schools across Australia.
Teaching awards for dental team

Dentistry lecturers Sophie Karanicolas (left) and Catherine Snelling (right) were presented with the Vice-Chancellor and President’s Award for Excellence in Teaching at the Faculty of Health Sciences graduation ceremony in April.

The two also took out the Team Teaching Award for the Stephen Cole the Elder Prize for Excellence in Teaching. It is the first time a team has taken out the Vice-Chancellor’s teaching prize.

The two lecturers developed the curriculum for the new Bachelor of Oral Health program, forging a successful teaching partnership.

They are photographed with the Dean of the School of Dentistry, Professor Johann de Vries.

Photo by Candy Gibson

Volunteers needed to boost student skills

The School of Dentistry is seeking volunteers to help its students improve their communication skills in a clinical environment.

Volunteers will be trained to role-play as real patients, giving second and third-year students the skills to promote trust, put people at ease, and explain complicated dental procedures.

During role-plays volunteers will not receive any dental treatment, examination, or advice.

Project leaders Dr Vicki Skinner and Associate Professor Tracey Winning said good communication skills were essential for dentists.

“Communication is at the core of dentistry. A clear and supportive relationship between a patient and their dentist leads to more accurate diagnosis and treatment and better outcomes for oral care,” Dr Skinner said.

Role-plays will involve specific scenarios that students may experience as students or graduates, including interacting with anxious or upset patients, patients with special needs, and cross-cultural communication.

The volunteer program is being developed initially for the Bachelor of Dental Surgery program and will be adapted for the Bachelor of Oral Health program. It may then be used in other University programs where communication with clients is crucial.

Volunteers will be required to attend two to four sessions over a period of a few months and will be reimbursed for their travel expenses.

People of all ages (above 18) and backgrounds are encouraged to volunteer, including University staff and students, those with a non-English speaking background as well as people with disabilities.

For more information, contact Karen Squires from the School of Dentistry on 08 8303 5968 email: karen.squires@adelaide.edu.au or go to: health.adelaide.edu.au/dentistry/volunteer_patients

Dental service for homeless

Adelaide’s homeless and low-income residents will have improved access to free dental care thanks to a new initiative involving the University of Adelaide’s School of Dentistry and the SA Dental Service.

A Commonwealth grant has enabled the Dental School to build a dental clinic in Light Square to service socially disadvantaged people living in the Common Ground accommodation complex.

The clinic, to open in late July, will be operated by University staff and students from the Dental and Medical Schools, volunteer dentists and medical practitioners with a focus on oral health and linking to improved general health outcomes.

The Dean of the Dental School, Professor Johann de Vries, said the new clinic had multiple benefits, facilitating students in the dentistry, oral health and medical programs to gain valuable practical experience.
Abortion parasite discovered in SA cattle

A parasite that is a major cause of miscarriage in cattle, sheep and goats worldwide may be present in one third of South Australia’s cattle herds, according to research from the University of Adelaide. Although the number of cattle infected is low, the parasite can be found in a wide range of beef and dairy cattle herds and represents a threat to breeding. The culprit is a single-celled parasite called Neospora caninum. It causes spontaneous abortion in cattle, sometimes leading to “abortion storms” among herds. In Australia and New Zealand, losses are estimated to cost animal industries more than $100 million per year. There is currently no vaccine or effective treatment for N caninum infection in Australia.

Two PhD students with the University’s School of Animal and Veterinary Sciences, Amar Nasir and Sasha Lanyon, conducted a survey of South Australian beef and dairy herds, testing almost 1000 blood samples.

“The results show that less than 3% of cattle are infected with the N caninum parasite, approximately 38,000 cattle in total. But the infection is widespread and occurs in about a third of all cattle herds – that’s about 1400 dairy and beef herds across the state,” said the study’s supervisor, Professor Michael Reichel.

“The low level of parasite infection may be due to the sunny, dry climate in South Australia and could be good news for primary producers in this state. However, the widespread nature of the infection means that producers should be aware of the likelihood of abortions and the need to quarantine infected stock to prevent further spread of the parasite.”

Professor Reichel said parasite infection was much more prevalent in overseas herds of cattle and buffaloes.

PhD student Amar Nasir has been conducting research in South Australia thanks to the support of the Higher Education Commission of Pakistan.

Story by David Ellis

Emily’s career goals attract national prize

Agricultural Sciences student Emily Buddle is a step closer to achieving her career goals after winning a studentship from the livestock industry and the Federal Government.

