Adelaidean

News from the University of Adelaide

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Research stars shine on world stage

Linking with the Riverland

IMPROVING PIG HEALTH FROM BIRTH

THE UNIVERSITY of ADELAIDE

>ADELAIDEAN

INSIDE THIS EDITION OF ADELAIDEAN

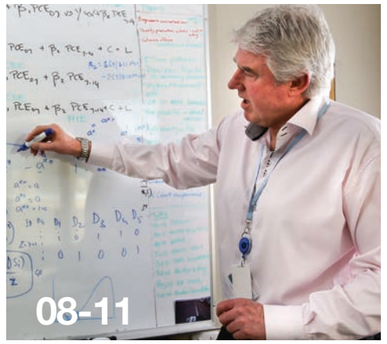
Research stars at the University of Adelaide are shining on the global stage.

University academics have been listed among the world's most highly cited researchers in the latest ranking issued by Thomson Reuters.

In this edition we also take a look at the work of two agricultural researchers who are helping to increase the productivity of Australia's pig and barley farmers.

The University is a major winner under the Federal Government's New Colombo Plan with dozens of our students winning prized exchanges overseas. We are also expanding our work in regional South Australia to support local communities.

These stories and more can be found online at **adelaide.edu.au/adelaidean.**



>CONTENTS

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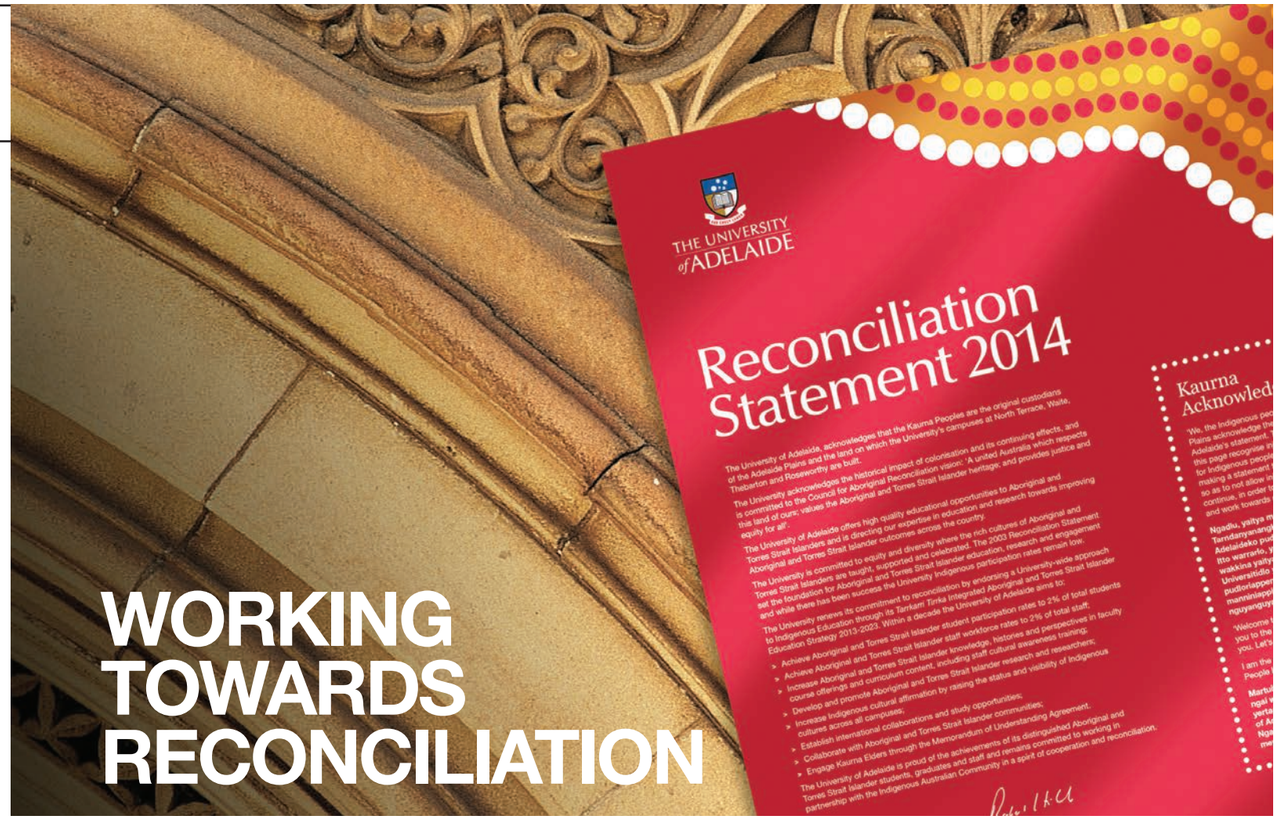


WORKING TOWARDS RECONCILIATION

The University of Adelaide has reaffirmed its commitment to Australia's Indigenous people with an updated reconciliation statement, which supports key targets for Aboriginal and Torres Strait Islander participation.

The revised statement aims to build on the original 2003 document by taking into account future directions of the University under the *Beacon of Enlightenment* strategic plan.

