By Tamara Hunter

Annemieke van der Goot sets into position in the pre-dawn of the South African wilderness even before her study targets are awake.

As day breaks, she has the privilege of watching a small family group of endangered white rhinos stir and come to grips with the day. But the meditative mood doesn’t last. The PhD student is already alert, waiting for a rhino to defecate.

Annemieke’s research into the reproductive physiology of the Southern White Rhinoceros is part of the important and complicated business of saving a species.

Every day, she follows her group of rhino as closely as she can until one of them deposits the evidence she needs.

Once the animal has done its business and wandered far enough away, Annemieke quickly moves to dig into the dung ball and extract a 50g sample. The sample goes into a cooler bag and is driven back to base camp – often one or more hour’s drive away across the vast privately-owned sanctuary in Limpopo where she is doing her work – to be deposited into a freezer. From there, it is taken to the University of Pretoria for close analysis. Separate samples of grasses the rhinos like to eat are sent for analysis to the San Diego Zoo.

What Annemieke and her colleagues are looking for are clues which may help keep this ancient and remarkable species alive. Although the rhinos appear to breed well in the wild, they do not do so in captivity – and nobody yet knows why. It’s a mystery conservationists need to unravel quickly, because a rapid escalation in horn poaching is now threatening to decimate wild rhino numbers.

Annemieke got to name this baby rhino, Maatla, meaning power and energy. Photo: Annemieke van der Goot

continued on page 2
A lot of females in captivity don’t get pregnant, and it’s a problem specifically seen in white rhinos,” Annemieke says. “Zoos worldwide are struggling with that same problem.

“Nobody has been able to pinpoint the difference: why do they breed better in one place than another? I am mostly working with rhinos in the wild and using them as a model to learn more about their physiology, so we can use that information to learn more about rhinos in captivity.”

It’s hoped the dung samples and grasses will help to reveal specific mechanisms regulating reproduction and how these are modified by intrinsic and extrinsic factors – including levels of phytoestrogens, which are suspected to be higher in the diet of captive rhinos. The results could lead to better management programs for wild and captive rhinos – including the Northern White Rhino subspecies, of which there are only seven left.

Annemieke, who grew up in the Netherlands and holds a degree in Veterinary Medicine from Utrecht University, is doing her PhD through UWA in conjunction with the University of Pretoria, the South East Zoo Alliance for Reproduction and Conservation (SEZARC) based in White Oak Conservation Center, Florida, and IBREAM (the Institute for Breeding Rare and Endangered African Mammals). Her supervisors include Research Associate Professor Monique Paris and Winthrop Professor Graeme Martin.

IBREAM (which was co-founded by A/Professor Paris) has helped several UWA PhD students from the School of Animal Biology undertake research projects in Africa. Others include a project attempting to learn more about the endangered and elusive pygmy hippopotamus on the Ivory Coast, and research into African painted dogs in South Africa.

Annemieke plans to continue working in the area she sees as her life’s calling. She already works with several international zoos and organisations devoted to saving rhinos, and plans to return to South Africa.

“I really want to stay focused on this one animal and make my career there, because now I have so much knowledge of rhinos, it would be a pity for that all to go to waste,” she said. “There are never enough rhino experts.”

She speaks passionately about the risks now facing the White Rhino, which was rescued from the brink of extinction by legendary conservationist Ian Player as part of the famous Operation Rhino in the 1970s, but which is now once again declining in numbers due to poaching. There are an estimated 20,000 Southern White Rhinos left in the wild.

She knows that unlocking the breeding problem is only half the battle: for the rhinos to have a chance, the resurgence in poaching – for the animals’ highly sought-after horns – must be addressed. It’s a huge challenge, given a rhino horn, which can weigh up to four kilograms, can now fetch more than the price of gold.

“When I am in South Africa I live amongst a lot of local people, and it’s one of my passions to educate these people,” she said.

“The children I meet, they might become the future poachers. In a way I understand them. I don’t approve of it. But if a rhino means nothing to them, and if they can have money this way for their aunt to go to the hospital then why not do it? I try to change their minds and show them alternatives.”

Annemieke returns to South Africa for the final field trip of her PhD in September.
Strawberry research is the cream of the crop

By Sally-Ann Jones

For Dr Xiangling Fang, strawberries are a happy fruit.

She loves eating them, decorating cakes with them and giving presentations at international conferences about them – and her PhD thesis about keeping strawberry plants healthy so impressed the examiners that she didn’t have a single correction to make even though she wrote it in English, which is not her first language.

Dr Fang has been at the School of Plant Biology for nearly five years, working with her supervisor, Winthrop Professor Martin Barbetti, and colleagues on a serious disease – *Fusarium* wilt – that affects strawberry plants and impacts on farmers and the economy.

Dr Fang is in WA with her husband, who has a PhD in control engineering. But with her parents, five sisters, four brothers-in-law and four nephews in her hometown in Zhengzhou in Henan Province, Dr Fang tries to go back to China as often as she can and has only missed one Chinese New Year since she has been here.

In China, strawberries are mainly grown in glasshouses around big cities like Beijing and at no less than $13 per half kilo, are a luxury that are often only bought as weekend treats. Some strawberry varieties are native to China, where 300 years ago horticulturalists began developing new types from a pink-petalled plant, with a very small fruit, from mountains in northern China.

Today’s big, juicy strawberries are one of the most economically important berry crops in the world, and a high value export crop for the Australian horticultural industry.

For the first time, Dr Fang and her team have identified mechanisms that strawberry plants use to combat a serious strawberry fungus *Fusarium oxysporum*.

The research identifies the molecular mechanisms in which strawberry varieties respond to a devastating soil-borne fungal infection known as *Fusarium* wilt which poses a serious threat worldwide to commercial production.

