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April 2015

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UniSA secures \$1m grant to transform prostate cancer diagnosis

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by Will Venn



Prostate cancer is one of the most common forms of cancer, claiming the lives of around 3,000 men in Australia each year, yet not everybody who develops this disease is guaranteed either an early or accurate diagnosis of their condition.

The Prostate-Specific Antigen (PSA) test is the most frequently used tool to screen for prostate cancer, yet it can detect only certain types of tumours and is known to give rise to false negative and false positive results.

Earlier detection and more accurate prognosis of the condition is the goal of the potential life-saving research that UniSA's Professor Doug Brooks is engaged in, and it is research that has secured a National Health and Medical Research Council (NHMRC) grant worth more than \$1 million.

"It's a large grant but we are also ambitious in terms of what we are trying to do, which is to revolutionise the field, in a way," Prof Brooks says.

"It should allow us, for the first time, to diagnose patients accurately, and to enable them to be told whether they have prostate cancer, how advanced it is, and whether they need some radical intervention – at an early stage."

With more than 30 years' experience in medical research and expertise in developing practical applications in biochemical medicine, Prof Brooks is currently the leader of the Mechanisms in Cell Biology and Disease Research Group at the Sansom Institute for Health Research.

It is here that Prof Brooks' research team is examining prostate cancer cell biology to find more specific biomarkers, with the ultimate aim being to provide better treatment plans for those diagnosed with this type of cancer, while easing the burden on the healthcare system which has seen patients misdiagnosed and being over treated in the past.

Prof Brooks says that the current PSA test, which screens for prostate cancer by measuring the blood level of PSA (a protein that is produced by the prostate gland), is not without fallibility.

“The higher a man’s PSA level, the more likely it is that he has prostate cancer. However, there are additional reasons for having an elevated PSA level, and some men who have prostate cancer do not have elevated PSA,” Prof Brooks says.

“PSA tests have a large number of false negatives and a large number of false positives and this can lead to over diagnosis and over treatment of patients, which is a big issue. The specificity of PSA is a problem – as it only detects certain types of tumours. PSA was originally developed only as a prognostic marker yet people have tried to apply it as a diagnostic marker.

“Our philosophy has been to take a step back and look at the cell biology and to see if we can find something that is consistently changed – in gene expression and protein expression – which gives us more specific biomarkers.”

It’s a step that has already yielded impressive results. Prof Brooks says that the endosome-lysosome system (a set of compartments inside cells) has a critical role in controlling protein secretion, making it an ideal system to identify new biomarkers that are released from cancer cells.

“We have discovered that the biology of endosomes (sub compartments of a cell which can also traffic things within cells) is significantly altered in prostate cancer and that endosome proteins have discriminatory capacity in cell lines and patient data sets,” Prof Brooks says.

“We’ve discovered that our biomarkers are more consistent, and more specific than current biomarkers. The whole biology of endosomes and the vesicular trafficking machinery that controls them is altered in terms of gene and protein expression.

“Interestingly the cell biology that we have discovered has an advantage over PSA.”

The next step – where the grant funding will be targeted – will be to analyse gene expression and to make antibodies and assays (to determine the amount of protein within a biological sample) to the endosome markers, so that tests can be developed and validated in model systems, and then adapted for use in patients.

“It will allow us to predict the course of the disease, and to predict which patients will go on to get aggressive disease and which ones will have indolent disease – so the medical community will have better markers for monitoring patients,” Prof Brooks says.

“They will know before a tumour gets aggressive or invasive, and the physician will be able to give patients that information and this will lead to more effective clinical interventions at proper time points; which means that treatments will be more effective, and resources are not wasted.

“The healthcare system will benefit and the patients should have improved outcomes and increased survival.”

UniSA PhD student Liping Wang has also been granted \$83,429 postgraduate scholarship through the most recent NHMRC funding round to advance her research in the field of mechanobiology and mechanotransduction – the molecular mechanism by which cells sense and respond to mechanical signals.

Liping’s research will involve an experimental and computational study on the biomechanical behaviour of osteocytes which are the major type of bone cells embedded within the bone matrix, that regulate bone mass, bone quality and strength as well as bone repair outcomes.

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University of
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Prevention is better than cancer

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by Kelly Stone



HEALTH

New Director of the Sansom Institute for Health Research, Professor Ian Olver, has one simple message when it comes to cancer prevention.

The world-renowned cancer researcher, clinician and public health advocate says one third of all cancer deaths could be prevented by lifestyle choices alone.

“There are three big things people can do – stop smoking, control their weight through diet and exercise, and protect themselves from the sun,” he says.

“People want to argue about whether hair dyes cause lymphoma or whether drinking out of a plastic water bottle left in the sun is carcinogenic, but those three big things blow any subtleties like these out of the water.”

In his previous position as CEO of Cancer Council Australia, Prof Olver oversaw development of an ‘i heard’ website where questions from the public could be answered with the latest evidence-based research.

“Many people are getting their information from the web, so we used the web to give people authoritative information,” he says.

“Myths like underarm deodorant causing breast cancer often do the rounds, but they obscure the fact that if you’re smoking, overweight or sunbaking, those three things are going to have the biggest impact.”

Prof Olver has co-authored a new book – to be released later in the year – on cancer prevention, targeted at the general public.

“The book is set out in a way that people can easily understand what the evidence is when it comes to prevention and lifestyle changes like reducing alcohol consumption, eating a healthy diet and exercise,” he says.

“I just want to make sure everyone knows about these things. I’m not trying to preach to people; I just want them

to live the best possible lives.”

Leading the Sansom Institute's broad program of health research, from cancer treatment to nutrition and exercise, Prof Olver is still actively researching himself.

“All of my own research is focused on cancer but most recently I have been looking at the psychosocial aspects of cancer survivorship,” he says.

“Survivorship is an under-researched area and for a long time it was ignored. People would say, ‘you’ve just survived cancer, you should buy a Lotto ticket’.

“But often those survivors were feeling isolated; their jobs didn’t mean anything, they viewed their relationships differently.

“After cancer one of the considerations about survivorship is that, having had their lives threatened, survivors don’t fit back into their previous lifestyle.”

Prof Olver says when faced with a life-threatening illness like cancer, questions of spirituality can come to the fore.

“We’re all spiritual beings in one sense and anyone who has asked ‘why am I here’ has asked a spiritual question,” he says.

“Spiritual well-being, which includes a search for peace and meaning in relation to illness, is an independent contributor to quality of life, so if you’re interested in maintaining somebody’s quality of life, you must be interested in supporting their spiritual journey.”

Across the span of his career, Prof Olver says some of his most satisfying research has been in nausea and vomiting after chemotherapy.

“It doesn’t make me a great after-dinner speaker, but it’s been very satisfying over a period of 30-odd years to see the problem largely solved by the advent of two new classes of drugs,” he says.

“It’s much rarer now for patients to get vomiting with chemotherapy and that’s been satisfying.”

When it comes to advocacy and his broader career, Prof Olver is proud of the National Bowel Cancer Screening Program, HPV vaccination, and tobacco taxation and plain cigarette packaging.

“Perhaps the most satisfying things though relate to individual patients over the years,” he says.

“A few months ago I was stopped at Adelaide airport to be security tested and the woman said to me, ‘you probably don’t remember me but you treated me for breast cancer 25 years ago and I just wanted to tell you I’m ok’.

“That sort of thing is what makes your work worthwhile. She still did the security test, she had to do her job, but that sort of feedback is very satisfying.”

Looking forward within the Sansom Institute, Prof Olver is keen to promote cross-disciplinary research, foster collaboration and identify research themes fundable through industry and philanthropy.

“Category one funding is important but it’s determined by the external environment, which is becoming very tough,” he says.

“We need to look at other funding sources as an essential and, when it comes to research projects that are solving the contemporary health issues of our time, we’ve got the projects.”

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Tourism's part in the Anzac legend

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by Rosanna Galvin



HUMANITIES

Fifty years after the guns fell silent in World War One and the commemoration of the contribution of Australia and New Zealand troops – Anzac Day – was all but extinct in Australia. The flag waving crowds at the traditional Anzac Day march were thin on the ground.