Vice-Chancellor and President Professor Warren Bebbington says the University's aspirations for Indigenous enrolments, employment and cultural awareness are more compelling now than they have ever been.

"Our mandate to foster and protect a campus environment of equity, diversity and social justice has never changed," he says. "In the University of Adelaide's 140th anniversary year this was clearly the right time to revisit our reconciliation statement and to reaffirm our position for a new generation."

The reconciliation statement endorses the University-wide approach in *Tarrkarri Tirrka,* the Integrated Aboriginal and Torres Strait Islander Education Strategy, which targets Indigenous workforce and student participation rates of 2% over the next 10 years.

The University's Dean of Indigenous Education, Professor Lester-Irabinna Rigney, describes the statement as the University's "birth certificate document" in working towards reconciliation in collaboration with Elders.

"It acknowledges the hardships suffered by Australian Indigenous people since European colonisation and that the Kaurna people are the original custodians of the land on which the University's campuses are built," he says.

"It is essentially a roadmap for the next 10 years of engagement with Indigenous communities, providing specific targets for participation rates of Aboriginal and Torres Strait Islander students and staff, and an affirmation of Indigenous culture right across the University." ■

> "Our mandate to foster and protect a campus environment of equity, diversity and social justice has never changed."

NEW INSIGHTS INTO A COMMON HEART CONDITION

PIONEERING RESEARCH BY UNIVERSITY OF ADELAIDE PROFESSOR PRASH SANDERS IS PROVIDING VITAL INSIGHTS INTO ATRIAL FIBRILLATION, A POTENTIALLY FATAL AND PREVIOUSLY LITTLE UNDERSTOOD CONDITION.

Prash Sanders came to a surprise conclusion as a medical registrar when he observed cardiac specialists treating people suffering from irregular heartbeats.

They were all using a different approach.

“It was pretty obvious at the time that no-one knew exactly how to manage the condition,” says Professor Sanders.

And they weren’t alone. Atrial fibrillation was a common illness which had cardiac experts worldwide struggling to fully understand and to standardise management.

The young Prash Sanders made it his goal to find out more.

After graduating with honours from the University of Adelaide in 1994, he undertook physician and cardiology training at the Royal Adelaide Hospital before doing clinical training and a PhD in cardiac electrophysiology in Melbourne.

These were all steps in a carefully planned journey that would take him to Bordeaux in France where Professor Michel Haïssaguerre was pioneering a new treatment called catheter ablation.

Professor Sanders won a prestigious Neil Hamilton Fairly Fellowship to work with Professor Haïssaguerre and for the next four years learned all he could about complex ablation techniques involving cauterising areas of heart muscle to interrupt abnormal electrical impulses and, in many cases, cure rhythm disturbances.

He brought his new-found expertise back to Adelaide in 2005 when he established a dedicated electrophysiology laboratory to pursue further groundbreaking research. He’s come a long way since.

Today he is Director of the University’s Centre for Heart Rhythm Disorders and heads an 80-strong team based at the South Australian Health and Medical Research Institute, University of Adelaide and the Royal Adelaide Hospital.

Their work is helping to save numerous lives. An estimated 2% of people suffer from atrial fibrillation which has been identified as a leading cause of strokes and hospitalisation.

“I’ve been fortunate to have been involved in exploring and designing some of the techniques to cure people of atrial fibrillation and we’re now introducing these techniques in Australia,” says Professor Sanders.

“Important to the success of my group, which extends from basic science concepts through to the clinic, is the support and integration of services between the University and hospital environments.

“We have been fortunate to have attracted high-quality students back to the University, which has been fantastic.”

Among the key initiatives is a major collaborative trial involving cardiac electrophysiologists across Australia and New Zealand to evaluate treatment options.

The study, which is being led by Professor Sanders, is looking at new ways of using a cardiac resynchronisation device to improve heart pumping.

“This is the first trial of its type and by joining forces in this way we have a much greater chance of having a high clinical impact,” he says.

But while better treatment options are important, Professor Sanders is particularly focused on addressing the various risk factors that cause the condition – factors which until recent years were not considered connected.

They include hypertension, diabetes, smoking, alcohol abuse, high cholesterol, obesity and sleep apnoea.

“I’ve been fortunate to have been involved in exploring and designing some of the techniques to cure people of atrial fibrillation.”

THIS PAGE Professor Prash Sanders

ULTRA-COLD FACILITY DELIVERS SECURITY FOR RESEARCHERS

FREEZER FAILURE CAN SPELL DISASTER FOR A RESEARCH PROJECT. NOW LABORATORY MATERIALS AT THE UNIVERSITY OF ADELAIDE ARE BEING PROTECTED BY ONE OF THE MOST ADVANCED FREEZER MANAGEMENT INITIATIVES.

A new secure, ultra-cold storage system is being rolled out at the University of Adelaide to protect valuable research and archival materials.

Freezer failure is one of the most common adverse events at universities and can ruin irreplaceable samples, disrupt vital research and place grant funding at risk.

The University of Adelaide has taken a lead in Australia with a three-step Biobank project, which includes a laboratory information management system, secure freezer storage and extensive guidelines.