The *Fusarium* wilt fungus penetrates through the roots and causes severe damage, yield losses and death to strawberry plants. Up to two million strawberry plants annually die or are seriously damaged from this disease in WA alone.

The researchers’ work, published recently in the *Journal of Proteome Research*, will pave the way for developing new strawberry cultivars with improved resistance to the fungus. Dr Fang was the lead author of the paper.

Their work will mean growers should be able to use fewer anti-fungal chemicals, with reduced input cost and improved outcome on human health and the environment.

The researchers’ findings provide the first understanding of strawberry plant resistance at a molecular level so that more effective and sustainable disease management strategies can be adopted locally and nationally.

The co-authors of the study were Winthrop Professor Martin Barbetti, Assistant Professor Ricarda Jost and Associate Professor Patrick Finnegan, all from the School of Plant Biology and Institute of Agriculture.

These studies were jointly funded by the Australian Research Council, the Department of Agriculture and Food Western Australia, the Strawberry Growers Association of Western Australia, China Scholarship Council and UWA.
In a few days, our University will host the annual UWA Centenary Trust for Women lunch.

The Centenary Trust for Women was formed 10 years ago with the aim of raising $1 million by this year, the University’s centenary. The fact that they have achieved this will make for a particularly celebratory occasion this year.

As before, copies of UWA News – this issue in fact – will be given to guests at the lunch. I hope many of these generous women will read this column and accept my personal thanks for their efforts and their loyalty to their alma mater.

It is wonderful that the guest speaker at the lunch is Dr Susan Gordon, AM. A graduate of UWA, Dr Gordon was the first Aboriginal person to head a government department in Western Australia. She was also the first Aboriginal magistrate in the State’s history.

Dr Gordon is a shining example of an alumna who has done amazing things for society. She received the Order of Australia Award in 1993 for her work with Indigenous people and community affairs.

At UWA, we are committed to keeping in touch with as many of our alumni as possible. They are part of our University ‘family’ and we welcome their ongoing contact with UWA in whatever capacity, from fundraising, to mentoring students, to becoming a member of one of the many ‘friends’ groups that contribute so much while also gaining so much from continued friendship.

Our department of Development and Alumni Relations is integral to maintaining links to alumni around the world and is now harnessing social media to reach younger graduates, for example through Facebook.

Convocation is another means of staying connected to our graduates, all of whom are members of this group, created under the University Act of 1911.

Convocation’s new Warden – the 32nd in the history of the University – is graduate Warren Kerr, AM. Mr Kerr, who is national director of the Perth-based Hames Sharley health group that is part of the consortium designing the new $2 billion Fiona Stanley Hospital – hopes that Convocation will contribute to achieving our goal of being counted among the world’s top 50 universities by 2050.

By helping to ensure that UWA continues to rise up the rankings – and be held in high esteem by the local, national and international community – Convocation will help ensure that a UWA degree continues to be a superior degree.

Mr Kerr was appointed a Member of the Order of Australia in 2009 for his service to architecture and his contribution to the planning and design of major health facilities around the nation.

It is great that people such as Dr Gordon and Mr Kerr are willing to give up their time to ‘give back’ to the University and we are very grateful that they do.

We warmly welcome all our alumni to stay in touch with us, whatever turns their lives have taken.

Paul Johnson
Vice-Chancellor

First lady of maths

Winthrop Professor Cheryl Praeger has become the first woman to win Australia’s premier award for mathematicians.

The Thomas Ranken Lyle Medal recognises outstanding achievement by a scientist in Australia for research in mathematics or physics. It has been presented at the Academy of Science since 1935.

Last month Professor Praeger became the first woman to be awarded the medal in its almost 80-year history. She is the Director of UWA’s Centre for the Mathematics of Symmetry and Computation, in the Faculty of Engineering, Computing and Mathematics.

Her acceptance speech noted how pleased Professor Praeger was to receive the medal from Professor Suzanne Cory, only the second woman to be President of the Australian Academy of Science.

“It is especially nice, since I am the first woman to be awarded the Lyle medal. I’d also like to add that I am enjoying the privilege of serving on the Executive of the International Mathematical Union with its first woman President, Professor Ingrid Daubechies,” she said.

“It’s important that girls as well as boys are able to see what may be possible for them, and that it is important to keep studying mathematics and science.”

As a school leaver, Professor Praeger was discouraged from studying mathematics, a counsellor suggesting she become a teacher or a nurse. But she persevered, studying mathematics at the University of Queensland, becoming enamoured with algebra and specialising in the theory of groups, which can be regarded as the mathematical representation of symmetry.

She completed her doctorate at Oxford.

Professor Praeger has been on the staff at UWA since shortly after her postdoctoral positions at the ANU and the University of Virginia in the early 1970s.
The Director of UWA’s Oceans Institute and one of the world’s most eminent ocean scientists, Professor Duarte was one of 16 scientists to attend a three-day meeting in the White House recently to try to provide the scientific underpinnings to predict the likely futures of the Arctic.

Following an expedition in April, his research team completed field work in the Arctic region again in June and he will be working in Greenland in the next two months.

“The Arctic is suffering from dangerous climate change,” he said. “In March 2007, peer-reviewed scientific literature predicted that, by 2100, two thirds of the summer ice would be gone from the Arctic Ocean.

“Even before this projection was ratified by the United Nations in October 2007, it had become obsolete. Change is happening so rapidly that the predicted loss of ocean ice has been brought forward by 85 years.

“In the past six years, the future has come up to our doorstep.”

The more ice that melts, the more methane is released into the atmosphere, and climate change is propelled further.