But fast forward almost another half a century and in 2013, 35, 000 people attended the Anzac Day Dawn Service in Australia's capital, Canberra, the largest turnout in Australian history.

How Anzac Day has been repositioned as a symbol of Australia's national identity has been the focus of much discussion, with many researchers attributing the revival to political opportunism and attitudinal shifts across generations.

But according to UniSA's Dr Brad West (pictured right), those factors only tell part of the story.

The sociologist based at UniSA's School of Communication, International Studies and Languages, says the resurgence of the Anzac legend in Australia is directly linked to the rise of the global tourism industry. He pinpoints the 75th anniversary of Anzac Day in 1990, when populist Prime Minister Bob Hawke launched a campaign to 'return to Gallipoli', as a turning point.



"I argue that the contemporary significance of Anzac Day and of the now popular 'pilgrimage to Gallipoli' is a result of the 75th anniversary event and its creation of a new understanding of and ritual around Anzac Day," he says.

"The unexpected guests that turned up at the battlefields for that anniversary – in the form of thousands of Australian and New Zealander backpackers – have had the most influence on the development of the Anzac Day

legend as we know it today.

“Up until that point, there had been almost no backpackers – or any travellers for that matter – going to Gallipoli. But the anniversary event literally opened up the battlefields to tourists and as it created new memorials at the site, there was suddenly something physical to visit.

“The anniversary event also coincided with Turkey opening up to tourism – in the 1990s, Turkey became one of the world’s most popular tourist destinations.

“At the anniversary event, Hawke had been careful about who represented the nation, but then a few thousand backpackers essentially ‘gate-crashed’ the party.

“This kick-started a backpacking tradition – a much more relaxed event, independent of the traditional Returned and Services League’s (RSL) conservatism, which had been at the centre of previous Anzac Day commemorations in Australia.”

Dr West argues that it was through backpacker word of mouth that the popularity of the Gallipoli pilgrimage grew. When they returned home to Australia and New Zealand, they then shared their experiences with others and in doing so, changed Anzac Day’s place in contemporary society.

“These young people found the experience of being in Gallipoli so positive – they had a sense of openness and ownership of history which contrasted with the Anzac Day they knew previously which was associated with RSLs and the military,” he says.

“Suddenly there was a greater role for young people in a new Anzac Day tradition.”

The resurgence of Anzac Day commemorations in Australia goes directly against cultural trends in other Western nations. According to Dr West, young people don’t automatically engage with historic events. He believes that tourism and the way Australians are able to engage with history is to become one of the reasons why Australia is bucking the trend.

“For the last forty years, the cultural attachment to founding moments and historical events in Western countries has been in decline. So the rise of Gallipoli and re-engagement we see in Australia is very interesting as it’s countering that trend,” he says.

“If young people hadn’t been able to engage with Anzac Day in a particular way, if there wasn’t the reimagining of that historical era in ways they could relate to – through travel for example – I argue that Anzac Day wouldn’t have the relevance it now has.

“The commemoration of Anzac Day has gained momentum over the past two decades, bolstered by the rise of the pilgrimage to Gallipoli. But it’s potentially something that is losing momentum as well, as we see both the Australian and Turkish governments try to control that ritual more than in the past.

“The centennial event in Gallipoli a few weeks’ time is highly scripted – the number of attendees has been capped and there’s very little of the informal social effervescence that the traditional pilgrimage had.

“We may think that Anzac Day will automatically become more and more popular, but if it’s taken away from the young people and controlled by the state, it may not continue to resonate – its place in Australian society may well change again.”

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Vale Sir Terry Pratchett, UniSA Honorary Doctor and international best-selling author

It was with great sadness that the University of South Australia received the news of Sir Terry Pratchett's death last month.

An Honorary Doctor of the University, Sir Terry (pictured right) was accepted into the University community in 2014 in recognition of his lifetime contribution to literature.

Sir Terry was the United Kingdom's best-selling author in the 1990s, best known for his Discworld fantasy series containing 40 books which has sold more than 80 million copies.

UniSA Vice Chancellor Professor David Lloyd said the world had lost one of its most creative fantasy writers.

"With a great deal of dedication, passion and a razor sharp mind, Sir Terry created some of the most imaginative, witty, insightful and accessible science fiction works of the 20th and 21st centuries," Prof Lloyd said.

"He was a powerhouse of creativity, inspiring readers and writers alike to consider life in new ways, to look for the absurd and ridiculous in human behaviour and to value our indefatigable human resilience.

"He will be greatly missed by all those who loved him and the many millions who loved his books."

Sir Terry was diagnosed with Alzheimer's disease in 2007 and since then had become a strong campaigner in the search for a cure and better treatment methods for the disease, donating more than \$1million to the Alzheimer's Research Trust.

Sir Terry never let his disease get in the way of doing what he loved most – writing – and he has been honoured by more than 20 universities for his achievements.

Read more of UniSA Vice Chancellor Prof Lloyd's personal reflections on Sir Terry's legacy in this edition of [UniSA News](#).

Leading light in optics awarded fellowship

UniSA's Deputy Vice Chancellor and Vice President: Research and Innovation, Professor Tanya Monro (pictured right) has been made a Fellow of the Optical Society (OSA), the leading professional association for the field of optics and photonics.

Prof Monro accepted her accolade at the Optical Fibre Communication Conference in Los Angeles last month, where she also presented on new



trends in fibre-based sensors.

The prestigious fellowship acknowledges Prof Monroe's scientific contributions of international significance to optical glass materials and fibres, photonics and optical physics, most notably in nanophotonics for nonlinear optics and sensing.

Prof Monroe said she was honoured to receive the fellowship, which is bestowed on no more than 10 per cent of OSA members. She was the only Australian among the 76 members who were made OSA Fellows in 2015.

In presenting the fellowships, OSA President Philip Bucksbaum said the Society was honoured to offer recognition for the recipients' outstanding contributions.

"This year's class of OSA Fellows has offered prodigious service to the OSA and the global optics community," Bucksbaum said.

Prof Monroe receives her new accolade in the International Year of Light, a United Nations initiative designed to raise awareness of how optical technologies promote sustainable development and provide solutions to worldwide challenges in energy, education, agriculture, communications and health.

UniSA researchers receive major national honour

Three UniSA researchers have been made Fellows of the Australian Academy of Health and Medical Sciences (AAHMS), in recognition of their significant leadership in the science of health and medicine.

Professors Angel Lopez and Sharad Kumar (pictured right), Co-Directors of the Centre for Cancer Biology (an alliance between SA Pathology and UniSA), and Professor Alex Brown (pictured below), Head of the Wardliparingga Aboriginal Research Unit at the South Australian Health and Medical Research Institute, received the accolade at a special event last month.



A world-recognised leader in Indigenous health, Prof Brown's induction into the AAHMS recognises his extensive work and distinguished professional skills in Indigenous health research in rural and remote communities.

Prof Brown has spent many years researching chronic conditions which are the biggest contributor to the 10-year life expectancy gap between Indigenous and non-Indigenous Australians.

For Profs Lopez and Kumar, the AAHMS accolade follows their election as Fellows of the Australian Academy of Science in recent years.

Prof Lopez has undertaken significant research on blood hormones and their role in blood cancers, while Prof Kumar's research has contributed to the better understanding of a number of diseases, including cancer, cardiovascular and inflammatory diseases.

For more information, see the related media releases on [Prof Alex Brown](#) and [Profs Lopez and Kumar](#).



UniSA students meet Vietnam's PM ahead of New Colombo Plan trip

Two UniSA students who are set to study and work in Vietnam later this month as part of the 2015 New Colombo Plan, have met with the Prime Minister of Vietnam, Nguyen Tan Dung, in Canberra at an Australia-Vietnam Friendship Event.

The students, Caitlin Breyer and Joel Edwards, are among the first who will travel to Vietnam under the New Colombo Plan, where they will study



architecture at the Hue University of Sciences.