“Once successfully implemented, the benefits of the University’s approach to freezer management will be significant,” says Professor Mike Brooks, Deputy Vice-Chancellor (Research).

“In addition to constructing a new, purpose-built, secure facility, we are providing researchers with additional tools to achieve best practice management of their research materials.”

Biobank follows a 2011 audit which revealed the University had at least 110 minus 80°C freezers, and not all of them were being adequately maintained or monitored, leaving the University with a significant risk.

A major increase in research activity over the past five years also means demand for freezer space has soared.

Biobank includes a total of 36 new freezers which will be centrally located on the North Terrace and Waite campuses in purpose-built facilities that are secure and monitored.

They each have complete power back-up, with alarms providing alerts in the event of failure. All freezers and contents are recorded and monitored by the FreezerPro management system, which has a full reporting capability.

To improve security and ensure insurance standards are met, University of Adelaide schools will be given guidelines to improve the management of their local laboratory freezers.

Among the major users is the School of Paediatrics and Reproductive Health. School Head Professor Julie Owens says that knowing their work is secure and protected will provide researchers great peace of mind.

“As far as we know, no other university in Australia has such a comprehensive and institution-wide ultra-cold storage system which covers all three key areas to protect and manage our vital research materials,” she says.

More information can be found at:
www.adelaide.edu.au/biobank

“In addition to a new, purpose-built, secure facility, we are providing researchers with additional tools to achieve best practice management of their research materials.”

LEFT Professor Julie Owens in the Biobank

RESEARCH STARS SHINE ON WORLD STAGE

THE UNIVERSITY OF ADELAIDE HAS DEMONSTRATED ITS RESEARCH CREDENTIALS WITH FOUR ACADEMICS LISTED AMONG THE WORLD'S MOST HIGHLY CITED RESEARCHERS.

The Thomson Reuters ranking covers an 11-year period from 2002-2012, listing researchers who have made an "exceptional impact" in their specialty field.

Titled *The World's Most Influential Scientific Minds*, the report was compiled by identifying a small set of researchers – only 3215 worldwide – who wrote the greatest number of highly cited papers in their field.

Professor Mike Brooks, Deputy Vice-Chancellor (Research), says having researchers in this elite group is a fantastic result for the University.

"There were 78 high-citation researchers Australia-wide, so having four associated with the University of Adelaide – and the only ones in South Australia – is quite an achievement," he says.

"It's the pinnacle of academic success to publish papers that are highly cited. Being extensively referenced by other scientists means you're making an outstanding contribution which is influencing world research."

Attracting highly cited researchers to Adelaide is a key aim of the University's *Beacon of Enlightenment* strategic plan.

"We aim to attract many more research stars in the coming years and be at the very top level of citation performance. I think we've already demonstrated we're capable of achieving that goal," says Professor Brooks.

HIGHLY CITED RESEARCHERS

- Professor Alison Kitson, Dean, School of Nursing
- Professor Peng Shi, School of Electrical and Electronic Engineering
- Professor John Lynch, School of Population Health
- Professor Timothy Hughes, School of Medicine and SAHMRI

PROFESSOR ALISON KITSON

INSIGHTS INTO IMPROVING PATIENT CARE

Finding ways to introduce new evidence and innovations into large and often entrenched health systems has been the underpinning theme of Alison Kitson's research for more than 20 years.

She has been focusing on an approach called knowledge translation, or KT, to achieve her lifelong goal of improving patient care.

Professor Kitson's insights have been highly influential worldwide in helping health systems understand how they can better embrace new initiatives and practices. Her work has also shaped many research teams in studying the impact of KT initiatives.

She says it's a great honour to be in the highly cited list of international researchers.

"It reassures you that all the hard work is counting for something on the ground," she says.

Research has been a major focus throughout her career, including senior positions at Green Templeton College at the University of Oxford and the Royal College of Nursing in the UK.

Professor Kitson has brought that passion to the University of Adelaide's School of Nursing in her position as Dean, and its international reputation has grown accordingly.

A key aim since joining the School in 2009 has been to establish a global research network focused around the importance of patient-centred care.

PROFESSOR PENG SHI

REALISING YOUR DREAMS

Peng Shi is a distinguished international researcher who believes in following his dreams.

It's a journey which has taken him around the world before joining the University of Adelaide's School of Electrical and Electronic Engineering two years ago to continue his breakthrough research in intelligent systems and automation and control.

Professor Shi graduated from one of China's leading technology and engineering universities, Harbin, in 1982 and over the years has progressively added to his impressive academic record at universities in the UK and Australia.

He also spent six years applying his skills at Australia's principal defence research establishment, the Defence Science and Technology Organisation, from 1999.

Professor Shi says he was attracted to the University of Adelaide because of its reputation as one of Australia's top Group of Eight research universities.

"It's allowed me to keep following my dreams and continue research into areas that have real-world practical applications, whether it is in defence, industry or manufacturing," he says.

He is delighted on two levels at being nominated as one of the world's most highly cited researchers.

"It's really pleasing to have your work recognised by your peers and colleagues, and to know that you are playing a leading role in an area in which you are so passionate about," he says.