“The Arctic paradox is that the Arctic nations – the US, Canada, Russia, Denmark and Norway – all declare they are worried by the rapid changes, but they are all preparing for mining and extraction of oil and gas that were not accessible before the ice started melting,” Professor Duarte said.

Australian mining companies have applied for 40 per cent of the mining permits filed to the Greenland government.

“But we can’t start mining in this delicate region without a huge amount of research. We have insufficient understanding of how the Arctic works, to be able to provide guidelines for exploration, mining or development.

“The scientists who met in the White House agreed that we need to vastly accelerate our research so we can understand the Arctic and let science inform the laws and decisions,” he said.

The world’s leading scientists are ramping up their research and the tiny regional government of Greenland is taking a stand against mining in the Arctic.

“Greenland is heavily subsidised by Denmark,” Professor Duarte said. “And the only way they can achieve independence is with economic growth, which could be theirs with an international mining industry.

“But the newly-elected Greenland Social Democratic government has put a stop to all exploration and is not issuing permits.

“They may be missing out on a chance of economic independence but they have a future,” he said. “There were already plans for airports, pipelines and thousands of workers from China, but these have all been cancelled because the Greenlanders have chosen not to trade their independence for activities that will threaten their culture and values.

“There are only 58,000 people in Greenland – fewer than some of the big mining companies employ – but their courage and responsibility is encouraging to the scientific research community which no longer feels alone in its struggle to guide the region to a better future.”
A sunny school excursion to UWA by country primary school kids will probably inspire many of them to become students here in the not too-distant future.

The highlight of the visit for the Pinjarra Primary School year sevens was the opportunity to explore their connection with world-renowned author, artist, Oscar winner and graduate, Shaun Tan.

Pinjarra Primary School teacher Jan Middleton’s brother Iain Middleton, is the artisan tiler behind Shaun Tan’s sundial. In sharing the creative and mathematical process of the sundial, Iain inspired the students to build their own sundial for their final year project.

The students visited the sundial, Hours to Sunset, which adorns the west wall of The University Club, to understand how it works.

After Iain Middleton described the art of mosaics and design to the students, Dr Peter Kovesi, from the School of Computer Science and Software Engineering, explained the mathematics and science behind Shaun Tan’s centenary gift to UWA.

The year sevens were then taken on a tour of the university grounds by Uni Role Model student volunteers.

For many of the students their first visit to UWA made a big impression.

“It’s a much bigger place than I thought,” said aspiring marine biologist/forensic scientist Amy Attwood (12).

“I liked the architecture of the place and there is so much here,” said Connor Healy (12).

Jan Middleton said Pinjarra Primary School eventually hoped to attract sponsorship to be able to design and construct its own sundial on a large scale.

Shaun Tan graduated in 1995 with joint first class honours in Fine Arts and English Literature. As a young artist, one of his patrons was the then librarian at Subiaco Library, Susan Marie, who is now Director of UWA Extension. She commissioned and co-ordinated the Centenary sundial project and facilitated the Pinjarra Primary School visit along with UniDiscovery coordinator Megan Henderson.

Hours to Sunset, made of Venetian glass, was influenced by the medieval Book of Hours, an illuminated manuscript featuring gold and blue pigments.

“This combination of old European elements, mixed with my own experience of painting our coast, has produced a work that rhymes well with the sensibility of the University campus and its architecture,” Mr Tan said when his sundial was launched.

In an age of digital clocks and smart-phone calendars, he relished working on a sundial that blends the ancient origin of time-keeping with humanity’s basic relationship with sunlight and nature. Mr Tan is also designing a garden to compliment the sundial.

Amy Attwood and Ashlee Dickson enjoy the UWA experience.
Since May 2012, the Development and Alumni Relations office has run four phone appeals, connecting with thousands of alumni, working with more than 160 students, and raising more than $800,000 towards support for our students.

Each year, the Alumni Annual Fund is spearheaded by a team of talented student callers, who engage with our alumni, updating them with the latest news from campus, comparing stories about their experiences as a UWA student and seeking donations to support current and future students of the University.

The phone appeals offer a unique opportunity for our students to gain valuable career advice and hear about the outstanding things our alumni have accomplished since leaving University.

The students build new skills, learn more about UWA and, of course, earn some money.

Simon Thuijs, Bachelor of Philosophy student and Fogarty Foundation Scholarship recipient, has taken part in three phone appeals and gained much from his experience.

“Whether they offer me valuable career advice or simply engage in a great chat, every conversation is an experience which I value,” he said.

“It gives me great confidence in my own studies and the University when I hear of the successes of people who came before me. This combined with the fact that so many graduates are willing to give back and contribute to UWA’s mission makes me feel privileged to attend this University.”

The annual funds raised go toward supporting students via alumni scholarships (114 scholarships since 2001), program support such as the Fairway Program assisting students in need achieve their goal of a university education, and also to support priority areas or projects within the University.

These priorities range from Faculty support, to building the all-weather seating area in Jackson Court, to re-paving the Reflection Pond so that thousands of graduating students and their families can enjoy their graduation experience.

Most recently, the funds raised in 2012 by our alumni were used to provide Akram Azimi, the 2013 Young Australian of the Year, with a grant of $20,000 allowing him to continue his award-winning community work and still focus on his studies.

This year will see the arrival of a new funding process for Faculties and student groups to apply for financial support via the Area of Greatest Need fund. The new process will provide support for innovative projects for students and the University community overall. More information about the application process will be available later this month.
Providing food, shelter and health care used to be the priority in post-conflict zones.

But in contemporary conflicts, where communities are torn apart by years of violent civil war, schooling for children has emerged as the most important single priority for maintaining communities, aiding the psychological recovery of children and for the general recovery of society.