As well as attending lectures the students will work together in cross-institutional research teams to investigate a range of planning and development issues facing the city of Hue and to propose innovative solutions to these issues. The findings of the research teams will be formally presented at the conclusion of the workshop.

Dr Matthew Rofe, UniSA Senior Lecturer in Urban and Regional Planning, attended the Australia-Vietnam Friendship Event and said he was very proud of his students, Caitlin and Joel.

“They are outstanding representatives for UniSA and will both contribute greatly to the research teams in Vietnam, benefiting from the opportunities afforded to them under the New Colombo Plan,” Dr Rofe said.

Parliamentary Secretary to the Minister for Foreign Affairs, the Honourable Steven Ciobo, MP, also spoke of the value of the New Colombo Plan at the event.

“The New Colombo Plan will lift knowledge of Vietnam and other partners in the region among young Australians,” Ciobo said.

“A generation of young Australians with an understanding of and interest in engaging the region is critical to Australia’s future productivity and our pursuit of political and economic cooperation.”

Grant funds provide catalyst for new innovations

Two early career researchers from UniSA have secured Catalyst Research Grants from the South Australia Government to help them develop new innovations in the fields of winemaking and healthcare.

Dr Chia Chi Chien will receive \$30,000 to work with TGR Biosciences and the Australian National Fabrication Facility to enhance medical equipment technology used to measure a patient’s health, to produce faster results.

Dr Xavier Cetó Alsedà will also receive \$30,000 to collaborate with TGR Biosciences, Australian Wine Research Institute and Accolade Wines to develop a device for winemakers, which monitors haze-forming proteins in wine.

Dr Cetó said the tool will indirectly help improve the quality of wine and save both on costs and time for winemakers, particularly on the handling and disposal of waste products.

“The wine industry is highly competitive and requires continuous innovation and better sustainable usage of our natural resources to improve on the high standards,” Dr Cetó said.

“Working with the Australian Wine Research Institute and TGR Biosciences, our research will aim to develop a faster and more reliable tool to assess the presence of haze-forming proteins in wine.

“By linking new research ideas to wine production, we can provide winemakers with the right tools to put them at the forefront of international wine quality and safety.

“It will also showcase the State’s biotechnology and research capabilities in viticulture and oenology to the world.”

Prize-winning PhD reduces guesswork in cancer research

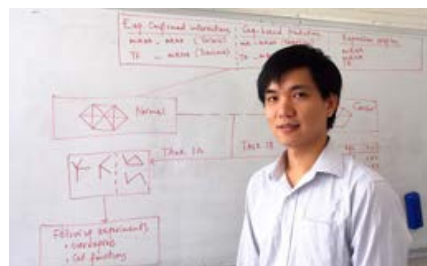
Cutting-edge bioinformatics work by UniSA’s Dr Thuc Le (pictured right) offers cancer researchers a shortlist of genes that need a closer look in the lab.

Bioinformatics combines maths, statistics and computer science to solve biological problems, and Dr Le’s focus is on how genes interact and lead to cancer. The work recently won him the 2015 Ian Davey Research Thesis Prize, which recognises last year’s most outstanding research thesis at UniSA.

“Gene regulators, known as miRNAs, control other genes by interacting with messenger molecules called



UniSA students Joel Edwards and Caitlin Breyer (left) meet Prime Minister of Vietnam, Nguyen Tan Dung.



mRNAs. For a long time, researchers have looked for correlations between the two, based on statistics,” Dr Le says.

“In my research we changed the point of view to look for causation, not just correlation. This was our contribution from a computer science perspective.

“We developed a computer model to predict which miRNA will affect which mRNA, and pick the top interactions to investigate further. This model will help the design of laboratory experiments in the field of cancer research.

“Researchers might have 20,000 genes to look at, one-by-one. My model helps put together a shortlist of genes for further examination, significantly reducing the research process.”

Dr Le completed his PhD in the School of Information Technology and Mathematical Sciences, in close collaboration with the Centre for Cancer Biology, an alliance between UniSA and SA Pathology.

Despite the vast amount of cancer research occurring around the world, Dr Le says a key challenge is pooling the knowledge that’s being generated. By enabling better-designed lab investigations, Dr Le’s research offers potential for a richer understanding of genetic causes of cancer.

“Results from each lab don’t give a complete picture. Bioinformatics starts drawing this together – like ‘big data’ for cancer,” he says.

“We need to understand the genetic profiles of patients, and how genes interact. Biologists have been struggling with this for a long time.

“Understanding the genetic causes of cancer will lead to more efficient treatment and therapy, and will enable personalised medicine in which the genetic information of the patient will allow the creation of customised drugs.”

With a PhD under his belt, Dr Le is continuing on as a bioinformatics researcher at the University, and says a career goal is to lead a team to find genetic causes of cancer with a bioinformatics approach, and to help promote bioinformatics as a research area.

Local educator to lead UniSA’s Whyalla campus

Local knowledge and extensive career experience in regional South Australia will stand Paul Havelberg (pictured right) in good stead in his new role as Regional Manager at UniSA’s Whyalla campus.

Havelberg started the new position last month, moving from his previous role as principal of Edward John Eyre High School (EJEHS) in Whyalla, where he taught for the past six years.

During his time at EJEHS Havelberg, led plans to improve grades for Year 12 students, and increase the amount of students preparing for tertiary entry. He also strived to boost enrolments for Aboriginal students and improve school attendance.

He has had almost 30 years’ experience as a rural South Australian teacher and started his first role at Orroroo Area School.

Havelberg said he was excited to be embracing a new challenge in Whyalla with UniSA.

“The role will provide an important opportunity to increase and enhance educational opportunities for students in the region – to take students to the next step and launch valuable careers,” he said.

“UniSA’s Whyalla campus is hugely significant in South Australia not only for what it offers students but for what it represents for regional communities in providing tertiary education opportunities on their home turf.

“I look forward to working with the team in Whyalla and across the University to ensure Whyalla continues to play an important role in education for this region.”

For more information, see the related [media release](#).

Back in the space education business

Space fans will be pleased to hear that UniSA will again be hosting the International Space University (ISU) Southern Hemisphere Space Studies Program (SHSSP) in 2016.

The successful collaboration between ISU and UniSA dates back to August 2004 when an initial short summer space program was held in Adelaide for



the first time.

In January 2011 ISU and UniSA conducted the first SHSSP, welcoming local and international students to Mawson Lakes campus and one of the most interdisciplinary curricula you could find – including studies about systems engineering and life sciences right through to law, economics and communications, as they relate to the space industry and space travel.

Over the period of the collaboration more than 270 scholars have travelled to South Australia to learn about the complex and sophisticated workings of the international space industry.

SHSSP coordinator in Adelaide, Michael Davis, says after a short break of one year when the program was held in another country, it is now returning to SA at an important time.

“We are very excited to have John Connolly, formerly Exploration Chief Scientist for NASA’s Human Exploration and Operations Mission Directorate as the Director of ISU’s SHSSP,” Davis says.

“He has come from NASA to take on the role and students will really benefit from the close association with industry that his leadership brings to the program.”

The return of the program to UniSA will also bring a great focus on space education in the lead up to one of the world’s most important international space-related conferences being held in Adelaide in 2017.

“One of the factors that helped us win the bid to host the International Astronautical Congress in 2017 is our experience in hosting space industry and education events such as the ISU SHSSP at UniSA,” Davis says.

Find out more about the 2016 ISU SHSSP at unisa.edu.au/spaceprogram.

New sports programs set to benefit disadvantaged communities in South Australia

The Sport and Development Program in UniSA’s Division of Health Sciences has kicked off two new community outreach programs this year.

The innovative programs will provide children from refugee backgrounds living in northern Adelaide and children with mental disabilities in the regional South Australian city of Whyalla with new options to get active.

A collaborative pilot project between Whyalla Special School, the University’s Department of Rural Health, the Sport and Development Program and a range of local stakeholders including the Whyalla City Council and the Whyalla Samaritan College, Sport 4 Rural Health (S4RH) aims to increase physical activity levels of disadvantaged young people living with a mental disability in the Whyalla community.