PROFESSOR JOHN LYNCH

COMMUNICATION KEY TO HIGH CITATIONS

Epidemiologist and public health expert John Lynch believes researchers should focus on three key areas to succeed in having their work regularly cited.

They need a strong sense of society's big questions, good data to address those questions and, finally, they must be able to communicate.

"Good writing is an undervalued skill across science, to be honest, and I cannot emphasise that enough – it's important to communicate clearly," he says.

During a distinguished research career, the Professor of Public Health at the University of Adelaide has been cited more than 11,000 times.

He is an internationally recognised scholar who spent 20 years in North America and also worked in Europe before returning to Australia six years ago.

In 2007 his work in public health was recognised with an honorary Doctorate in Medical Science from the University of Copenhagen, and in 2009 he was awarded a prestigious National Health and Medical Research Council Fellowship.

The main focus of Professor Lynch's work over the past four years has been an early childhood project to make better use of the masses of government data on child health and development.

The whole-of-population study captures more than 240,000 children up to the age of 13 who have been born in South Australia since 1999.

PROFESSOR TIMOTHY HUGHES

LEUKAEMIA BREAKTHROUGH GRABS WORLD ATTENTION

Timothy Hughes credits good fortune and great teamwork for being ranked among the world's most highly cited researchers.

It's a typically modest response from someone whose work has helped revolutionise the treatment of chronic myeloid leukaemia (CML).

The Head of Translational Leukaemia Research at South Australian Health and Medical Research Institute (SAHMRI) and the University of Adelaide has led a team which has been at the forefront of research into leukaemia using drugs called kinase inhibitors.

The approach has saved countless lives. Before 2002 only 50% of patients survived beyond five years, now 90% can expect to live at least that long.

"We've been very fortunate to be at the centre of this paradigm shift in the way we treat leukaemia, with a move away from harsh and untargeted chemotherapy to this very targeted small molecule approach," says Professor Hughes.

Professor Hughes, who is also Head of the Department of Haematology at SA Pathology, Royal Adelaide Hospital, was recruited to the University of Adelaide in 1993 to head up the University's leukaemia research group after spending five years in London and Los Angeles.

IMPROVING PIG HEALTH FROM BIRTH

ROSEWORTHY CAMPUS HAS EARNED A REPUTATION AS THE LEADING RESEARCH CENTRE FOR PIG REPRODUCTION IN AUSTRALIA IN A PROGRAM WHICH INVOLVES CLOSE COLLABORATION WITH INDUSTRY.

Will van Wettere threw on a backpack and headed for New Zealand to milk cows and play rugby after graduating with honours in agricultural science from the University of Edinburgh.

It was a working holiday which was meant to lead into a research career in the dairy industry. Fourteen years later and he's one of Australia's leading pig reproduction experts with an international reputation.

"Someone persuaded me that pigs are small pink dairy cows," says Dr van Wettere. "Well, maybe not, but they do have a lot of similar issues when it comes to nutrition and reproduction."

A lack of opportunities in dairy research proved a bonus for the pork sector as the young researcher pursued ways to maximise the reproductive potential of pigs.

His travels brought him to Adelaide where he worked for South Australian Research and Development Institute (SARDI) and he completed a PhD at the University of Adelaide on the reproductive physiology of sows.

Since 2009 Dr van Wettere has been a lecturer at the School of Animal and Veterinary Sciences at the University of Adelaide's Roseworthy campus where he's heading numerous research projects to improve pig fertility and the life expectancy of piglets.

Roseworthy is now considered the leading research centre for pig reproduction in Australia.

"Our research is aligned with the priorities of the Co-operative Research Centre for High Integrity Australian Pork and Australian Pork Limited, and we work closely with SARDI and commercial piggeries in South Australia and interstate," he says.

Nutrition and dietary strategies have been a major focus of the research and have resulted in several landmark discoveries.

They include the addition of betaine to the sows' diet to improve reproductive performance in summer when the animals struggle because of the heat. The supplement has been shown to increase the litter size by one to two piglets and is now used in most piggeries in Australia.

Improving the survival rate of new-born piglets is another priority. Birth hypoxia – a lack of oxygen during the birth process – seems to be a risk factor for piglet survival. Again, diet is proving to be the key.

"Traditionally the approach has been to treat the individual piglet, but we're looking at dietary strategies in the pregnant sow to reduce the problem in the piglet," says Dr van Wettere.

"We're focusing on two types of dietary ingredients – compounds such as creatine monohydrate and melatonin to help the piglet cope with birth hypoxia, and caffeine to increase their vigour to support more rapid milk ingestion."

Interestingly, the team is making use of research findings on humans to help inform its approach. Normally it's the other way around.

"Our research is aligned with the priorities of the Pork CRC and Australian Pork Limited, and we work closely with SARDI and commercial piggeries in South Australia and interstate."

ABOVE Dr Will van Wettere

MAJOR WINS IN NEW COLOMBO PLAN

The University of Adelaide's strong international focus has helped it secure significant involvement in the Federal Government's signature New Colombo Plan.

During the start-up pilot phase, the University attracted $287,000 for exchange programs in the Indo-Pacific.