Rebuilding school systems destroyed by long-running conflict is the focus of new projects in the Graduate School of Education.

Gilbert Karareba is a PhD candidate from Rwanda, which is a post-conflict country. He and his supervisors, Professor Simon Clarke and Winthrop Professor Tom O’Donoghue, are working together to fill a crucial knowledge gap as they research ways to assist the reconstruction of Rwanda’s education system.

Both Simon Clarke and Tom O’Donoghue have done research in other post-conflict zones and they have recently published a book about education in these societies:

“It’s designed to open up research in the area of school leadership in post-conflict contexts, which we hope will develop more traction in the next couple of years, especially as it complements the work that we are already doing with Chilean colleagues investigating schools facing challenging circumstance in Chile,” Professor Clarke said.

Rebuilding broken schools

“People in post-war countries face immense challenges as they try to re-establish schools.

“Imagine sending your child to a school whose teachers you know are corrupt and routinely use physical violence to ‘teach’ their students,” he said.

“Imagine teaching a class consisting of former child soldiers and orphans with mental health issues. Imagine being the principal trying to overcome the underlying tribal tensions of your teaching staff, with very few resources and no government support behind you.”

Mr Karareba came to UWA as an AusAID student in 2010 to do his Masters with the same supervisors. He then won an International Postgraduate Research Scholarship from UWA to do his PhD investigating primary school leadership in post-conflict Rwanda.

Another PhD candidate – from Cambodia – will start work in this area of research with Professors O’Donoghue and Clarke later this month.

“We’re extremely grateful that the University has deemed these scholarships worth funding,” Professor O’Donoghue said. “It’s great that UWA has a social justice agenda.”

The researchers’ book School Level Leadership in Post-conflict Societies – The importance of context, published by Routledge, discusses educational contexts in a range of post-war environments, including Angola, Sri Lanka, Kosovo and Northern Ireland.

Each chapter highlights the importance of context for understanding the realities of school leadership, and reveals the problems that school leaders face as well as the strategies they adopt to deal with the complexities of their work.

The authors point to inspiring examples across the world, such as collaborations between schools, community churches and non-government organisations, the inclusion of life skills in school curricula and an increasing importance placed on learning for peace and human rights.

Professor Clarke said it would be naïve to think that the appalling circumstances associated with post-conflict contexts could be alleviated by reforming schools alone, but schooling could still play an important role in social and economic life.

After he has completed his PhD, Mr Karareba will return to Rwanda to pass on his research and leadership skills to teachers and school principals, hoping they will achieve his level of determination to succeed.

Just to get to UWA was a mission of determination and perseverance for the young teacher.

Mr Karareba had to travel 24 hours each way by bus from Rwanda to Kenya to lodge a visa application, than travel another 10 hours each way by bus to Uganda for the required medical checks.

He is returning to his homeland in January 2014 for field work.
The eyes have it

Great photography isn’t about technique, it’s about seeing, according to multi award-winning landscape and travel photographer Nick Melidonis.

The former geologist has spent many years travelling to many countries — including Iceland and Antarctica — and knows from experience that what makes the difference between a good photographer and a mediocre one is the eye.

“Anyone can learn technique,” he said. “What is important is learning how to see. A photographer needs to have something to say. He or she should find one main element in a landscape to share with the viewer.”

Mr Melidonis, who is a triple winner of the Australian Institute of Professional Photography’s Landscape Photographer of the Year Award, is offering a Successful Landscape Photography course through UWA Extension as part of the City of Perth and UWA Cultural Precinct’s WINTERarts season.

The course will cover tips for shooting iconic landscape subjects; seeing and composing the landscape; equipment and field techniques; and finishing of the images.

The course begins on Saturday 20 July, just days after his return from Iceland where he led a photographic tour. From 29 September Mr Melidonis will lead a tour to India and Greece and from 24 November to Cambodia.

For more information contact extension.uwa.edu.au/course/CCNPOO7, telephone 6488 2433 or visit the website: http://nickmeldonis.com/

A whole range of cultural events including exhibitions, concerts, workshops and talks — most of them free — are yours for the taking during this month.

Take part in a free Chinese calligraphy workshop, hosted by the Confucius Centre at the Lawrence Wilson Art Gallery at lunchtime on Friday. It is linked to the ORIENTing exhibition at the Gallery, featuring Ian Fairweather’s WA collections and responses to his work by a variety of contemporary artists.

Little Paintings, Big Stories is also at the Gallery. The exhibition explores the relationships between people, country and stories of Goulburn Island in the Northern Territory. It focuses on the local Maung language and the existing relationship between the Berndt Museum and Lamilami family, and includes bark paintings, photographs and sound recordings.

On Friday night, 12 July, the Gallery will be transformed for the Guild Centenary Gala. A literary dinner with travel writer Stephen Scourfield will feature at the University Club on Wednesday 10 July. And on Friday 19 July, the GRADS’ production of Randolph Stow’s The Merry-Go-Round In The Sea opens at the Dolphin Theatre for a two-week season.

While the students are on holiday, access to the campus is easy, so encourage your friends and families to make the most of this opportunity.

For more information about these and other WINTERarts events, go to culturalprecinct.uwa.edu.au
A PhD candidate at Yale University, a well engineer for Shell, and an HR analyst with Rio Tinto Iron Ore are all taking part in the 10th year of UWA’s Career Mentor Link program.

A few years ago, these successful young professionals were students at UWA who took part in the program from the other side, and all of them at least partly attribute their achievements to their mentors.

When it was started by the Careers Centre (Student Services) in 2003, the program had just nine participants: three mentors and six students. This year, 300 students and more than 250 mentors are taking part, as well as nearly 60 participants in a separate program for students and mentors from Singapore.