UniSA Research Fellow in Sport and Development, Dr Edoardo Rosso says that the multi-sport S4RH program, which includes cricket, soccer, netball and lawn balls, aims to develop the self-efficacy and life skills of participants while also providing a space for positive social experiences. The S4RH program was officially launched in Whyalla at the end of March.

In the same month, the Kicking Goals for Community program – run by the Sport and Development Program and the Northern Refugee United Social Club (NRUSC) and supported by a Community Benefit SA grant – was also launched.

Kicking Goals for Community focuses on specific football (soccer) activities designed to improve life management skills and overall wellbeing of children from refugee backgrounds living in the Playford area, and follows on from more than three years of engagement with the local African community through the University’s Football United® program.

As part of its involvement, the UniSA Sports and Development Program recently donated a large quantity of football gear to the NRUSC.

Dr Rosso says the suite of programs run by the UniSA Sports and Development Program provide a number of benefits for both communities and UniSA students.



“These new programs are part of a number of innovative sport-based community programs we run in collaboration with government, communities, and non-for-profit, sport and education organisations,” he says.

“Run by UniSA student volunteers and community volunteers under the guidance of UniSA staff, these programs give disadvantaged communities more opportunities for participation and education centred on sport.

“It’s a win for the communities and it’s a win for our students, who are able to apply skills they learn at university in a real-life setting. The students find it a rewarding and beneficial experience, and make an enormous contribution to community development.”

For more information, go to the Sports and Development [website](#).

New ATN partnership opens doors to global company Huawei

UniSA students will have the chance to learn from one of the world’s leading information and communications technology providers through a new partnership between the Australian Technology Network of Universities (ATN) and Huawei Australia.

For each year of the three-year partnership, 10 students – two from each of the five ATN universities – will have the opportunity to take part in the Huawei undergraduate program ‘Seeds for the Future’.

The program, which already operates in the United Kingdom, United Arab Emirates, Italy and Spain, will introduce Australian students to Huawei’s headquarters in Shenzhen in China, giving them firsthand insight into the operations of an innovative global company.

Students will also spend one week in Beijing where they will learn about Chinese culture and language.

In his role as ATN Chairman, UniSA Vice Chancellor Professor David Lloyd said the ATN was excited to be partnering with Huawei.

“The ATN is proud of its strong ties to industry and through this program our students will get multinational industry experience within the ICT sector, while learning how to be effective in a multicultural business environment,” he said.

The Memorandum of Understanding was signed by John Lord AM, Chairman of Huawei Australia and Prof Lloyd in Canberra last month.

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Koalas: our new research ambassadors

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by Michèle Nardelli



INSIDE UNISA

UniSA has signed a Memorandum of Understanding (MOU) with Hong Kong's Ocean Park Corporation and the South Australian Department of Water and Natural Resources to boost education and research into one of Australia's emblematic marsupials – the koala – and into conservation and tourism.

Ocean Park attracts more than seven million visitors to Hong Kong each year to explore its wildlife and other exhibits.

Signed at the end of March, the MOU will further develop a partnership with South Australia that has already seen three koalas – Dougie, Merinda and Yani – bred at Cleland Wildlife Park, find a new home in the *Adventures in Australia* exhibit at Ocean Park.

UniSA's role will be to develop research and education opportunities for those interested in understanding more about one of the world's most unique species. The partnership will also explore what impact exhibits, such as the koalas, have on tourists' perceptions of conservation and environmental issues.

UniSA Professor of Biology Chris Daniels says the UniSA collaboration with the State Government and Ocean Park in Hong Kong on the koala project will open up some significant educational opportunities.

"The special ecological conditions that koalas need to survive and thrive and the ways in which marsupials have evolved and adapted to their environmental challenges are of significant research interest and there are many students in China and Hong Kong keen to learn more," he says.

Already five different species of eucalyptus have been established in a 9,000 tree plantation at Ocean Park to accommodate the koala's very specific diet.

"Through this collaboration there will be support from Hong Kong to develop research and education

opportunities here in South Australia for international students,” Prof Daniels says.

“We will be spearheading research collaboration around the themes of sustainability and conservation and we are hoping to welcome some PhD candidates to complete their research in Hong Kong and SA.

“The koalas’ placement in the Australian exhibit in Hong Kong will offer opportunities not only to research how these beautiful and resilient animals adapt, but also to look at what impact seeing koalas has on visitors to Ocean Park.

“There are opportunities to lead and nurture great research through exchanges and partnerships in key areas including business, sustainable development, park management and tourism, biology and environmental science.”

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From the Chancellery: Vice Chancellor pays tribute to Sir Terry Pratchett

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INSIDE UNISA

UniSA Vice Chancellor Professor David Lloyd presenting Sir Terry Pratchett with an Honorary Doctorate last year.

My friend Terry Pratchett was a teacher. He was just trapped in a bestselling author's body. Every time we met, every conversation we ever had, Terry would impart some nugget of wisdom or information or some new arcane fact that he had squirreled out of a reference book and lodged in his encyclopaedic mind. His 'pack rat mind' he called it.

I recall one particularly animated conversation about the content of Victorian sewers. He sat back in his chair in the café in which we were having lunch. We were eating something called stewp. A type of stewy soup. Or soupy stew. He wiped some stewp from his beard and declared, unbidden, "Do you know what a tosheroon is?"

I looked up from my stewp, slowly. I had learned by this time to be wary. An ill-judged guess or a bluff, or indeed any attempt at appearing semi-knowledgeable on receipt of such unprompted questioning could often lead to several minutes of his gleefully bemoaning the fate of the modern education system, with interjections such as "aren't you university chaps supposed to be clever?"

Better to own up to ignorance and enjoy the lesson.

"I have no idea," I ventured. And, knowing it was most unlikely, but just to test the waters of humour which always ran deep with Terry, I followed up with "Is it related to a macaroon?"

"Not bloody likely!" he laughed. "A tosheroon, young man, is a clump of sewer gunk. It collects around eddies and swirls in the, as you might call it, system. Heavier '*material*', if you take my meaning, aggregates in these whirlpools. And where there's muck there's brass! A sewer scavenger could find anything in a tosheroon. Lost jewellery, coins, anything valuable that fell down the loo. You name it."

I was thinking about the probable majority of the 'find anything' composition of a tosheroon, more so than the

bounty it might contain, and pushed back my bowl of stewp, unfinished.

“It’s a good word,” I conceded. Terry was very fond of words (one of his all-time favourites was *susurrus*).

As was the usual post-lesson period, we went on to chat more deeply about the book he was working on at the time (*Dodger*) and what was coming next back on *Discworld* and what else he had picked up in his insatiable research about the great Victorian unwashed, before ranging into wider consideration of the human condition (we used to spend a lot of time on the appropriateness of ‘*sapiens*’ as a descriptive term for humans) and inevitably plotting a course to a glass of brandy. It was a classroom to which I was happy to return, time and time again.

I first met Terry in December 2008, about two weeks before he came Sir Terry and almost exactly a year after he had been diagnosed with early onset posterior cortical atrophy (PCA). Naturally, that topic came up fairly early on in the conversation. Terry’s sense of humour was evidenced in that first meeting by his pretending (to me) to have lost all sense of his short term memory. “What year is this?” he asked, scratching his head in confusion. When he saw the look of abject horror on my face at discovering this great literary hero of mine had seemingly lost all faculty for reason, his mask of mock seriousness broke. “I’m pulling your leg,” he smiled.

PCA is a very rare variant of Alzheimer’s disease, but no less cruel, perhaps indeed, even more so than the Alzheimer’s we fear will steal us away in old age. In those early days, Terry’s sense of visual acuity was first impacted. He described it as having a totally warped sense of topology. Regaling an audience with witty conversation and plotting bestsellers were quite easily done in those days, but navigating a chequerboard tiled floor, or God forbid, a rotating doorway in a hotel lobby – they were major trials of sensory trickery.

PCA robbed Terry early on of his ability to touch type, but use of Dragon Dictate software meant previously typed narrative now became oral, and indeed, more structurally complex. We used talk about that too. The change in his storytelling style from the written to the spoken – you can see this evolution in his later books.