The $100 million flagship program officially began in 2014 and is designed to forge closer ties with the region through greater study exchanges and internships.

Professor Kent Anderson, Pro Vice-Chancellor (International), says the early success is a fantastic result for the University and great news for students.

"Building international connections is an important part of the University's *Beacon of Enlightenment* strategy so we are very keen to have a major role in the New Colombo Plan," says Professor Anderson.

"In recent years we've achieved a four-fold increase in the number of our students studying overseas and this latest funding will help us improve on that.

"By 2023 we are aiming for 30% of our students to have an international experience during their degree. It adds a breadth of skill and knowledge and a sense of global citizenship that can only be achieved through first-hand experience of other cultures."

Professor Anderson is a member of the New Colombo Plan steering committee, a position he shares with two high-profile University of Adelaide alumni – Minister for Foreign Affairs Julie Bishop, Chairperson of the committee, and Minister for Education Christopher Pyne.

As part of the pilot, the University of Adelaide won funding to work with several Japanese universities through study tours, internships, language and cultural programs, and other short courses.

Animal science students are also spending time at the Bogor Agricultural University in Indonesia on study activities relating to live cattle exports. The exchange has important commercialisation interest with involvement of both Elders and Meat and Livestock Australia.

A group of Indonesian students also visited the University of Adelaide as part of the initiative, while funding has been provided for an exchange involving architectural students.

In another exciting development, three University of Adelaide students have been chosen among a group of 40 in the flagship scholarship program to live, study and gain work experience in either Japan, Indonesia, Singapore or Hong Kong.

They include Bachelor of Arts student Sarah Mitchell who was chosen as one of four Fellows, and two engineering students, Huw Grano and Jacob Shearer.

FELLOWSHIP WINNER

Sarah Mitchell is heading off to Hong Kong to study next year after winning a prestigious scholarship as a New Colombo Plan Fellow.

Only four fellowships were selected by the Federal Government from the 40 New Colombo Plan Scholars chosen for its scholarship program. The scholarships are worth up to $67,000 each and the fellowships are reserved for the top student in each overseas country.

Sarah, a 20-year-old Bachelor of Arts student from Mt Compass on the Fleurieu Peninsula, has been placed at the Chinese University of Hong Kong where she will study linguistics and history, and undertake an internship.

"Eventually I want to work in speech pathology or a related discipline, so this is a fantastic opportunity to pursue further linguistics study in various specialist areas," says Sarah.

"Building international connections is an important part of the University's Beacon of Enlightenment strategy so we are very keen to have a major role in the New Colombo Plan."

ABOVE New Colombo Plan Fellow, Sarah Mitchell.

Photography credit: Calum Robertson /Newspix

"In terms of productivity growth, this is a very direct and tangible contribution of science to the farming community and industry improvement."

PHOTO Professor Jason Eglinton

BARLEY PROGRAM BOOSTS FARMER PROFITABILITY

RESEARCHERS AT THE WAITE CAMPUS HAVE DEVELOPED A NEW BARLEY VARIETY WHICH WILL INCREASE FARM PRODUCTION BY 10%. IT'S THE LATEST IN A STRING OF SUCCESSES OVER THE PAST 40 YEARS.

Developing a new variety of barley takes smart science, high-level expertise – and lots of patience.

Researchers at the University of Adelaide's barley breeding program have demonstrated they have an abundance of all three, and growers across Australia are very grateful.

Every year the team at the Waite campus produces new varieties which have special characteristics or are more disease and salt tolerant.

And every year over the past decade the program has managed to deliver farmers productivity gains of between 2-3%.

An impressive performance which barley program leader Jason Eglinton says is about to get even better.

Growers around the country have recently been testing the University's latest inspiration – a malting barley named Compass which is consistently showing a 10% increase in product yield.

"This is one of the most eagerly anticipated product releases from a farmer's perspective in many years," says Associate Professor Eglinton. "It means they'll be able to run their barley program for the same costs, with the same management and the same agronomy – and get a 10% improvement in returns.

"In terms of productivity growth, this is a very direct and tangible contribution of science to the farming community and industry improvement."

Developing a new variety is very much a collaborative effort involving a multidisciplinary team of molecular biologists and biochemists using the latest science.

Researchers also work closely with industry, with each potential new variety field tested at 34 different on-farm locations spread across Australia to validate the genetic improvement in real conditions.

But to reach this stage takes a huge effort. According to Associate Professor Eglinton the process is like trying to find a needle in a haystack.

"We generate about 25,000 potential new varieties every year and test and evaluate every one of them," he says. "But on average we only release about one new variety every 12 months, and a typical product development time is 10-12 years."

Last year the University announced a five-year, $10 million investment to expand sections of the program. Royalties earned from new varieties are invested back into research to drive future growth.

The breeding group boasts some of the world's major brewing companies among its customers and they are all in it for the long haul.

Recently the team released a new variety called Charger which it developed over 10 years in partnership with Carlsberg and Heineken.

Charger increases the shelf life of beer by 50% by slowing down an ageing process which results in a stale, papery flavour. This was achieved by switching off a troublesome enzyme called lipoxygenase.