Emily, 18, from Kurralta Park, is one of eight students nationally to be chosen for an Investing in Youth Undergraduate Studentship. Investing in Youth is an initiative of the Australian Government’s Rural Industries Research and Development Corporation (RIRDC) and is designed to promote the diversified career pathways that agriculture offers tertiary students. Their goal is to support and educate the future leaders of Australia’s rural industries.

The studentships are worth $5000 a year for up to four years and involve a work placement and a leadership development course. They are awarded to students committed to a career in primary industries.

Emily’s studentship has been sponsored by Meat and Livestock Australia.

“My parents grew up in the Mallee region near Lameroo and Pinnaroo, and one of my grandfathers was an agronomist for Elders,” she said.

“Although I grew up in Adelaide, mum and dad still have friends with farms and I went to Urrbrae (Agricultural High School).” At Urrbrae, Emily began working with beef cattle from Year 10 and started showing cattle at the Royal Adelaide Show and the South Australian Junior Heifer Expo. By Year 12, she was already helping out at a cattle stud.

Her interest in the large animals continues: “After my studies, I’m hoping to get a job in livestock management and nutrition – mainly with cattle, but also possibly with sheep.

“I love working with big animals. Some people love their chickens, and others love their sheep, but I love my cows,” she said.

For more information about the Investing in Youth Undergraduate Studentship, go to: rirdc.gov.au

Story by David Ellis

Above: Agricultural Sciences student Emily Buddle, who has won a national Investing in Youth Undergraduate Studentship

Photo by David Ellis
Uni aims to join Fair Trade movement

The University of Adelaide will seek accreditation as the state’s first Fair Trade university.

The move follows the recommendation to the University of Adelaide’s Council by the Student Fair Trade Collective, the Adelaide University Union and the University’s Ecoverity program.

Making the announcement on the eve of Fair Trade Fortnight in May, the University said it would seek accreditation to be recognised as an official provider of Fairtrade certified products, such as coffee, tea, chocolate and sugar, across all of the University’s campuses.

Fairtrade provides fair and stable prices, decent working conditions, local sustainability, and fair terms of trade for farmers and workers in the developing world.

The Fairtrade label also means that farmers and workers in developing countries can strengthen their businesses and invest in projects to benefit their communities, such as education, healthcare or environmental protection.

If the University of Adelaide becomes Fair Trade accredited, it will join a global network of non-government organisations tackling poverty and empowering producers through trade.

"Increasing consumption of products on campus which are Fairtrade certified contributes to an ethical consumption that aims to help others help themselves, give them fairness and dignity at work, and essentially helps to make their business more economically, socially and environmentally sustainable," said University of Adelaide student Bec Taylor from the Student Fair Trade Collective.

"It’s fantastic that we have the University’s support in this endeavour. It shows that the University is committed to partaking in ethical and sustainable purchasing.”

The University’s Vice President (Services and Resources), Paul Duldig, said: “To become a Fair Trade University, we need to satisfy a range of minimum requirements as determined by the Fair Trade Association of Australia and New Zealand. We are well positioned already, with Fairtrade products used widely on campus by our retail outlets, in our offices and at meetings.

"Seeking accreditation to become a Fair Trade University is the culmination of a lot of hard work by our students. It demonstrates how students and the University are working together to achieve positive change.”

For more information about Fair Trade, go to: fta.org.au

Photo by Zsuzsanna Kilian
Jazz award winners

Some of the University of Adelaide’s most talented jazz students have celebrated the annual Jazz Awards with a taste of Broadway.

Nine of the best jazz students from the University’s Elder Conservatorium of Music were winners of the 2011 Jazz Awards for South Australia.

Presented by the Elder Conservatorium and the Helpmann Academy, the awards recognise the State’s brightest emerging performers from the school’s Jazz Studies program.

The winners are chosen from a range of disciplines, including piano, drums, bass, guitar, saxophone, trombone and voice.

The awards not only recognise the quality of the students, but also enable them to showcase their talents in performances.