As the years passed, the progression of PCA from an ‘embuggerance’ to an outright nuisance became more apparent, but Terry raged against that biological machine and lent his eloquent voice to those less able to speak out. His advocacy for assisted dying garnered global attention, in fact his fame for simply being unfortunate enough to have a disease at times threatened to outstrip his far more hard-earned fame for being an international bestseller of some 85 million volumes. Terry’s forays into other media also included the heart-rending trilogy of award-winning documentaries, *Living with Alzheimer’s*, *Choosing to Die* and *Facing Extinction*.

I had the honour of presenting Terry with an honorary degree not once, but twice. From two different universities, two different hemispheres. The first, from Trinity College Dublin, led us to friendship and took him on a journey that led to a most unexpected professorship, one that wholly suited his inner teacher. He retitled his inaugural professorial address from ‘The importance of being amazed about absolutely everything’ (the title under which he originally delivered it), to, ‘A genuine absent-minded professor’ (when it was published as part of a collection of non-fiction work last year).

The second, from the University of South Australia, meant that I had to journey to see the professor, as Terry was no longer able to travel Down Under - something I know he really wanted to do, but PCA had steadily and stealthily taken another pleasure away from him. The second degree conferral was also a joyous occasion, made more memorable through the presence of corks on his doctoral bonnet. In his address to UniSA’s graduating class of 2014, he noted and advised, “I know first-hand that Fate can be cruel and unusual at times, but she is hardly ever deliberately malicious, she just suffers from bad timing in the main, so use your gifts and your talents to greatest effect possible while you can.”

As a Knight of the Realm, Terry had a heraldic coat of arms commissioned. The arms are emblazoned with the Latin motto, *Noli Timere Messorum* – don’t fear the reaper. Terry didn’t, and one of his most loved characters, Death, ultimately came to visit him far too early.

Sir Terry Pratchett passed away peacefully at home, surrounded by his family and with his cat on his bed, on March 12 2015, aged 66.

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**University of
South Australia**

Foundations for success: the partnership between industry and research

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by Will Venn



INSIDE UNISA

UniSA's inaugural Industry Professors, Peter Murphy and John Fielke.

UniSA's inaugural Industry Professors, Peter Murphy and John Fielke, say cultivating strong links between industry and research will create new jobs and enable South Australia to become a hi-tech, innovative state.

Their new titles recognise their ability to translate the demands of industry into practical products within the research environment.

It is these skills that saw Prof Murphy lead the development of the first plastic car mirrors for mass market, while Prof Fielke's innovations in agricultural machinery have led to the development of new tillage and seeding equipment for local manufacturer Horwood Bagshaw and new methods for processing dried fruit and almonds in Australia.

Most recently Prof Murphy has played a pivotal role in taking the knowledge acquired in developing plastic car mirrors into the renewable energy sector, through the design and manufacture of heliostats for concentrated solar thermal arrays. The heliostats are highly reflective mirrors able to focus sunlight onto collectors, which convert the sun's energy to electricity.

"Car mirrors must survive temperatures ranging from -40°C to $+80^{\circ}\text{C}$, which is typical for objects that must survive in the extreme climatic conditions of the real world," Prof Murphy says.

"Mirrors for heliostats, whilst comprised of different materials, must survive in harsh, often arid environments, characterised by extremes in temperature, potentially severe storms and massive doses of UV light, which can cause major degradation to materials.

“Working heliostats reflect sunlight onto a tower and via a heat transfer process they can create electricity. The more light that is reflected the more efficient they are, but they get dirty and contaminated in the field – if you can stop airborne contamination sticking to them you can improve their efficiency.”

In addition to his important role at UniSA, Prof Murphy is also director of research at Heliostat SA, an Australian company that uses next-generation technology to harness renewable energy power. The company recently delivered an order of heliostats worth almost \$1 million to Mitsubishi Hitachi in Japan.

“We are in the process of engaging a broader research plan with funding that will take us on a journey of creating more innovative products and get us into a niche in the marketplace,” Prof Murphy says.

As a mechanical engineer, Prof Fielke was one of the first research-only staff to join UniSA's antecedent institution, the SA Institute of Technology, and he has now been at the University for more than 30 years.

Through industry consultation he began to understand that the agricultural machinery industry needed stronger and more efficient design to suit Australia's unique agriculture practices.

Prof Fielke's research revolutionised dried sultana production in Australia, after he identified significant improvements to existing agricultural processing machinery which had not been modified or improved since the 1920s.

“New high-capacity separation equipment was employed to remove more contaminants, such as stems and stones, from dried fruit. The cleaner and less-damaged fruit now meets the expectations of dried fruit consumers,” Prof Fielke says.

“The almond industry is also growing and this is what we are involved in now – looking at current equipment and finding ways to improve it so that we can get cleaner, less-damaged almonds through the processing system.

“The project is at a stage where we are beginning to demonstrate new equipment to the industry. We use impact threshing, a different technology, and we can get 10 to 20 per cent more recovery of undamaged almonds with this new technology, which flows on to improved production rates.

“Our key goal right now is to develop equipment that can process and dehydrate earlier-harvested almonds, to avoid seasonal damage.”

Both professors believe that end-user engagement – a process of really getting to understand the client's challenges and needs – is the key to making research relevant.

“Listening to what customers want and being able to interpret that to what you can achieve and what's practical, taking a risk and not being scared about trying something new, and having the confidence to find a solution for a market need – this is what builds relevancy,” Prof Fielke says.

“It's also about reading the trends and demands ahead of time.”

Prof Murphy agrees and says that being able to translate research from an original idea into a commercial product signifies achievement.

“I view success as creating small start-ups that become successful companies, which in turn create jobs and places for our PhD students to go and work,” Prof Murphy says.

“With the current state of the automotive industry and the imminent closure of the GM Holden factory, South Australia is a state that's in a major transition, from the manufacturing and mass production lines of the past to high-tech, high-value-add industries of the future.

“From a research perspective it's important that our students develop that industrial awareness. Our PhD students have industry co-supervisors – it exposes them to the real world and business, it gets them to meet with people from industry and opens their eyes to what working in industry means.”

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**University of
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Living labs to stimulate low carbon living

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by Will Venn



COMMUNITY

The main assembly building in the town square at Tonsley.

Imagine an area in Adelaide for people to live, work and play, which has been designed specifically to leave the smallest carbon footprint on the environment.

The launch of the first Adelaide Living Laboratory (ALL) program is seeing such a precinct being developed in Tonsley, together with similar sites at Lochiel Park and Bowden.

As a living, thriving research hub, the multi-purpose development at Tonsley – covering 60 hectares and due to be completed in 2018 – is expected to bring real-time knowledge to developers, builders and planners, informing the way residential and industrial premises can be created and put to use with minimal carbon emissions.

Dr Robert Crocker, Acting Director of the UniSA Zero Waste SA Research Centre for Sustainable Design and Behaviour, is one of the lead researchers involved in the ALL program, which comprises a partnership between the South Australian Government and the Cooperative Research Centre for Low Carbon Living (CRCLCL), of which UniSA is a key member.

Dr Crocker explains that a living lab can be a precinct, a building or an industrial development in which it is possible to measure, assess and evaluate the processes which create and sustain a low carbon environment.

“It involves an exploration of emerging usages, behaviours and market opportunities, experimentation with living scenarios within communities of users, and an ongoing evaluation and assessment of what is progressively learnt in the precinct or development,” he says.

“A critical difference is its emphasis on co-creation – that is ‘co-design’ by and for all those involved.”

As a potential template for the design of other eco-friendly areas across Australia, Dr Crocker describes the Tonsley development as a highly-significant project.

“It has to be one of the largest reuse projects in Australia, and is certainly the largest living lab Australia has, involving a mixed-use site of light industry, business, educational facilities, retail and residential development,” he says.

Tonsley’s transformation is most evident in the iconic saw-tooth roof of the former Mitsubishi plant, at one time Australia’s largest shed at 11 hectares, and now being converted into a major rooftop solar array while the main assembly building will be adapted into a multi-purpose precinct which will house, among other attractions, an indoor forest (pictured right).