Japanese beer giant Sapporo has also partnered with the researchers to develop Southern Star, a variety which improves foam retention. Production starts later this year and the variety will be used exclusively for Sapporo premium brands.

Today more than 50% of the barley grown in Australia originated from the Waite laboratories.

"We have six or seven other organisations competing in the same space, so it's a track record which we're quite proud of," says Associate Professor Eglinton.

LINKING WITH THE RIVERLAND

"We're offering our substantial capability and engaging with industry, councils and regional development groups to tackle projects which have real value for the community."

PHOTO
Photography Credit:
Adam Bruzzone/SATC

The University of Adelaide's Faculty of the Professions is forging new partnerships in regional South Australia to support local communities while offering unique learning and research opportunities for students.

The Riverland is the latest region to benefit from the initiative, which aims to use the University's vast expertise across multiple specialist areas to assist local development.

Professor Christopher Findlay, Executive Dean of the Faculty of the Professions, says the approach is a win-win for all parties.

"We're offering our substantial capability and engaging with industry, councils and regional development groups to tackle projects which have real value for the community," he says.

"At the same time it's a tremendous opportunity and experience for our students because they get to work on real-life issues."

The University has also developed projects in other parts of South Australia, including the South-East and Port Augusta.

"While some of our ideas are still in the embryonic stage, the response locally has been very enthusiastic – they appreciate the benefits which will flow from such collaboration," says Professor Findlay.

Among the initiatives is a partnership with Renmark-based Almondco Australia, which is seeking to add additional supply chain value for its existing growers while encouraging more farmers to grow almonds.

International Global Food and Agricultural Business student Yumeng Chen has linked with Almondco for her Masters research to help the process.

It's a comprehensive study to find out the needs of existing and potential growers, and to provide crucial financial information relating to overheads, timelines and expected returns. The research involves liaising with key industry stakeholders.

In a separate project at Almondco, engineering students from the University have been invited to review and evaluate the company's world-class processing facilities to see if further innovation and improvements can be implemented.

"Our students are thirsty for this type of practical experience and the opportunity to use their skills in an area that can add real value," says Research Associate Craig Johns. "It also looks good on their résumé."

The Faculty of Professions is also liaising with Renmark Paringa Council with a view to having overseas students take part in council internships.

Business Development Manager Anna Cosentino says the aim is to provide a real-life regional experience for students through possible homestays and by becoming actively involved in the community.

"Projects being considered include assisting the council with new technology and records systems, designing platforms for community engagement, and the development of new procurement programs," says Ms Cosentino.

"The council is very enthusiastic at the prospect of being able to utilise the skills of our students and we're hoping to have something in place soon."

Various other initiatives are still at the developmental stage, including programs with Regional Development Australia and the local business community.

UNICARE SUCCEEDS ON MANY LEVELS

Adelaide Unicare clinics owned and operated by the University of Adelaide are attracting increasing numbers of patients while providing critical real-life student learning experiences and research opportunities.

The network of six clinics in Adelaide and regional South Australia delivers quality primary healthcare to various communities, with more than 150,000 patient attendances over a 12-month period.

At the same time Unicare is giving medical, nursing and allied health students access to a hands-on teaching experience, enabling them to work with patients from all types of backgrounds and with specialist needs.

It also fills an important third goal, providing postgraduate students with unrivalled access to general practice for important research.

CEO Michael Chalk says Adelaide Unicare is highly innovative and continues to evolve as it succeeds across many levels.

"We're always looking at new ways to expand Unicare services in conjunction with the University to meet the needs of the various communities we serve – and that includes students, researchers and the general public," he says.

"For example, late last year our Gawler Place Medical Practice opened a satellite clinic in Light Square especially to offer bulk-billed GP services to the local homeless and marginalised community.

"Then in June this year we opened a new service, in a joint initiative with the University, to provide specialist counselling support for students who are referred by the University's Counselling and Disability Service."

Adelaide Unicare is the inspiration of Timothy Murrell, the visionary founding professor of the University's community medicine department, who spent two decades setting up and running GP medical education facilities.

Today Adelaide Unicare engages 60 healthcare providers at its six clinics. Two clinics are located in Adelaide's CBD, including the University Health Medical Practice on the North Terrace campus, which is mainly used by staff and students.

Three clinics have been opened in the northern suburbs, including the flagship Unihealth Playford practice at Munno Para West, which was built using funding under the Federal Government's GP Super Clinic program.

The sixth clinic is located at Minlaton on the Yorke Peninsula.

"Having clinics in diverse locations provides our students with a range of unique experiences, including work with Indigenous patients and those with various special needs, so it becomes a really important part of their study," says Mr Chalk.

