Orthopaedic patients in Shanghai are helping to improve outcomes for Australians with sporting injuries.

A new collaboration between UWA and Shanghai Jiaotong University Medical School will see Chinese patients taking part in clinical trials of innovative tendon surgery, developed at QEII by researchers in the School of Surgery and the Orthopaedic Research Unit.

Researchers and clinicians have been working on establishing the new Centre for Translational Orthopaedic Research (CTOR) and it looks like their first success will be autologous tendocyte implantation: a simple effective procedure for hard-to-treat tendon injuries.

Medical Director of CTOR, and former head of Orthopaedics at QEII, Clinical Associate Professor Gerard Hardisty, explained the process of extracting cells from a patient’s healthy tendons, growing new tendon tissue, then implanting it back into the patient, at the injured site.

This treatment follows the School of Surgery’s successful front-running in autologous chondrocyte implantation, for the growth and implantation of cartilage tissue.

Professor Ming-Hao Zheng, Research Director of CTOR, led the research group which pioneered this surgery in the southern hemisphere, about eight years ago.

He has also led a burgeoning collaboration with Shanghai Jiaotong University Medical School (SJUMS), which began around the same time. UWA’s Faculty of Medicine, Dentistry and Health Sciences and SJUMS now have established student exchanges, a double-badged PhD program and regular translational medical research symposia.

One in four athletes have tendon injuries
Dr Qin An was the first graduate to receive his PhD jointly from UWA and Shanghai Jiaotong. He is working with Dr Hardisty and Professor Zheng in the new centre. He plans to spend six months at a time in Shanghai and six months in Perth.

He said that the research was being conducted at the best orthopaedic hospital in China – known as Shanghai No. 9 hospital.

“We are conducting clinical trials of the procedure here at QEII, but sometimes it’s hard to get enough patients to take part,” Dr Hardisty said. “So it’s great that our partners can help us with that.”

Professor Zheng said that about one in a hundred Australians suffered tendinopathy or tendon injury. “They are often sporting injuries but it is also rife among elderly people. Achilles problems and ‘tennis elbow’ are also very common.”

Dr Hardisty said that, while being very common, tendinopathy was very hard to treat. “The best results for tendon surgery would be about 60 per cent success,” he said. “But this looks like it’s going to work.”

Cells from healthy tendons can be taken from any part of the body. Dr Hardisty said the knee was one of the best sites. “Around the knee, the patella tendon is close to the skin and easy to extract with a needle. It is a big tendon, so taking some of the tissue won’t affect it much.”

The new tendon cells are injected back into the patient, at the site of the tendon injury, by a radiologist, using high definition ultrasound to pinpoint the spot. It is a simple day procedure minimally invasive.

Dr Hardisty said tendon cells died in tendinopathy, and so couldn’t regenerate, which could be why so much traditional tendon surgery failed.

“We are developing models to tell us why. We think it is partly due to the load that has caused the problem with the tendon in the first place. Repetitive strain or extra load blocks blood supply to the area and the cells start to die,” he said.

“We have done a lot of clinical research and we needed a centre where we could integrate researchers at the molecular level with clinicians, so we could translate the research into practice.

“With this new centre, we can design studies better, we can train practitioners better and take our work from the laboratory to the bedside.”

Collaborative clinical trials on tendon and cartilage repair will start in Shanghai within 18 months.

The collaboration between SJUMS and UWA, the Sino-Australia Research Centre for Skeletal Medicine, will bring together medical researchers in both countries to develop advanced treatments for osteoporosis, osteoarthritis and sports injury. The centre will also provide a training ground for PhD students and postdoctoral fellows from around the world.

UWA’s Deputy Vice-Chancellor (Research) Professor Robyn Owens, and Dean of Medicine, Dentistry and Health Sciences, Professor Ian Puddey, signed the agreement for the research centre in April.

Professor Zheng described Professor Dai Ke Rong, the SJUMS’s 80-year-old world-renowned orthopaedic surgeon and academic, as “the orchestra conductor” who is making the link between UWA and SJUMS.

Professor Dai was a Raine Visiting Professor at UWA in 2007.
The new Dean of the Law Faculty doesn’t waste time.

Professor Erika Techera arrived at UWA from Macquarie University last year. Having done a lot of work on the legal protection of marine life and environments, she hot-footed it down to the Oceans Institute.