“We’re now starting to apply what we have learnt at the sustainable developments at Lochiel Park and Bowden to the Tonsley site,” Dr Crocker says.

“What we are doing in Bowden and Tonsley is creating a knowledge ramp for all stakeholders, whether builders, developers or residents. Low carbon living can’t be imposed from above, but must be researched, understood and put into practice by everyone involved – this is co-creation at work.”

With UniSA’s Dr Jane Andrew, Dr Crocker is leading the co-creation task to be used in the project. There are three other important research tasks, including an evaluation of the most effective software tools for assessing carbon reduction, a study of the most effective way of reducing and managing power, and a value proposition which seeks to provide the market with a more accurate understanding of the substantial economic benefits of investing in such advanced developments.

“It’s about using different technologies and also about social knowledge – trying to get people to change their behaviour by demonstrating best practice, in an ongoing, iterative way,” Dr Crocker says.

“One of the challenges is how to educate developers and builders to recognise the value of low carbon living.”

Why people should consider changing their behaviour, or care so much about low carbon living, is emphasised by Megan Antcliff, director of the Tonsley Redevelopment project, CRCLCL Board Member, and Chair of the steering committee of the ALL hub.

“Climate change is by far the biggest challenge that we are facing and low carbon living is one of the best ways that individuals can respond to that challenge,” Antcliff says.

“This is why the ALL program, and Tonsley redevelopment as part of that, is important.

“It is bringing together researchers with knowledge, industry that can take that product to market, and a community that can benefit from that product. It is about bringing the end user in contact with that product.

“We want to showcase South Australia as a low carbon society and we are ahead here because we have fantastic renewable energy sites and leading-edge researchers in this area.

“The excitement around Tonsley is extraordinary – it will become showcase for new technologies, new ways of living and working.”

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New iPad software keeps trains on time

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by Aleisha Johnston



SCIENCE AND TECHNOLOGY

UniSA researchers have developed a train driver advice system that runs from an iPad, helping trains stay on time and reducing their energy use and carbon emissions by up to 20 per cent.

Thirty years in the making, the Energymiser system was invented by researchers at UniSA's School of Information Technology and Mathematical Sciences and the latest version of the system – an iPad app – has recently been trialled in Europe.

Senior Research Fellow Dr Peter Pudney says the trials build on the success of earlier versions of the Energymiser system, which is already being used by trains in Australia and overseas.

"Having successfully trialled Energymiser in France on the 320km/h TGV high-speed train, the French national rail operator SNCF is now moving to the second phase of the project to roll the system out across their 1500 TGV drivers," Dr Pudney says.

"Working with SNCF, we integrated our driving advice software onto their iPads. Each SNCF train driver has an iPad that shows the route and timetable information as they are driving.

"Our software calculates how a train should be driven in order to ensure that the train arrives at each timing point on time, and uses as little energy as possible."

The system uses GPS to monitor the progress of a train journey, and continually calculates the most efficient way to complete the journey taking into account track gradients, speed limits, power limits and the timetable. It then advises the driver when to apply power, when to maintain speed, when to coast and when to brake, as well as displaying real-time information about the route and journey.

It is currently used by railways around the world on a variety of trains, including intermodal freight trains and coal trains in Australia, coal trains in New Zealand, and high-speed passenger trains in the UK. It works on diesel,

diesel-electric and electric trains.

Dr Pudney says recent trials in the United Kingdom have also illustrated the system's ability to reduce congestion on rail networks.

"We recently conducted trials in the UK that demonstrated that we can send updated timetables to trains in real time in order to smooth the flow of trains through busy junctions," he says.

"We are also working with train manufacturers to develop systems that are built into the trains and can interact directly with the traction control systems to drive the train automatically – this means that the system will provide a cruise control option for trains, which improves efficiency and is better for the environment."

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The surprising link between land use and rainfall

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by Rosanna Galvin



SCIENCE AND TECHNOLOGY

While Adelaide was spared a scorching summer this year, the city did experience one of its driest periods in recent decades. Rainfall – or lack thereof – once again became the focus of conversation.

UniSA's Professor of Environmental Mathematics, John Boland joined the conversation last month, delivering a public lecture about the nexus between rainfall, land use and people's perceptions of landscape.

While significant attention has been paid to the effects of climate on landscape, Prof Boland says he is investigating the effects of land use change on climate – particularly rainfall, and how people's perceptions of their landscape might play a role in that connection.

"Many studies detail the harmful effects of vegetation clearance on rainfall totals and while originally it was thought that this decline was due to climate change alone, there is now evidence that some of the reduction in rainfall is from land use change," Prof Boland says.

"This introduces an important question – if land use change in the form of vegetation clearance reduces rainfall, can the opposite also be true?"

"Initial research I have undertaken in South Australia indicates that increased vegetation, if placed advantageously, may well enhance rainfall."

Based at the School of Information Technology and Mathematical Sciences, Prof Boland conducted a statistical analysis of the Monarto plateau region in South Australia, which experienced extensive revegetation in the 1970s.

He concluded that while there is insufficient statistical evidence to prove the revegetation increased rainfall, there is enough evidence to infer a link between the revegetation program and rainfall, a link which warrants further exploration.

“It’s not conclusive but there is evidence that rainfall around the Monarto plateau was maintained, and even increased, soon after the revegetation of the area,” he says.

“This could have a significant impact on how we look at revegetation projects. Through targeted projects, we may be able to keep rainfall in an area stable or possibly enhance it.

“We can also grow ecosystems, rather than monocultures, and in the process this could lead to saving endangered plant species as well as providing habitat for fauna.

“If we are able to increase rainfall through targeted revegetation projects we can make the whole ecosystem more robust in terms of coping with the pressures of present heat in South Australia and the prospect of increasing frequency of heat waves under climate change.”

Prof Boland has been working with Kurna Elder Dr Lewis O’Brien on an Australian Research Council Discovery Indigenous Development Grant, which is identifying specific locations in Australia where revegetation projects might be able to enhance rainfall.

As part of the project, the researchers are also looking at how people’s perceptions of their landscape can impact on how they choose to use it.

“Historically, people have always had a relationships with their natural environment and this in turn has affected the way people interact with it,” Prof Boland says.

“In Europe, there is a lot of mythology about Europeans who feared the forest – in *Grimm’s Fairy Tales* and in references to werewolves for example. I suspect the English settlers in Australia probably shared that fear and, like they had done in England, they embarked on wholesale clearance of vegetation.

“They wanted to change their landscape based on their cultural perceptions of it and in the case of Australia, they wanted to introduce farming techniques that they knew worked at home – disregarding the fact that the landscape and climate in Australia is very different to what they were used to.

“I believe that if we can place more importance on listening to the land and understanding our natural landscapes – free from constructed perceptions of landscape tied up with culture – we will be better equipped to adapt and thrive in our natural environments.”

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Minds and music meet at WOMAD

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by Kelly Stone



COMMUNITY

Music sensation Timberwolf and UniSA's Dr Evangeline Mantzioris.

UniSA contributed both minds and music to Adelaide's hugely successful WOMADelaide festival last month.

From the City East plaza one day to Sounds of the Planet the next, UniSA 'mind' Dr Evangeline Mantzioris met music sensation Timberwolf – aka UniSA physiotherapy graduate Chris Panousakis – on the eve of the four-day festival, of which the University is the official education partner.

Nutrition lecturer Dr Mantzioris was a speaker at WOMAD's Planet Talks sessions, which were presented by the University and attended by hundreds of people across the March long weekend.

Dr Mantzioris teamed up with celebrity chef Simon Bryant and winemaker Louisa Rose to deliver a thought-provoking workshop on sustainable diets.

"I told my kids I was performing at WOMAD and they just looked at me and said 'but you can't sing mum!'," she says.

"It was a great experience being involved in the Planet Talks workshop with Simon and Louisa and sharing some knowledge on nutrition and sustainability with the community."