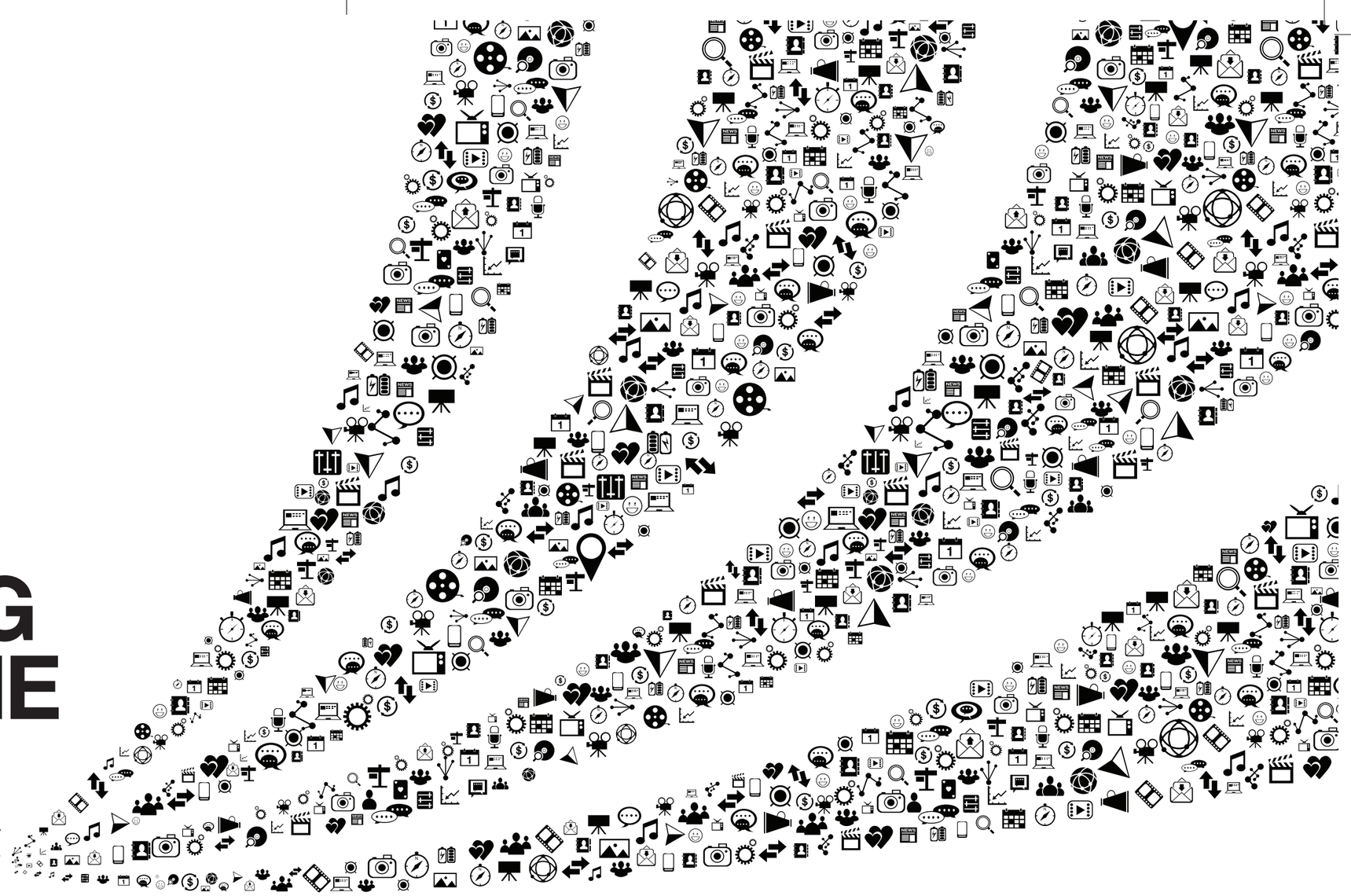
"This year alone we have budgeted for nearly 1,700 student placement days across our network, covering medical, psychology, nursing and counselling students."

Mr Chalk says future priorities include involving a broader range of students in Unicare activities, and leveraging off its practices to help the University expand its goal of becoming a 'health promoting' university.

"Having clinics in diverse locations provides our students with a range of unique experiences, including work with Indigenous patients and those with various special needs, so it becomes a really important part of their study."

PHOTO Dr Stephanie Taylor with student James McNeil and a patient.

EMPOWERING LEARNING THE MOOC WAY



THE UNIVERSITY OF ADELAIDE HAS TAKEN THE NEXT STEP IN ITS JOURNEY TO DELIVER UNIQUE STUDENT LEARNING EXPERIENCES BY BECOMING A MEMBER OF THE INTERNATIONAL EDX GROUP.

Adelaide has joined an elite network of the world's leading universities as it moves to create a new flexible learning environment which embraces the latest in online delivery and the small group discovery experience.

The University has started work on at least four Massive Open Online Courses (MOOCs) as a member of edX, an international consortium which is driving new directions in education delivery using the latest technologies and targeted content.

Professor Pascale Quester, Deputy Vice-Chancellor and Vice-President (Academic), says MOOCs will be the catalyst for teachers to rethink their course material to enhance the student experience.

"We're in the process of identifying topics for our first MOOC courses which will be developed over the next 12 months," says Professor Quester. "A small team will be going to Boston in September for technical training in relation to the edX platform underpinning our MOOCs and then we'll start in earnest."

MOOC development will involve teachers rethinking course content and delivery, using media techniques such as video segments and animation to meet the needs of a broader audience.