The winners were:

- **InterContinental Award for Most Outstanding Honours Jazz Student** – joint winners: Lauren Sturdy (jazz voice) and Holly Thomas (jazz drums), $1000 each
- **Adelaide City Council and Tommy Norman Scholarship Award for Most Outstanding Undergraduate Jazz Student Award** – joint winners: Stephen Neville (jazz drums) and Alex Wignall (jazz piano), $1000 each
- **Keith Langley Award for Top Jazz Trombone**: Aaron Deanshaw, $500
- **Keith Langley Award for Top Jazz Saxophone**: Natalie Ahrens, $500
- **dB Magazine Award for Top Jazz Guitar**: Marko Gal, $500
- **Allans Music + Billy Hyde Award for Top Jazz Drums**: Adam Williams, $800
- **Mitzi’s Prize for Top Jazz Bass**: Martin Holoubek, $500

Hosted at the InterContinental Adelaide hotel, the Jazz Awards 2011 featured performances by all nine award-winners, along with guest performer Luke Thompson, Lecturer in Jazz Voice at the Elder Conservatorium.

They put together a program of classic Broadway showtunes re-interpreted with a soulful jazz twist, with instrumentation, improvisation and rhythms typical of jazz. Chord changes, solos and the phrasing of the music were all given a unique jazz treatment.

The Elder Conservatorium first presented the Jazz Awards in 1997 to encourage emerging jazz musicians and to showcase their talents to the Adelaide community.

For more information about jazz studies, go to: music.adelaide.edu.au/specialisations
The mass extinction of marine life in our oceans during prehistoric times is a warning that the Earth will see such an extinction again because of high levels of greenhouse gases.

That's according to two geologists who have been studying ‘greenhouse oceans’ – oceans that were depleted of oxygen and suffered from increases in carbon dioxide and temperature. Using core samples drilled from the ocean bed off the coast of western Africa, Professor Martin Kennedy from the University of Adelaide (School of Earth & Environmental Sciences) and Professor Thomas Wagner from Newcastle University (Civil Engineering and Geosciences) studied layers of sediment from the Late Cretaceous Period (85 million years ago) across a 400,000-year timespan.

They found a significant amount of organic material – marine life – buried within deoxygenated layers of the sediment. “Our research points to a mass mortality in the oceans at a time when the Earth was going through a greenhouse effect, with high levels of carbon dioxide in the atmosphere, and rising temperatures, leading to a severe lack of oxygen (hypoxia) in the water that marine animals are dependent on,” Professor Kennedy said. “What’s alarming to us as scientists is that there were only very slight natural changes that resulted in the onset of hypoxia in the deep ocean. This occurred relatively rapidly – in periods of hundreds of years, or possibly even less – not gradually over longer, geological time scales, which suggests that the Earth’s oceans are in a much more delicate balance during greenhouse conditions than originally thought, and may respond in a more abrupt fashion to even subtle changes in temperature and CO₂ levels than previously thought.”

Professor Wagner said the results of their research, published in the Proceedings of the National Academy of Sciences (PNAS), had relevance for our modern world: “We know that ‘dead zones’ are rapidly growing in size and number in seas and oceans across the globe. These are areas of water that are lacking in oxygen and are suffering from increases of CO₂, rising temperatures, nutrient run-off from agriculture and other factors.”

“After a hypoxic phase, oxygen concentration in the ocean seems to improve, and marine life returns. Our results show that natural processes of carbon burial kick in. Importantly, this rescue comes from the land, with soil-formed minerals acting to collect and bury excess dissolved organic matter in seawater. Burial of that excess carbon ultimately contributes to CO₂ removal from the atmosphere, cooling the planet and the ocean. “This is nature’s solution to the greenhouse effect and it could offer a possible solution for us. If we are able to learn more about this effect and its feedbacks, we may be able to manage it, and reduce the present rate of warming threatening our oceans.”

Story by David Ellis
Above: New research suggests the Earth will see mass extinctions of marine life because of high levels of greenhouse gases
Photo by Oktaviani Marwikasari
LEAPIN is representing the University of Adelaide in the Licensing Executives Society (LES) Foundation Graduate Student Business Plan Competition. They were selected from 78 international teams and are competing against teams from Sweden, Russia and the United States. To qualify for the event, LEAPIN defeated an impressive field of universities, including Harvard, Yale and Stanford.

LEAPIN is developing remote access control and security systems for tourist accommodation (and other uses) “which enables hotel guests to leap past the check-in desk and go straight from the web to their room”. In the travel industry it’s called ‘mobile phone room check-in’ and was recently voted a top emerging travel trend.