With each Australian household throwing out on average \$616 worth of food every year, Dr Mantzioris says her top tips for sustainable eating are reducing food waste and reducing processed food intake.

"It's the things you do every day that count," she says.

"If you have processed food once in a while, that's not as problematic as if you do it every day. The same goes for nutrition – if you have fish and chips as a once off, it's not going to be a problem like it would be if you had it on a regular basis."

From Planet Talks to the main stages, Chris says his first ever WOMAD performance was “like one big dream”.

“There are no words really ... I just want to relive it all over again,” he says.

Having been a keen music festival fan himself before rising to fame, Chris was ‘super excited’ in the lead-up to WOMAD.

“To go from the crowd, to know how a performer can make you feel, make you leave with great memories and emotions ... it’s all facilitated by the artist. To be in that position now, where I’m the one who’s going to give to the crowd and hopefully set up a great weekend for other people, that’s really cool, that’s my favourite part,” he says.

Chris works part-time as a physiotherapist when he isn’t busy touring and says he enjoys the balance between his music and working as a health professional.

“I find working as a physiotherapist really refreshing,” Chris says.

“I really like going into a physiotherapy bubble where you see 10 clients in five hours, it’s intense but so rewarding.

“The physiotherapy degree was great. The knowledge you gain is amazing and I’ve also got some really close friends from my years at uni.”

A self-taught singer and musician, Chris’s musical interest was sparked when he was in high school.

“My dad brought home a guitar when I was in Year 9 at school ... I think he knew it would be game-over if I picked it up,” he says.

“Both my dad and my uncle Nick Panousakis played guitar – we’ve all got a bit of an ear for music in our family and I taught myself to play guitar and to sing. I guess I picked up the guitar that day and it all just went from there.”

Timberwolf has a new EP coming out soon and his latest singles ‘Fallen Sun’ and ‘It Burns’ are available on iTunes.

As well as their City East campus connection, Timberwolf and Dr Mantzioris have something else in common – they are both big fans of the Mediterranean diet.

“I hate coriander but I love Greek food,” Chris says.

Dr Mantzioris says the Mediterranean diet is a very sustainable diet, consisting of plenty of vegetables, fruit, nuts, seeds and olives, extra virgin olive oil and small amounts of red wine.

“Most Australians eat too much meat; cutting meat intake even a little will have a positive impact on the environment,” she says.

“Organic fruit and vegetables have fewer pesticides but overall science shows they have the same level of nutrients as non-organic.

“Just because it’s organic doesn’t mean it’s healthy – an organic chocolate bar is still a chocolate bar.”

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University of
South Australia

UniSA staff member celebrates 60-year milestone

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by Kelly Stone



INSIDE UNISA

UniSA staff member Beverley Schutt holding a photo from when she first started work at the SA School of Mines and Industries.

At a time when job hopping is the norm, Beverley Schutt has clocked up something extraordinary – 60 years as an employee of the University of South Australia.

Schutt, 74, celebrated her retirement from UniSA and her 'diamond anniversary' service to the University and its antecedent institutions with a farewell function at City West campus last month.

"My years here have been wonderful. I don't think it will happen again that someone will stay in a job as long as I have," she says.

"The University has seen me through good times, bad times, happy times, sad times and sickness, and has always been there to help in any way possible."

From days of hanging up photocopying to dry to going home with purple stains on hands and clothes from the Fordigraph printer, Schutt has seen great changes across the duration of her employment.

Most recently Schutt worked as Research and Academic Administrator in the School of Management and, at a time when the Government is pushing for everyone to work to age 70, she says she's never felt her age has been an issue.

"I have never felt that my age made any difference working in the Business School," Schutt says.

"I was treated the same as the younger ones, except I couldn't walk as fast as them if we went out somewhere for lunch."

Schutt says working in your 70s is fantastic as long as you have your health, a job that can physically be done by 70-year-olds, and you are still able to do your job to the satisfaction of your employers.

"I don't think employers need to be any more considerate of older workers than younger workers," she says.

"I've learnt a lot from younger staff that I've worked with. If they've asked for any assistance I have always been there for them, I hope. There's nothing worse than older people always trying to give advice if it is not asked for."

Schutt says the biggest change across the course of her career has been technology.

"You couldn't do the type of work or the volume of work that is needed today by administrative assistants if you didn't have computers and all the technology that goes with them," she says.

"We used to spend hours on the phones in the late 1950s and 60s. But phones are no longer essential equipment – emails have taken over.

"You don't have to stand for hours waiting for a Gestetner printer to roll out your printed copies, or stand turning a handle of a Fordigraph printer."

When Schutt first joined the SA School of Mines and Industries in 1956, she used a black LC Smith typewriter. In the Mathematics, Physics and Navigation Department she used a double keyboard Imperial typewriter – one of only two in SA.

"Then I had an IBM electric golf ball typewriter with many balls for the maths symbols. It was a wonderful invention but exhausting to use," she says.

"I was the first punch card operator at the SA Institute of Technology, which was fine, until someone dropped a box of cards!

"After some time, dedicated word processors called Raytheons were used. I was in Chemical Technology and it fitted into a small room and was quite complicated. I learnt to use one by reading two huge manuals the size of Webster's Dictionary.

"Next I worked with a small Macintosh computer when I was in the Occupational Therapy Department – the business division used PCs. Gradually the PC took over everywhere. The rest is history!"

Schutt says she never thought of leaving the University at any time during her 60 years.

"But I have moved around many times and have worked in lots of departments and schools," she says.

"I think it is good for younger people to change jobs if they are lucky enough to get the work and be able to improve themselves.

"I would say adapting my skills to achieve the best of my ability in all areas in which I've worked is the highlight from my years of service to the University.

"Working with students and academic staff has always been my top priority and I've received favourable comments from both. That makes it all worthwhile."

Schutt's husband John, her daughter and son-in-law have all worked at the University. Schutt is on long service leave until the end of the year, at which time she clocks up 60 years. In retirement, she looks forward to spending more time with her husband and family, travelling and studying French.

Her farewell was attended by 200 people, with speeches from Vice Chancellor Professor David Lloyd; UniSA Business School Pro Vice Chancellor: Business and Law Professor Marie Wilson; and a song from Law Professor Rick Sarre.

School Manager from the School of Management, Jennie Connor, says Schutt's story has been a long and eventful one at the University.

"Since 2008 I have been Bev's boss and have really appreciated her quirky sense of humour, her care and enthusiasm for the PhD students she has worked with, and her determination to just keep doing what she loved," Connor says.

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Latest content revision: Thursday, 23 March 2017



**University of
South Australia**

Danielle's glasswork success scores her a trip to Seattle

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by Katherine Cox



ART AND DESIGN

UniSA graduate and visual artist Danielle Rickaby (pictured below) is planning to expand her practice in America's top city for glass-art after winning a travel award at the Helpmann Academy Graduate Exhibition in March this year.

The Bachelor of Visual Arts (Honours) graduate won the 2015 Hill Smith Gallery Helpmann Academy Friends Award for International Travel and \$5000 for her glasswork showpiece.

She was one of three UniSA graduates to take home awards at the prestigious exhibition, with Thomas Yeend winning the \$3500 Raffan Award and James Geraghty winning the \$250 Backers Prize.

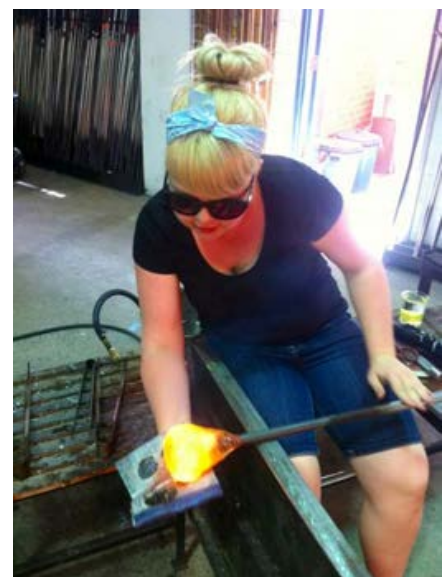
Danielle says she plans to use the award money to visit Seattle, which she describes as the 'glass mecca of the world'.