"It really focuses the mind because with a MOOC there is only a limited amount of time for teachers to get their message across," she says.

"This is all about learning outcomes not cramming in content. We're jumping into a future where lectures are no longer the most important component of a course."

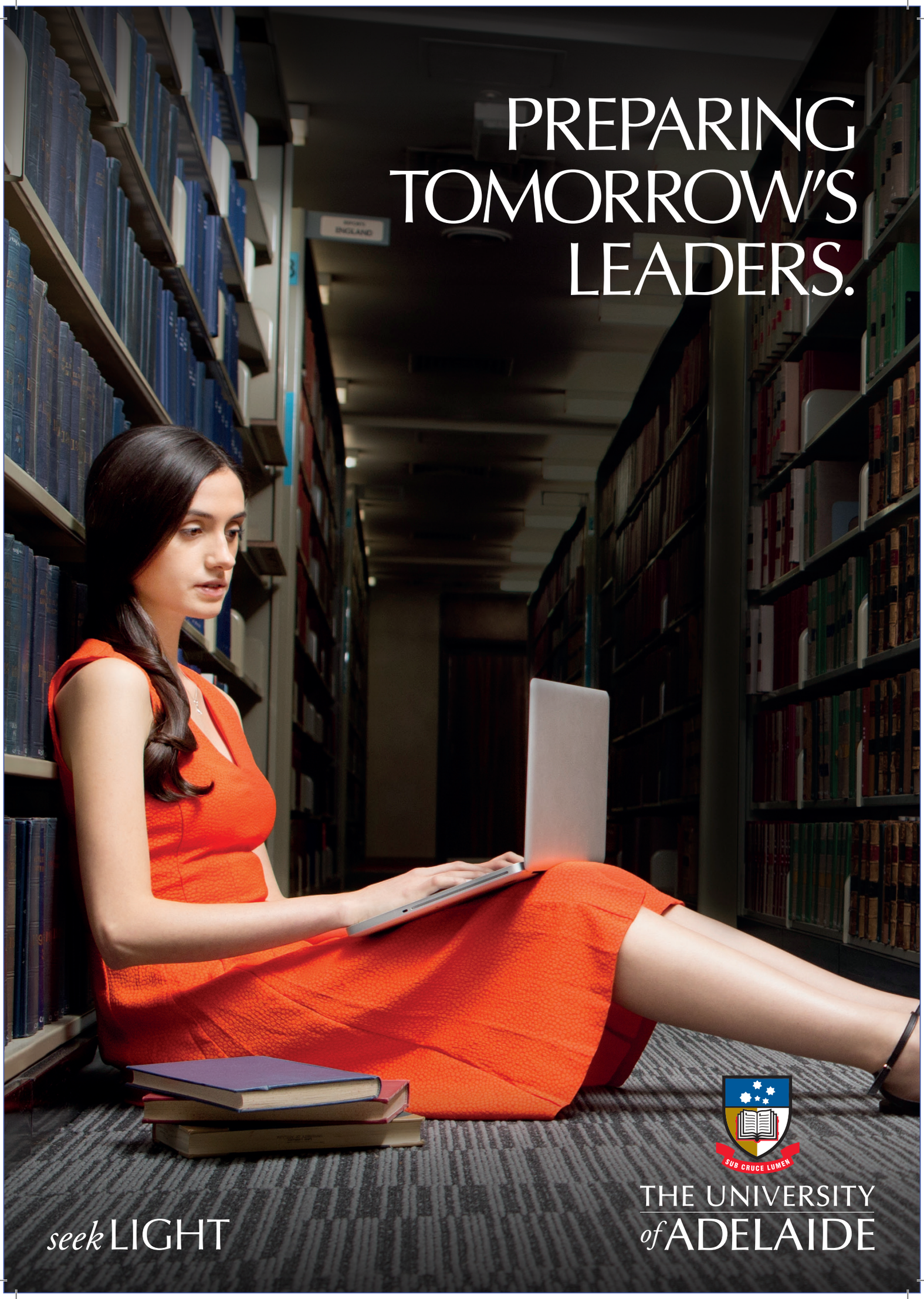
Using some MOOC learning to enhance the University's on-campus teaching will allow students to acquaint themselves with course content ahead of class, while freeing up time for more face-to-face interaction with teachers. This is a key part of the University's *Beacon of Enlightenment* strategic plan targeting the small group discovery experience.

Professor Quester envisages each MOOC will last five to seven weeks and will have multiple uses. In addition to forming part of normal course material for degrees, the free online content will also be accessible by anyone wanting to further their education, including those in remote areas or developing countries.

"It's also a wonderful way of helping our alumni to remain attached and involved with the University. That's what universities are all about – a community of learners expanding the boundaries of knowledge."

As a member of edX, the University of Adelaide is joining many other leading universities and organisations, including Harvard, MIT, the University of Tokyo and UC Berkeley.

"It really focuses the mind because there is only a limited amount of time for teachers to get their message across."


PREPARING
TOMORROW'S
LEADERS.
SUB CRUCE LUMEN
THE UNIVERSITY
of ADELAIDE
seek LIGHT