Last year, when known as Easelock, the team won the Piper Alderman and John Heine prizes in eChallenge and came third in the national John Heine Challenge. Chief Executive Officer and co-founder Stephen Dunn is starting a Masters in Applied Innovation and Entrepreneurship with the University of Adelaide’s Entrepreneurship, Commercialisation and Innovation Centre (ECIC), which runs the eChallenge competition. Other team members are Richard Busulwa, who’s just graduated with the same degree, Ben Luk, completing an Honours degree in Commerce (Marketing), MBA graduate Tania Jezukaitis, and Flinders University digital media student Sam Faulkner. Accompanying them and providing strategic guidance will be ECIC Undergraduate Director Gary Hancock.

“For the team, this is an opportunity for them to show the world their talents and, of course, generate business as well as provide access to advisors, mentors and potential business partners at an international level,” Mr Hancock said. “Their success is also an opportunity to show just what our students can achieve and the value of eChallenge. A common myth is entrepreneurs are just born. We passionately believe that education plays an important role in developing successful entrepreneurs and innovators.”

“For LEAPIN, their development has been accelerated on such a scale that the international market is now a reality, rather than a plan for the future.”

eChallenge 2011 is now open for entry and this year has an additional online component, allowing teams to enter from anywhere in the world.

In eChallenge, teams of up to six people develop a business plan for a new, previously unfunded business concept and each team must have at least one student member from a tertiary institution.

eChallenge’s online competition portal will allow teams to network with each other and their mentors, submit proposals and business plans, access resources and view workshops from remote locations. Top teams from the 2010 Singapore eChallenge will be brought into the Adelaide competition.

For more information or to enter, visit: ua.edu.au/echallenge

Story by Robyn Mills
Creative writing maestro is new professor

Celebrated and award-winning author and University of Adelaide medical graduate Dr Peter Goldsworthy AM has been appointed Adjunct Professor in Creative Writing.

Dr Goldsworthy, whose first novel Maestro was voted as one of the Top 40 Australian books of all time, has written novels, poetry, short stories, plays and opera libretti, with many major literary awards across the genres. “Peter is worth his weight in gold in adding his name to the reputation of the Creative Writing program,” said Professor Brian Castro, Chair of Creative Writing at the University. “He is something of a modern Renaissance Man – poet, novelist, film-writer and librettist – and his prolific output will undoubtedly boost the research potential of the program as well as add to the knowledge of student-writers.”

Dr Goldsworthy has agreed to teach a masterclass in July and will be participating in several talks on cross-disciplinary skills in creative practice.

He and his talented family, including acclaimed classical pianist and writer and fellow University of Adelaide graduate Anna Goldsworthy, are featured in the Winter 2011 edition of the University’s alumni magazine, Lumen.

The impact and achievements of many other University of Adelaide alumni are outlined in the latest issue of Lumen, including:

• Former military surgeon Dr Susan Neuhaus, discussing her experiences on the battlefields of Cambodia and Afghanistan, treating soldiers and civilians injured in war zones;
• Award-winning chemist Dr Nathan Gianneschi, who has been honoured by US President Barack Obama for his nanoscience research;
• Engineering graduates Lisa Moon and Peter McBean, who are both helping to rebuild Christchurch in the aftermath of the devastating earthquake in February;
• 28-year-old medical graduate Dr Michael Findlay, who with his wife Kim is establishing a health and development project in Uganda to service 350,000 people;
• Jim Redgate, an Elder Conservatorium of Music graduate who has made a name for himself crafting exquisite classical guitars for some of the world’s best musicians;
• Defence force lawyer Captain Dale Stephens, recalling his time in Baghdad as an adviser to renowned US Army General David Petraeus.

To see more stories from the Winter edition of Lumen, go to: adelaide.edu.au/lumen

Story by Robyn Mills and Candy Gibson
Above: Dr Peter Goldsworthy
Inset: The Winter issue of Lumen
2011 has been a good year for Indigenous students at the University of Adelaide, with 28 Indigenous students graduating, including two with PhDs.

Among those at last April’s ceremonies was Australia’s first Indigenous Rhodes Scholar, Rebecca Richards, who received her Bachelor of Arts with Honours in Anthropology. Rebecca, who was also named Channel 9 Young Achiever of the Year for South Australia, featured in last month’s issue of Adelaidean.

Here are some of our other recent Indigenous graduates:

Far left: Aaron Bulner became the first Indigenous student to graduate with a Bachelor of Oral Health. He had wanted to do this since he was in primary school and moved from Mount Gambier in the State’s south-east to study in Adelaide.

Above left: Dr Jared Thomas graduated with a PhD in Creative Writing. A long-time Indigenous author, Dr Thomas’s thesis is titled The Process and Importance of Writing Aboriginal Fiction for Young Adult Readers.