Jo Hocking, the program co-ordinator, said it was not about work experience but a relationship focused on helping a student to identify career goals and developing the skills to achieve them.

The mentors usually get as much out of the program as the students.

Yuna Lee is studying for her PhD in Health Policy and Management at Yale University and is hugely enthusiastic about the program.

“Reading old email exchanges with my career mentor transports me back to Perth in 2004. I had just turned 20. The emails reflect the tremendous growth I experienced in that year as a result of the program,” Yuna writes from New York.

“I hadn’t found the words to articulate my professional interests but I was lucky enough to have found the field of public health.

“In 2004, I was matched with my fantastic mentor, Eamon Ryan, who held a senior position at the WA Health Department. I am so grateful for his role in shaping me at that key moment in my professional growth. He brought to life what the professional world of public health might feel like post-graduation and gave colour and shape to what I was studying in the classroom. He became a role model and gave me something invaluable: the confidence to believe that my goals were attainable and not far from my reach. He helped me build the skills, language and path to achieve them.

“Soon after, I completed my combined degree in Health Science (Hons) and Commerce, and was accepted into the Health Management Masters program at Yale University. After graduation, I spent three years as a special projects coordinator for the NYC Health Department. Last year, I was accepted into Yale’s Health Policy and Management PhD program, and I am currently pursuing research in quality, patient-centered care and innovation in healthcare.

“This year, I am on the other side of the mentoring relationship as a mentor. My mentee is Anna MacTiernan, working towards her MPH. It has been fun and rewarding to be Anna’s mentor. Given we live on other sides of the world, we haven’t had the luxury of coffee catch-ups, but we have kept in regular contact via email and Skype. Anna and I bounce ideas off one another and brainstorm possibilities for her future path as she prepares for life after UWA.

“I see a lot of myself in Anna. I hope to give to her what Eamon passed on to me: encouragement, a concrete path forward, a sounding board, cheerleading, support and a reality check when needed.

“Mentoring is one of the most powerful ways to develop talent and professional practice. It never feels like “work”; it is always fulfilling and surprising for both the mentor and the mentee. Most successful people I know attribute their success to ‘standing on the shoulder of giants’.

“I like to think that I’ve passed on both tangible and intangible skills to Anna, as well as created a safe environment to bounce ideas around. We have talked generally about professional development but also worked concretely on questions about her approach to future opportunities.
“I am really happy I signed up for the career mentoring program back in 2004. I never thought I’d be on the other side as a mentor or that I’d be sitting writing this now from New York City nine years later.”

Royden Monteiro is a well site drilling engineer with Shell.

“My mentor was Soren Cicchini, who gave me a good introduction into the working life of a professional engineer,” Royden said.

“He went out of his way to get his friends to write about what they did, how they got there and lessons learned along the way. The information his mates provided was instrumental in my decision about the path I would eventually take in the world of engineering.

“It’s good to take on mentoring early in your career as your experience of transition from student to worker is still relevant and fresh in your memory.

“I’m mentoring Cem Miral, who is four years into a double degree in Engineering and Commerce. We meet face to face when I’m not working away. He’s very motivated and I’ve taken a page out of his approach and am now getting more out of the relationship with my own mentor!”

To learn more about UWA’s Career Mentor Link program, go to careermentorlink.uwa.edu.au

Amy Robinson graduated from UWA with Honours in Botany and now works for Rio Tinto Iron Ore.

“I had a mentor called Phil who worked for the Department of Agriculture. We met up for coffee on campus and he encouraged me to do Honours – which proved to be a very valuable learning experience: much greater than the previous three years,” Amy said.

“Mentors are essential because they can help you work through things without having a vested interest: Your Mum or Dad always want to solve a problem for you; your supervisors will want you to do something their way; employers want you to help them achieve THEIR goals.

“I would advise anybody who was thinking of becoming a mentor to do it for your own development, but make sure you know what your drivers are for your career: you can’t coach another person if you don’t have your own mantra and values defined.

“Anybody can mentor but you have to have a level of self-awareness and willingness to learn, not just be able to teach but be teachable.”
Bonnie co-ordinates a physical activity and health program for children aged from eight years with medical problems and it is aptly titled Thriving. It is overseen by a panel of experienced health professionals, and program leaders are final-year sport and exercise rehabilitation students.

Thriving may be the only such program specifically developed for children and teenagers in Australia and, while for some children and teenagers affected by cancer, a metabolic disease or any other condition which affects their physical abilities, healthy fun may seem like a luxury for other kids to enjoy.

But exercise physiologist and UWA PhD candidate Bonnie Furzer is determined that all children and teens should experience the thrill of everyday fun, from sport-specific skills to general fitness.

A young PhD candidate has turned out to be the best communications tool for a bioengineering research group.

Kelsey Kennedy has won her way to the Asia-Pacific finals of an international research presentation competition, Present Around the World (PATW).

The competition is run by the Institution of Engineering and Technology. After winning the WA then the Australian rounds, Kelsey, who is doing her research with the Optical + Biomedical Engineering Laboratory (OBEL) in the School of Electrical, Electronic and Computer Engineering, will present in Brunei next month, hoping to talk her way into the grand finals in London and a chance at the 1,000 pound prize.

Kelsey entered the competition at the suggestion of one of her supervisors, Research Associate Professor Robert McLaughlin.

Each young researcher gives a 10-minute technical presentation on an engineering or technology topic, which is followed by five minutes of questions. Three quarters of the marks are given for presentation skills, a quarter for technical content.