“Almost before I knew it, I was working on Ocean Solutions Dialogues and was part of the leadership team,” she said.

Professor Techera, environmental lawyer, advocate for shark protection, and the first woman to lead the Faculty of Law, is used to things happening quickly. Little more than a year after joining the faculty, she is the Dean, after the departure of Stuart Kaye.

“It’s an exciting time with our Majors in New Courses starting last year, and the Juris Doctor program commencing this year. I am delighted and honoured to be leading the Faculty in 2013,” she said.

“When you consider that, since the 1980s, more women than men have graduated from law schools across the country, it seems extraordinary that I am the first woman to hold this position at UWA,” she said.

“Historically, the Dean was usually the most senior person in the faculty, the person with longevity of service. If you had tried to find a 60-year-old woman with 30 years’ university service, you wouldn’t have had much of a chance.

“But things have changed. Over the past 10 years, the position has transformed from a more academic position to being at least 50 per cent administrative. And so you tend to see people appointed earlier in their careers, which opens up a lot more opportunities for women.”

Professor Techera works in international and comparative environmental law. She is currently interested in the governance of sharks, and has an ARC Discovery grant with the Dean of Macquarie Law School, Professor Natalie Klein, to look at the protection of sharks, which she feels are much maligned.

“They play a very important role in keeping the oceans healthy,” she said. “Whales are protected by their own treaty, and tuna, for example, by fisheries agreements. But sharks fall somewhere between whales and tuna: some are conserved and protected, others are part of the fishery industry.”

Professor Techera’s two children were born while she was an undergraduate and she didn’t take her bar exams until she was 30. “After seven years as a barrister, my children were in high school and I wanted a less stressful job and to be able to spend more time with them, so I did my PhD and entered academia.”

She completed her PhD in a lightning two years, after winning Vice-Chancellor’s commendations from Macquarie for her Masters degrees. Her PhD research looked at small island states in the Pacific and how they could hybridise indigenous customary law and state legislation.

“Legal pluralism in countries like Samoa makes legal governance a challenge. About 85 per cent of the population is indigenous and the government is poorly resourced. It’s extremely hard to enforce state-based laws when most people live at least a partially traditional lifestyle.

“Now I’m in WA, I’m starting to look at the Indian Ocean rim countries where there are so many legal systems in practice: common law, Dutch and French civil law, and Sharia, just for a start.”

Professor Techera is also interested in finding a sustainable balance in the workplace. “We need economic, social and environmental sustainability; in other words, balance – to ensure economic stability and that people are happy, as well as to protect the environment without any of these components upsetting the other.”

She would like to see vegetarian food served at faculty functions, not because she is a vegetarian (but she is careful to source her meat from sustainable supplies) but because it is a more sustainable practice.

“It’s just a small thing, but I haven’t been in the job for 100 days yet.”

If she continues at her usual pace, the Dean won’t be wasting any of them.
Teaching awards go to the heart of education

Last week, I had the pleasure of recognising the excellent teaching evident in this institution.

The UWA Excellence in Teaching Awards 2013 acknowledges the fine contributions of teachers from across the faculties.

We recognise the fundamental importance of undergraduate teaching, an undertaking that is at the heart of any university.

The best teaching encourages and facilitates the most ambitious learning by developing and enhancing students’ abilities. Good teachers enable their students to discover and to solve, whether in the classroom or online.

Teaching as a practice is perhaps more in flux now than at any time in human history. Innovations such as Massive Open Online Courses – or MOOCS – have the potential to reshape higher education.

Free online learning puts the spotlight on the fundamentals of pedagogy – the role of a teacher, the definition of a student, the value of a degree and even the mission of universities.

Our challenge is that anyone with access to the internet has the opportunity to study at some of the world’s best institutions – receiving a certificate of completion but not, as yet, a degree.

There are, of course, invaluable qualities that massive open online courses can’t replace – and this includes face-to-face teaching and the opportunity in the classroom, facilitated by good teachers, for students to interact with and learn from each other.

As educators, our challenge is to adapt digital teaching technologies and make them work for us, not replace us.

A 2012 study involving university teachers in the US suggested that most teachers are excited rather than nervous about e-textbooks and e-resources replacing traditional resources. They look forward to the growth of blended, or hybrid education. And it is not surprising that the same survey found that students overwhelmingly rate the impact of digital communication as positive.