"I recently got a scholarship for the Pilchuck Glass School in Seattle so the award money will help support my time there. I am really excited as the classes there are run by world renowned artists," Danielle says.

"I'm particularly looking forward to attending a class about hot-glass sculpting with Kelly O'Dell.

"Overall I just can't wait to explore Seattle as the city has many glass blowers to draw inspiration from."

Danielle's exhibit pieces were created from jet black glass parts that have been intricately designed into



imaginative shapes. The detailed glass arrowheads, buttons, flowers and other abstract and flora shapes appear to be growing out of the painted white wooden boards that mount the glasswork to the wall.

According to Danielle, the concept behind her Helpmann Academy exhibition piece involves ‘imagination and the subconscious visualising narrative from abstract imagery’.

Danielle says glasswork was an obvious medium for her to use for her exhibition piece.

“I have been working in glass for eight years now,” she says.

“I was also encouraged as part of my Honours to mix media which is why I put my work on a two dimensional plane.”

Danielle is currently completing a month-long graduate residency at Canberra Glass Works.

Thirteen UniSA graduates were selected to participate in the annual Helpmann Academy Graduate exhibition, which celebrates the best budding artists from South Australia’s leading arts education institutions.

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Robert Crotty: nothing but the facts

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Emeritus Professor Robert Crotty has spent half of his working life, about 39 years, with UniSA and its antecedent institutions.

He began lecturing in 1975 in Religion Studies and History and only finished teaching last year when his final contract with Open Universities Australia courses ran out.

Now just shy of his 80th birthday, he is still researching, thinking and publishing and where religious traditions are concerned, still pushing the boundaries. Prof Crotty's latest discoveries are the focus of this month's UniSA News: Research Spotlight column.

I'm not sure if people are even interested in the activities of an aged person who is presently regarded as a persona non grata in a number of circles and who one Australian theologian claimed had the special charism of sending bishops into paroxysms of rage.

My latest research question has been – can a religious tradition take its history too seriously?

I have selected the case of the Roman Catholic Church and its firm proposition that its Pope is descended, by an unbroken chain of succession, from the Apostle Peter.

The results are now being published in a new book, *Peter the Rock: What the Roman Papacy was, and what it might become*.

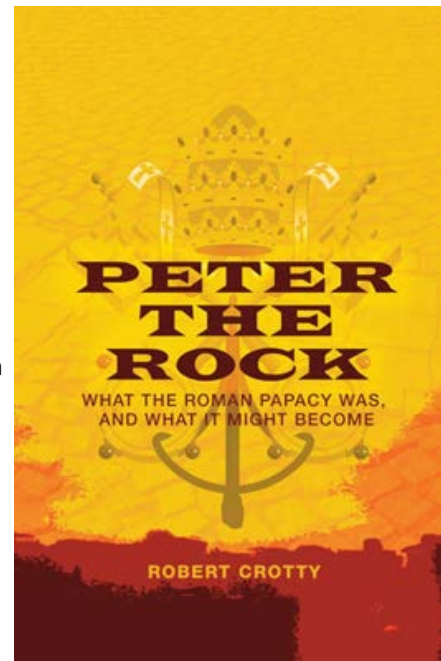
Examining this question from the point of view of texts and archaeology, I have come to the following conclusions:

- Jesus of Nazareth was a Jewish teacher, proclaiming the Reign of God to a Galilean audience, and he had nothing to do with the foundation of a separate religious community that was different from Judaism.
- There is no historical evidence, as against the symbolic statements in the Synoptic gospels, that Jesus of Nazareth appointed a man called Peter to any office or any succession.
- Peter was never a universal Church leader, never a Roman leader or Bishop and possibly not even a house-church leader.
- There was no monarchic Bishop of Rome until well into the second century.
- It was many centuries before the Pope in Rome even claimed to be the Head of the universal Church.
- The affirmation of a line of Popes as successors to 'Peter' belongs to the Church Story, not to history.

As a result, historians may like to investigate the historical beginnings of the papacy, but religionists cannot claim any historical proof for the institution of an office of papacy in their religious structure.

I have also been investigating the situation where multiple religious traditions co-exist.

In an era of Islamic extremism and Islamophobia, this is a crucial question. In a co-authored book – with one of my ex-students, Professor Terry Lovat, who was until his recent retirement Pro Vice Chancellor: Education at the University of Newcastle – we have taken the instance of Islam, Christianity and Judaism (known as the



Abrahamic Religions) co-occupying common social space.

Examining the foundations of all three, we have concluded that none can claim historical proof for their religious contentions. Each has a symbolic, albeit related, base and that is important.

None of them is 'correct'; none of them is 'incorrect'. Their symbolic systems are related but different.

None should submit to either of the others. The three must find an umbrella of common religious understandings and adhere to that, while strenuously maintaining their individual symbolic differences.

In the late Middle Ages, these three Abrahamic Religions did find a *convivencia* – an old Spanish term for a peaceful co-existence – at certain extended periods in Andalusia, northern Spain and Palermo.

Could such a happy situation be re-created? This research has been summarised in another book, *Reconciling Islam, Christianity and Judaism: Islam's Special Role in Restoring Convivencia*.

We hope that this will bring some light into a very stressful modern debate.

The underlying message in these two publications is that history belongs to historians, the study of religion to religionists. Within the parameters set by biology, humans can behave and do so with more and more complexity.

History then attempts to chart the development of these complex behaviours within the biological arena. Religionists, on the other hand, are interested in the structure and development of the many symbolic religions and their meaning. Religionists, specifically as students of religion, should not be historians. Their area is more like the research study of poetry, art and culture.

History sometimes explains aspects of religions; the study of religion certainly enlightens the development of human behaviours. However, the two areas are conceptually and methodologically different and should be carefully demarcated.

Historians cannot rely on the factuality of religious traditions (historians have no evidence for an Exodus out of Egypt or for the miracles and resurrection of Jesus); religionists cannot call on factual evidence for their conclusions (the kingdom of David and Solomon has no historical basis; the virginal conception of Jesus and his divinity are statements of Christian faith, not historical assertions).

And my general research conclusion? Many of the world's present dire ills are caused by this very confusion between the study of history and the study of religion.

So, I will continue with my own studies with happily more leisure at my disposal. I'd like to see where the Hebrew Scriptures, the gospels and other Christian writings came from.

That is a literary question, related to history. I would like to see how the Christian Gnostic movement, which considered Jesus to be divine and not a human being and who came as a Divine Revealer to instruct the select few, affected early Christian communities from the first century. That is both historical and literary-symbolic-religious.

For the moment my fascination with all these matters continues unabated. At some point I will run out of time.

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UniSA conferred 5358 Bachelor, Master and Doctorate degrees last month, with just over 3500 of those 'graduands' attending the graduation ceremonies. To view more photos from the graduation ceremonies, go to the UniSA [Facebook page](#).



Eight hundred students from 15 South Australian secondary schools competed at this year's Schools Head of the River Regatta, sponsored by UniSA.

Scotch College took out the 1st VIII races and the prestigious title of Head of the River Champions and became the first South Australian school to win both the girls' and boys' 1st VIII titles on the same day.





UniSA hosted the first Movies at Jeffrey's event for 2015 at the Jeffrey Smart Building last month. Part of ART AFTER DARK initiative, the event helped bring the West End to life with a free outdoor cinema screening of *Guardians of the Galaxy*. The next event is on May 8. For more information, go to the UniSA [Student Experience website](#).



The 'Innovate and Prosper - Ensuring Australia's Future Competitiveness through University-Industry Collaboration' report was launched by the Federal Minister for Industry and Science Ian Macfarlane at the Queensland University of Technology last month. The report was commissioned by the Australian Technology Network of Universities (ATN) with significant input from the Australian Industry Group and the ATN's Research and Industry Advisory Board. It can be viewed online in [PDF format](#).



UniSA education students in Mt Gambier participated in a community event, the Big Play Day Out, last month. The UniSA students helped create a box village (pictured above), which received positive feedback from many of the families involved.

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