“I attempted to paint a broader picture of my research, rather than focus on technical details of my specific project. My talk, Imaging the Mechanical Properties of Breast Cancer, discusses an imaging technology called elastography, which may have potential to improve detection, diagnosis, and treatment outcomes of breast cancer,” Kelsey said.

“Here at OBEL, we are working on an optical version of elastography, which offers a higher resolution (microscopic level) than other available techniques.”

Kelsey is doing a winning job of telling the world about the group’s already award-winning breast cancer research.

For more information, call Bonnie on 6488 3333 or sseh.uwa.edu.au/community/thriving

The children – and their carers – find out about healthy living and are linked into a network of community-based services for young people with medical considerations.

The next holiday program will be from Monday 30 September – Friday 11 October with enrolments currently open and places still available.

To present well is a gift

Kelsey Kennedy

A young PhD candidate has turned out to be the best communications tool for a bioengineering research group.
She is the only poet who migrated to Australia as an adult to be represented in the new anthology of Australian poetry, *Thirty Australian Poets* (ed. Felicity Plunkett, University of Queensland Press, 2011).

Internal Monologues, her third collection of poetry, but the first one written in English and published in Australia, has just come out (Fremantle Press, 2013).

Now, A/Professor Kambaskovic’s creative talents have taken a new turn. Just as her own poetry grew from an appreciation of the sonnets Shakespeare may have penned for his ‘dark lady’, her latest venture sprang from a feminist world view that has some of its origins in the Bard’s secret mistress.

It is a fashion line of sleek black dresses for intelligent and style-minded women of all shapes and ages.

While A/Professor Kambaskovic works on her dress styles she sometimes lets her mind wander to Shakespeare’s ‘dark lady’, the complex woman who inspired some of the most complex and thought-provoking love verses of all time.

While scholars do not know for sure who this intriguing woman was, A/Professor Kambaskovic thinks that the theory proposing Aemilia Lanier, England’s first feminist poet, has the advantage of being the most interesting.

This dark lady may be the subject of A/Professor Kambaskovic’s next foray, a novel set in Shakespeare’s London. Perhaps, as UWA’s own Renaissance woman fleshes out her protagonist, she may dress her too in striking, dark-hued styles.

A/Professor Kambaskovic began combining research, poetry and design as a student, coming of age at the time of the war raging in the Former Yugoslavia, when luxuries were beyond her and most people’s reach.

She quickly worked out that the only way to have a stylish prom dress was to invent it herself.

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**By Sally-Ann Jones**

In Slobodan Milosevic’s Serbia, Shakespeare’s sonnets were a secret escape from reality for an undergraduate studying English and literature at The University of Belgrade.

The sonnets also gave the keen student, who is now Adjunct Professor Danijela Kambaskovic, a deep love for poetry and a bedrock of expertise from which to mine her own future ideas.

A/Professor Kambaskovic, one of only two early career academics to be invited to become Associate Investigator with the ARC Centre of Excellence for the History of Emotions 1100-1800, is also an award-winning poet.

After her poems were accepted for the ACT’s 2008 and 2009 Poetry in ACTion projects displaying local poetry in the public transport, she had the disconcerting experience of occasionally sitting under her own verses on a Canberra bus.

She is the only poet who migrated to Australia as an adult to be represented in the new anthology of Australian poetry, *Thirty Australian Poets* (ed. Felicity Plunkett, University of Queensland Press, 2011).

Internal Monologues, her third collection of poetry, but the first one written in English and published in Australia, has just come out (Fremantle Press, 2013).

Now, A/Professor Kambaskovic’s creative talents have taken a new turn. Just as her own poetry grew from an appreciation of the sonnets Shakespeare may have penned for his ‘dark lady’, her latest venture sprang from a feminist world view that has some of its origins in the Bard’s secret mistress.

It is a fashion line of sleek black dresses for intelligent and style-minded women of all shapes and ages.

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Language and culture bridge the gap

UWA students continue to build a cultural bridge between China and the West.

For the second time in four years, two Chinese language students have taken two of the top three places in the national Chinese Bridge language and cultural proficiency competition.

Natalie Meyer won first prize, competing in spoken, written and performance Mandarin against tertiary students from around Australia. Her classmate Daniel Rosza came third. Both are students of Liyong Wang, lecturer in Asian Studies. Mr Wang also taught the students who won the awards in 2010.

“Liyong is a credit to UWA,” Natalie said. “We both decided at the last minute to enter the competition and he did so much to help us.”

She is an Arts and Commerce student, completing a double major in Chinese and Japanese.

Daniel studies Engineering and Commerce. Two years after adding Chinese studies to his workload, Daniel spent a year in China, studying the language and culture. “It took me three months to tune in my listening skills, but it was certainly worth it. You need exposure to a language and to spend time in that country to really understand the culture and come to grips with the language,” he said.

Natalie spent two months on a China Field Study tour 18 months ago and hopes to return next year.

Both of them will travel to Beijing, then Chang Sha, this month, for the international finals of the Chinese Bridge competition. It is funded by the Chinese government to encourage interest in their language and culture. No student with Chinese ancestry is allowed to enter the competition.

She said having learned Japanese at school was a definite advantage when she started learning Chinese at University.

“There are similarities in writing and grammatical construction, otherwise they are very different. But you don’t feel so overwhelmed, knowing that you understand the foundations of one Asian language already.”

Both Natalie and Daniel agree that speaking Mandarin is more difficult than writing it. “The language is very tonal and you can so easily say the wrong thing.”

“Learning to write Chinese characters is no mean feat, though!” said Daniel.

The students had to deliver a two-minute speech, My Chinese Dream; complete a 30-minutes written exam covering geography and culture; and give a short performance.