The US study found that the proportion of students taking at least one online course had increased from fewer than one in 10 in 2002 to nearly one-third by 2010.

At UWA, we can pick and choose digital technologies that will best fit our students’ needs.

Last week, the School of Pathology and Laboratory Medicine opened its new E-Learning Suite. The School’s New Approaches to Teaching project will revolutionise learning and teaching activities, with an emphasis on analytical, interpretative and critical thinking skills.

The School of Dentistry can simulate use of a dentist drill – using the same technology that trains fighter pilots, to train dentists. The simulated dental trainer computers represent one of the biggest changes in the history of teaching dental skills.

In other faculties across campus, our lecturers are using a variety of online tools to engage students and enhance the teaching and learning process.

Good teachers will employ new techniques that keep our students excited about learning. They will be at the vanguard of change in teaching.

UWA teaching award winners – and those honoured in the Australian Awards for University Teaching – are part of this changing landscape.

Paul Johnson
Vice-Chancellor

Thoracic Society winners

Two UWA academics have been recognised by the Thoracic Society of Australia and New Zealand (TSANZ).

Professor Philip Thompson, Director of the Centre for Asthma, Allergy and Respiratory Research has been awarded the most prestigious award from TSANZ – The Society Medal.

This is awarded annually to the Society member who has contributed most to the promotion of respiratory medicine and science in Australia and New Zealand.

Winthrop Professor Fiona Lake, who holds the Eric Saint Chair in Medicine, was also awarded the TSANZ 50th Anniversary medal for Education at the TSANZ recent annual scientific meeting in Darwin.

Thoracic medicine includes the study and treatment of lung and other respiratory diseases.

Pneumonia, whooping cough and other respiratory diseases are still rife in Australia, despite a common perception that they belong to the last century.

Infectious lung diseases have a big impact on Australians, with respiratory infections being the major cause of morbidity and mortality among elderly people and Indigenous populations.
It’s not just Porsches and Prada shoes that are the objects of conspicuous consumerism.

Solar power panels on your roof can also speak volumes about your finances and your green credentials.

Chunbo Ma, in the School of Agricultural Resource Economics, is looking at how we can make better use of Australia’s world class solar power resources without wasting government money.

Studies in the US have shown that conspicuous consumerism applies to photovoltaic (PV) panels.

“In California, some residents insist on installing their panels on the roof facing the street, even if it’s in permanent shade, so that people can see they have them!” he said.

Assistant Professor Ma’s research has found that conspicuous consumerism extends to the choice of green power from Synergy. “Our hypothetical survey returned findings that up to 70 per cent of people who said they would choose it opted for the minimum amount, about 25 per cent,” he said.

“This compared with Synergy’s actual data which showed an average of 32 to 35 per cent, just above entry level. People are buying a concept rather than being truly committed. You can tell your friends that you care for the environment when you are not actually a consistent contributor.”

Professor Ma said there was a concern that PV subsidies were regressive, as wealthy families would be more likely to install PVs.

“However in Perth, the highest numbers of PV panels are not found in the wealthier suburbs, but in areas like Mandurah and the northern suburbs.”

The highest percentage of PV panels in a Perth suburb is about 15 per cent of the homes, or one in seven.

“We have seen frequent stop-start of subsidy policy and feed-in-tariffs at both federal and state government level, as a result of over-subscription, which indicates a lack of understanding of consumer demand and decision making,” Professor Ma said. “Even when the subsidy was reduced, people still bought and installed PV panels. I think the Government underestimated people’s support for renewable energy.

“Perhaps it doesn’t need to offer incentives. Why give away taxpayers’ dollars when people are willing to make the change themselves? That money could be spent on all sorts of other good things like health and research,” he said.

Professor Ma said the University subscribed to Nearmap, an online service provided by a local company which flies over Perth and supplies high resolution aerial photographs.

“These photographs have allowed us to see the cluster effect of PV panels. While government subsidies were important to begin with, I think the peer effect is also a crucial driving force. When your neighbour gets PV panels on the roof, you chat about it and it gives you confidence to do the same, just as with any appliance. And you see local clusters developing over time.”

He said people usually looked at the initial cost of installation, then calculated their savings on power bills before installing PV panels.