Above: Dr Jillian Marsh also graduated with a PhD, in Geographical & Environmental Studies. Her thesis, which created some media attention in the lead-up to her graduation, is titled: A Critical Analysis of Decision-Making Protocols used in Approving a Commercial Mining Licence for the Beverley Uranium Mine in Adnyamathanha Country: Toward Effective Indigenous Participation in Caring for Cultural Resources.

Left: Richard Caruso, pictured with his mother, Acting Dean of Wilto Yerlo at the University, Jenni Caruso, graduated with a Bachelor of Arts (Psychology) degree.

Photo by Candy Gibson

Photo courtesy of Jared Thomas

Photo courtesy of Margaret Allen

Photo courtesy of Jenni Caruso
The achievements of almost 5000 students from the University of Adelaide have been celebrated at graduation ceremonies held in Adelaide and Singapore earlier this year.

“Graduation is a highlight of the University of Adelaide’s calendar, a time when the whole University community celebrates the tremendous achievements of our students,” said Vice-Chancellor and President Professor James McWha.

“Many of these graduates will go on to make a significant impact within the community, some of them leaders in their fields. We wish them all well in their future careers and look forward to hearing of their ongoing achievements.”

Prominent South Australian businessman Mr Ross Adler AC was admitted to the degree of Doctor of the University for his distinguished service to the University of Adelaide.

Mr Adler served on the University Council for 11 years, including contributions as Chair of the Finance Committee (from 2000) and Deputy Chancellor (March 2007-Dec 2009), until his retirement in December 2009.

Mr Adler was Managing Director of Santos for 16 years, then Chairman and CEO of Amtrade International. He has also been Chairman of Austrade and Director of both the Commonwealth Bank of Australia and Telstra.

In 2003, the University admitted Mr Adler to the degree of Master of Business Administration (MBA) ad eundum gradum in recognition of his lifetime of achievement in business leadership.

“Mr Adler’s expertise and wide experience in business and finance proved invaluable in helping the University achieve a sound financial position, as prepared as it can be to face future challenges. We owe a great deal to his contributions of more than a decade,” Professor McWha said.
Battling the Bugs: What’s working and what could be done better to control childhood infectious disease

Despite the advance of modern medicine, infectious diseases remain a leading cause of death worldwide and a serious threat to our children. But researchers in the Vaccinology and Immunology Research Trials Unit (VIRTU) and Children’s Research Centre based at Adelaide’s Women’s and Children’s Hospital are making progress. Led by the University of Adelaide’s Associate Professor Helen Marshall, these teams have been tackling some big questions.

What can we learn from community response to the 2009 Swine Flu pandemic? What more can we do to prevent infant deaths from our current Whooping Cough epidemic? And how close is a vaccine for Meningococcal B infection, potentially fatal and responsible for 85% of all Meningococcal cases in Australian children?

In this informative presentation Associate Professor Marshall will provide some answers.

Mid-year Entry
If you’re thinking of studying at uni, why wait until next year? We have many pre-degree (VET), undergraduate and postgraduate programs open for Mid-year Entry. For full details, go to: ua.edu.au/apply/midyear

When: Deadline for applications is Tuesday 14 June
Where: Lecture Theatre 102, Napier Building, North Terrace Campus

Complete your degree faster!
The Winter School offers a range of intensive credit-bearing undergraduate and postgraduate courses during the semester breaks. These include courses in: architecture, business, economics, education, entrepreneurship, commercialisation & innovation, engineering, humanities & social sciences, international trade, law, public health and sciences.

ua.edu.au/winterschool

When: Winter School runs from 27 June to 22 July

Tertiary Studies and Careers Expo Adelaide
At this free event, University of Adelaide staff will help answer any questions you may have about study opportunities and the careers they can lead to.

careersevent.com

When: 10.00am-4.00pm Sunday and 9.30am-1.30pm Monday, 19-20 June
Where: Adelaide Convention Centre

Free Public Lecture: How Green is the Universe
The Harley Wood Lecture will be given by Professor Fred Watson AM as part of the Annual Scientific Meeting of the Astronomical Society of Australia. Professor Watson has been Astronomer-in-Charge of the Australian Astronomical Observatory since 1995. He has helped to popularise astronomy and space science through books, broadcasts, talks and other outreach programs.

When: 8.00pm Tuesday 5 July
Where: Scott Theatre, North Terrace Campus
Cost: Free – all welcome