Daniel recited a poem in Mandarin and Natalie told a Chinese joke about a foreigner struggling with the language … clearly not based on their excellent performances.
New strengths in regenerative medicine

By Anke van Eekelen

Cancer, asthma, diabetes and heart disease are killing millions in the western world.

A new centre at UWA, the Centre for Cell Therapy and Regenerative Medicine (CCTRM) will bring together research into these and other serious and fatal degenerative conditions in the hope of bringing new treatments to the bedside.

The centre recently held its inaugural research symposium, showcasing a vast array of research activities in stem cell biology, tissue repair and their therapeutic application in the clinic.

The centre’s research will focus on diseases including cancer, asthma, chronic lung diseases, diabetes, heart disease, rheumatoid arthritis, osteoarthritis, osteoporosis, fibrosis, macular degeneration, muscle degeneration and neurodegenerative disease such as Parkinson’s and Alzheimer’s.

CCTRM Director Geoff Laurent aims for the centre to be at the core of a collaborative network across WA, where he says we have the breadth of talent from basic science through to clinical translation.

He says CCTRM will facilitate a broad approach to stem cell research with the vision that new ideas lead to new medicines.

“We can’t afford not to be in this transformational area of medicine,” Winthrop Professor Laurent said.

“Conventional medicine is built on pharmacological treatment with drugs – chemicals producing small molecules that interfere with the pathways of disease.

“It is very hard with many of these drugs to reverse disease; at best you stop progression.

“This has been successful but there are diseases, particularly age-related diseases, where the patient presents quite late and the damage is already advanced.

“Transplants are only a partial solution. Regenerative medicine holds out the possibility of a completely different approach where you replace tissue.

“Ideally you would use an individual’s own (mature) cells, drive them back to a stem cell, use them to create a new organ or tissue and have a (new) way of fighting chronic disease.

“The stem cell approach has already been successfully used in childhood leukaemias and is clearly attractive in settings other than cancer, like degenerative diseases.”

Professor Laurent returned to WA to establish and lead the CCTRM after a successful career at the prestigious University College London in the UK.

His international expertise in respiratory medicine and research interest in regenerative lung growth makes him well suited to create a new environment for research in regenerative medicine; where established scientists remain working in their niche but embrace a wider network at the same time.

The program of CCTRM’s first symposium reflected the strengths of the centre – its inclusiveness of all WA medical research and institutions and its multidisciplinary focus cutting across all areas of medicine and science.

CCTRM will move into the new WAIMR building on the QEII-campus in Nedlands at the end of the year.

Dr Anke van Eekelen is an Adjunct Professor at the Telethon Institute of Child Health Research; and editorial officer in the School of Anatomy, Physiology and Human Biology.

This was first published online by ScienceNetworkWA.
“Why have I never been asked about side effects before?” is one of the comments made to Master of Pharmacy students involved in a big study – *My Medicines and Me* – looking at the side-effects of medications on mental health patients.

These side-effects – which may include weight gain, impotence, insomnia, chronic sedation and lack of ability to concentrate and function in daily activities – are so intolerable that they may cause up to 80 per cent of mental health consumers to abandon treatment.

Yet the treatment of serious mental health disorders almost always involves the use of psychotropic medications which allows the patient to return to some degree of functionality.

The six students, from the School of Medicine and Pharmacology, helped administer questionnaires to 200 mental health consumers across six clinics in Perth’s North Metropolitan Health Services (NMHS).

The consumers were asked to fill out a questionnaire designed to gain insight into their subjective experience of side-effects across a wide spectrum of mental health illnesses of different severities.

The questionnaire is part of a PhD thesis by Assistant Professor Deena Ashoorian, who is co-supervised by UWA’s Professor Rhonda Clifford, Director of Pharmacy, NMHS Mental Health Professor Daniel Rock and Clinical Professor Rowan Davidson.

“Identification of side-effects through improved communication between clinicians and consumers can have a marked impact on treatment adherence,” Professor Clifford said.

The next phase of the study is a three-month follow-up with consumers and their clinicians.

“The study aims to prove that this questionnaire will help clinicians to better understand consumers’ attitudes to psychiatric therapy and ultimately to achieve shared partnership in the treatment and recovery process,” Professor Clifford said.

The study is funded by UWA, Pharmaceutical Society of WA, Mental Health Commission of WA and the Richmond Fellowship WA.

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Sir Bob visits Boomtown

Rock musician, philanthropist and poverty activist Sir Bob Geldof had a lightning tour of the Pilbara recently with the Vice-Chancellor, Professor Paul Johnson.

After a speaking engagement at UWA a few weeks ago, one of Ireland’s most famous contemporary sons said he wanted to learn more about WA’s mining industry and how it affected local communities.

UWA and BHP Billiton took Sir Bob to Newman and Karratha for a day. The group visited the Mount Whaleback iron ore mine and toured the Martumilli Aboriginal Art Centre, saw the rock art on the Burrup Peninsula in Dampier and met local business and industry leaders.
The fabulous Tudor-style St Georges College and its extensive gardens will provide an exciting setting for a school-holiday program that would also appeal to most grown-ups.

Fancy some African percussion? A boost to your cookery repertoire?

Drumming and cooking are just two of the activities on the menu for children in Years four to six. Others include an Amazing Race and team games, chemistry madness and first aid.

Held Monday to Friday, 8-12 July and 15-18 July from 7.45am to 5pm, the price of the program is $80 per child per day or $75 per child if three or more days are booked in one week. The price includes a high ratio of mentors to children as well as breakfast and lunch and morning and afternoon tea.

Experienced college mentors will run the program under the supervision of College staff.

For more information: stgeorgescollege.com.au, or call Angela Myott on (08) 9449 5555.

When the cricket season ends, James Oval is usually the venue for soccer and ultimate frisbee games.