“But what is often ignored is the premium it adds to your property. We estimate a three to five per cent premium, all other things being equal. On a $500,000 home, at three per cent, that’s $15,000, much more than the current cost of purchase and installation of panels.

“We need to verify this but I think it’s something that real estate agents could use as a selling point and it could also mean the scheme needs less government support.”

Professor Ma has an ARC grant of $372,000 over three years and hopes that his outcomes will be useful for the energy industry and the government for formulating business strategies and policies.
Trevor Franklin has spent his life in broadcasting in WA – but you won’t have seen him on screen.

The technical officer (electronics) in the School of Chemistry and Biochemistry has been behind the scenes for 45 years, mostly working on and maintaining radio and television transmitters.

He has taken part in some of the more momentous events in those media. The most recent was turning off the analogue transmitter for the ABC’s Channel 2.

“I’ve been at UWA for about six years but I still keep in touch with all my Telstra mates,” Trevor said. “Many people don’t realise that it used to be Telstra that ensured the television signals made it from the stations’ transmitters to your screens at home. The ABC and other channels just supply the pictures.

“My colleagues at the Bickley ABW 2 transmission site called me the night before the analogue signal was due to be turned off, and asked me to join them for a celebratory barbecue breakfast.

“When I arrived, they asked me to do the honours. There was a countdown screen connected to a computer, so at exactly 9am on Tuesday 16 April, I pressed two buttons simultaneously, to turn off the two ten kilowatt transmitters, and effectively put an end to analogue ABC television in WA.”

Trevor, who has also worked for Channel 9, said his work at UWA was very different. “But electronics is electronics – you can work on everything.”

He credits Telstra, or the PMG as it was when he joined as a 16-year-old, for his wide-ranging abilities.

“The training for a technician in those days included woodwork, metalwork, technical drawing and electronics,” he said. “And it took five years to complete – longer than most university degrees.”

Trevor was working at Mawson, the television transmission site 30 kilometres out of Quairading, in the wheatbelt, when colour television arrived in WA, and he was again part of an important television moment.

“The transmitters were designed for black and white pictures, and all I had to do was to put filters in that would allow colour to come through. It was pretty basic at our end. I installed the filters and, the next day, they sent colour pictures down the line.”

That was in the mid-1970s. About 20 years later, Trevor was again on hand to push the important button when ABC radio’s Triple J came into being. “I tuned it to the right frequency, then I turned it on,” he said.

“But I thought something had gone wrong. I was used to listening to the ABC’s other FM station, Classic FM. And when I heard the dreadful music coming out of the radio, I turned it off and called my boss in Perth.

“‘Awful is it?’ he asked. ‘Then it’s the right station!’”

Several years ago, Trevor said he ‘saw the light’ while he was working in the freezing rain in the middle of the night in Busselton to fix a broken transmitter.

“Why the hell am I doing this? I’m getting too old for this caper,” he said.

The next day a colleague showed him an advertisement for the job at UWA. He thought his days of broadcasting were behind him – until he was called up for that one last job on 16 April.
The world’s earliest opera, performed with instruments from the 17th century, has won a UWA research fellow the Golden Mask – Russia’s equivalent of the Oscars.

Andrew Lawrence-King, Senior Visiting Research Fellow in the ARC Centre of Excellence for the History of Emotions, scooped the pool with the Jury’s Special Prize for Music-Theatre across all categories, including opera, operetta, musicals and ballet.

The Golden Mask (an actual mask-like trophy of enamelled gold with diamonds and rubies) is Russia’s most prestigious prize for all genres of theatrical art, awarded by the Theatre Union in conjunction with the Ministry of Culture and the Moscow Government.

Dr Lawrence-King researches early 17th century opera performance practices, in a long-term collaboration with Winthrop Professor Jane Davidson.

The Russian production of Emilio de Cavalieri’s Rappresentatione di Anima et di Corpo (Drama of the Soul and Body) was nominated for best opera, best set design, best producer and best conductor (Dr Lawrence-King).

It was the first production in the new hall of Moscow’s Natalya Satz theatre.

Dr Lawrence-King conducted the opera while playing harp, harpsichord, regal (a reed-organ) and tambourine.

Russian Opera News wrote: “The work of musical director Andrew Lawrence-King deserves the highest praise…(the) true pleasure he and his team experienced, playing authentic historical instruments, communicated well to the public.”

The opera is the oldest surviving example of its genre, first performed in Rome in 1600.

Dr Lawrence-King and his team translated the Italian libretto into Russian, working on preserving Cavalieri’s ‘word-painting’. They then worked through the whole text again, to reconstruct in the Russian language the varied rhythms of Italian verse.

“During rehearsals with the singers and musicians, we concentrated on the historical yet practical priorities of text, rhythm (there was no stick-waving conductor in 1600) and sound,” Dr Lawrence-King said. “The instruments are divided into four independent groups: cornetto and sackbuts (baroque trombones) represent nobility and seriousness; strings suggest the power of music and dance; reeds are martial; and the whole opera is led by the improvising orchestra of the continuo (harps, theorbo [long-necked bass lutes], harpsichord, organ, regal and percussion).

“We added polyphonic music at the beginning and, later in the show, there is its opposto, an improvised ciacona, associated in the early 17th century with wild parties and dancing.”

Dr Lawrence-King’s interpretation would have pleased Cavalieri who was known as a musical pioneer.

It is also pleasing Moscow audiences where the opera continues to run in repertory. Most audiences are aged under 30, with a high proportion in their 20s.

Two years ago, Dr Lawrence-King won a Grammy (from the US Recording Academy) as a harp soloist in the category of Best Small Ensemble Performance, playing alongside Jordi Savall, famous Spanish viol player, conductor and composer.
The first time academics were encouraged to ‘socialise’ their research, they may have thought about sharing a bottle of wine with colleagues and chatting about latest developments.

In recent years, social media has changed the way research results, opinions, news and ideas are shared. Now the conversation takes place in cyberspace rather than the university bar.

But while the audience is global, social media also provides an intimate and immediate forum for academics and others to communicate their work and views.

The Conversation (http://theconversation.com/au) is an independent source of news and views from the academic and research community in Australia. With more than 840,000 readers each month, it is Australia’s most read independent news and commentary site.

Since it was launched two years ago, the site has been extraordinarily successful, with authors from 351 universities and research institutions around the globe accessing an ever-growing international audience.

UWA was one of five founding partners, and The Conversation is now sponsored by 22 Australian universities, the CSIRO, the Federal Government and some corporate partners.

The Conversation provides statistics on authorship and readers, with the Author’s Dashboard showing readership by country, how the readers found the piece, comments the piece has generated, and further socialisation through Twitter.

So far, 103 UWA staff have published 418 articles. Our top author is Associate Professor David Glance, Director of the Centre for Software Practice, who has attracted 227,360 readers to his 91 articles. One of his pieces, Music pirates won’t rush to i-Cloud for forgiveness, is the third most read UWA article, with 18,770 readers since it was published in June 2011.

Professorial Fellow in Psychology Stephan Lewandowsky is next on the list, with 120,736 readers of his 24 articles. His November 2011 article, Why do people reject science?, is the most read piece by a UWA author, amassing 40,678 readers.

Two researchers from the Telethon Institute for Child Health Research have been very successful with their work in The Conversation.

Associate Professor Andrew Whitehouse has published 28 articles, two of which, Childcare and the Damage Myth (March 2013), and The Messy Truths of Autism (August 2012) are in the top five most read UWA articles. Dr Monique Robinson wrote UWA’s fourth-most read piece, (the myth that) Controlled crying damages babies’ brains (part of a regular column, Monday Medical Myths, published in February this year).

Winthrop Professor Tim Mazzarol from the Business School, writes on entrepreneurship and innovation, and is UWA’s fourth most read author, with 64,749 readers for his 49 articles.

It is not just academics publishing in The Conversation. Dr Tim Pitman, Research Development Advisor for the Law Faculty, has published several pieces on higher education research. And Dr Natalie Mast, Senior Policy Analyst in the Vice-Chancellorcy, has written articles on the WA state election and on European political issues.

UWA Postgraduate students have also contributed.

Deputy Vice-Chancellor (Research) Professor Robyn Owens encourages all UWA staff to get involved in The Conversation. “As partners, UWA contributes financially towards the website, so we might as well take part, contribute to the content and supply feedback on others’ articles,” she said.