It is now also grazing pasture for two four-legged friends: Macca the pig and Bonnie the dog.

That’s right: Bonnie, the 11-year-old brindle American Staffordshire Terrier, enjoys nibbling on grass, alongside the black pig, the pet of the children at Unicare.

Environmental educator Christine Koba takes Macca for a walk every morning during which he grazes around the campus. Bonnie’s owner, Will Mayne, a history student, brings her to the campus most days and he said she and Macca had become friends and always looked for each other.

“Bonnie has always enjoyed nibbling grass,” Will said. “It’s actually good for dogs’ digestion.”

Sometimes Macca sees that Bonnie seems to be enjoying a particular patch of grass, and shoves her gently out of the way, so he can have a taste.

Bonnie is a gentle dog and happily gives way to her friend.

Mock-Tudor setting for real holiday fun
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On Centum’s travels last year, he felt quite at home at Queen’s University in Kingston Ontario.

Queen’s is in partnership with UWA in the Matariki Network, a group of seven similar-sized research-intensive universities around the world which all focus on the student experience.

But it wasn’t just the partnership, but one of the original buildings on the campus. It is so like Winthrop Hall (apart from the colour of the stone) that Centum thought he was home again.

NOTICES

Scott Kirkbride Melanoma Research Centre

Call for Research into Melanoma

The Scott Kirkbride Melanoma Research Centre (SKMRC), based within the Western Australian Institute for Medical Research, is dedicated to enhancing outcomes for people with melanoma by conducting high quality medical research.

The Centre was established in memory of young Perth golfer, Scott Kirkbride, who lost his battle with melanoma in 2004 at the age of 27.

The SKMRC aims to establish Western Australia as a world leader in melanoma research by providing crucial breakthroughs for improved diagnosis and treatment of the deadly skin cancer.

SKMRC is offering grant funding of $75,000 for a term of one year to support melanoma-related research currently not funded through outside sources.

Applications will undergo peer-review by the SKMRC Scientific Advisory Committee (SAC) and priority will be given to proposals likely to attract additional funding from other grant sources in the future. If the SAC determine there are no applications of suitable merit the SKMRC Management Committee retains the right to decline to award a grant.

These Discovery Research ‘Priming Grants’ have been established with the specific purpose of supporting world class scientific research towards discovery of the causes of melanoma, how melanomas develop, new methods of detection, novel treatments and improved management of the disease.

Who is Eligible?

Eligible applicants will be Perth based researchers with the caveat that there must be a WAIMR Group Leader as Co-Chief Investigator.

How to Apply

Please email Carolyn Williams (carolyn.williams@waimr.uwa.edu.au) to request an application form. For more information go to: www.skmrc.org.au

Deadline for applications is 5pm, Monday 19 August 2013.

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Engineering is really about people

by Winthrop Professor Caroline Baillie
Chair in Engineering Education

My students really responded to my teaching this semester.

I had great reviews and they really seemed to learn what I was hoping they would. Someone asked me whether they thought it was because I had become a mother since I last taught the class. I don’t actually think so, although I admit to seeing the students in rather a different light this year. I think it’s because I came back from maternity leave with renewed vigour – wanting to focus even more on those aspects of my work which I believe in and value.

I teach two classes, one compulsory first year class entitled Global challenges in engineering and one upper year elective, Critical theories of technological development. In both, students have to consider the social impacts of the engineering that they will be doing when they graduate. They learn (at different levels) how engineering fits within the global, social economic context. They also learn lessons from history.

But what must it be like to find out that engineering was (is) not always good for people? That during the Industrial Revolution, many great machines were developed, but many people suffered terribly in the factories. What must it be like to realise that in many ways, workers in factories in Bangladesh and Sri Lanka are suffering the same grueling conditions today, so that we can buy cheap cars and phones?

Understanding where we went wrong, and admitting it, is the first phase of any therapy – of any attempt to improve, to lose an addiction, to mend, to heal.

Students in these units, especially the upper level one, must pass through a liminal space, often agonising over the details which contradict everything they have thought about their profession. And it’s hard. But this year, my students passed through that gateway, and as I read their personal reflections, I saw that they were gradually opening their eyes, seeing the world in new ways, that they were questioning common sense and considering new ways and future practices which would be better for the Earth, better for men and women of all clans.

One of the main reasons I started on my current trajectory – that of working to improve engineering education – was because of some early research I did on the topic of women in engineering.

I asked the question: ‘Why are there so few women in engineering?’ Disturbingly, there are no more female students today than then. One student’s voice remains with me today.

The day after interviewing her for my study I heard a knock on my door:

“I was very interested in what you had to say yesterday and I came to thank you. I had no idea that I could be ‘myself’ in my profession. I thought I had to become someone else or I wouldn’t fit in. I really hadn’t considered that I could bring some of who I am into my work and that that might be a good thing,” she said.

Bringing myself into my work – my own reflections, my own values, doing things in ways which suit my talents and interests – not only helps us enjoy our studies and profession; as engineers, it helps us connect with our own humanity and that of others.

How can we engineer for others’ needs and values when we don’t even know what our own are? The young woman in my study had come up with something, which many researchers have since discovered is the key to many women enjoying engineering as a profession – that engineers need a connection to society. That engineering is for people.

It was the beginning of my determination to transform engineering education to be more inclusive of a broader range of values, that would not only attract to the profession a more diverse range of engineers, but would thereafter serve a more diverse population.

The units I teach aim to help engineers engage with the communities they serve, but in order to do so, they need to understand, first and foremost, their own views and beliefs. And finally, this year, almost 20 years after that knock on the door, I can say that I am beginning to know how to help them do that.