If you’re interested in contributing, pitch an idea to the editorial team at http://theconversation.com/pitches/new

If you’d like more information about The Conversation, Natalie Mast is the UWA liaison with The Conversation so please contact her (6488 1717 or natalie.mast@uwa.edu.au).

Bring your research into The Conversation
Teenage girls are more likely to take up smoking than any other sector of the community, increasing their risk of all the associated diseases. And UWA research has recently found that they are also at a high risk of disease from passive smoking – a much higher risk than teenage boys.

Dr Chi Le-Ha from the School of Medicine and Pharmacology at Royal Perth Hospital is the lead author of a study published in the international Journal of Clinical Endocrinology and Metabolism, which reported that teenage girls faced a higher risk of heart disease than teenage boys.

The study found that girls exposed to second-hand smoke had less of the ‘good’ cholesterol which reduces heart disease risk. Second-hand smoke did not appear to have the same impact on teenage boys.

High-density lipoproteins (HDL) pick up excess cholesterol in the blood and take it to the liver where it can be broken down. Unlike low-density lipoproteins that can create a waxy build-up blocking blood vessels, HDL cholesterol can play a key role in combating heart disease risk.

“We don’t know the biological mechanism of the sex difference in the relationship between cigarette smoke exposure and reduced HDL cholesterol levels,” Dr Le-Ha said.

He is a physician with research interests in the life-course epidemiology of heart disease and risk factors, and the developmental origins of cardiovascular disease.

Dr Le-Ha said the research team had surveyed more than 1,000 adolescents, using the Western Australian Pregnancy Cohort (Raine) Study, a Perth-based longitudinal cohort of children born in WA between 1989 and 1992.

“In our study we found that 17-year-old girls raised in households where passive smoking occurred were more likely to experience declines in HDL cholesterol levels,” he said.

“Second-hand smoke did not have the same impact on boys of the same age, which suggests passive smoking exposure may be more harmful to girls.

“Considering cardiovascular disease is the leading cause of death in women in the Western world, this is a serious concern.

“I think our findings reflect a difference in important aspects of the cardiovascular pathophysiology between boys and girls,” he said.

“We don’t have any data on whether the risk of heart disease reduces when and if a teenage girl leaves home and lives in a smoke-free environment,” he said. “But it has been previously shown in adults that stopping smoking decreases the cardiovascular mortality rate during a follow-up period of 12 years.”

Dr Le-Ha said the results suggested public health efforts needed to focus on reducing children’s second-hand smoke exposure in the home, particularly for girls.

Girls affected more by second-hand smoke

Teenage girls are more likely to take up smoking than any other sector of the community, increasing their risk of all the associated diseases.
In a world first, a UWA research centre has turned understanding complicated cell biology into child’s play.

The ARC Centre of Excellence in Plant Energy Biology is the proud developer of the world’s biggest and bounciest cell: a 10 metre by 13 metre inflated structure which incorporates all the elements needed for the molecular function of plants.

It was the inspired idea of Alice Trend, the centre’s science communications officer.

“Harvey (Millar) asked me how we could communicate our complex research to the public, most of which was happening on a microscopic scale inside tiny cells,” Ms Trend said. “It’s so hard for people to understand and visualise things that they can’t see, so I thought, well, we need to make the plant cell huge – big enough so people can get inside it.”

It’s the stuff of science fiction films but this time the cell has been blown up, not the people shrunk.

“The great thing about Bio-Bounce is that a person can BECOME a part of the cell. You can bounce your way from the ribosome to the mitochondrion or nucleus, just as a protein does. With friends you can recreate a whole sequence of cellular processes. Then you can REALLY understand how the cell works – and what goes wrong if you do not follow the instructions!”

The giant cell is a unique outreach and education tool that has already been booked for science festivals in Sydney, Canberra and WA’s south-west.

Ms Trend designed the cell with 3D animator Robert Mace and manufacturer Michael Steele, from Soxon Inflatables.

The idea behind Bio-Bounce is to have a portable, novel, immersive and exciting way of engaging the public with cell biology. A plant cell has been enlarged one million times so it is big enough for people to walk (and bounce) around in and look at and engage with the components of the cell in context.
The giant cell will explain the roles of chloroplasts, mitochondria, the nucleus, genes and proteins and help people to understand what biologists and cell geneticists study.

“It’s a new approach to plant biology education,” said Ms Trend, who has worked as a presenter at Canberra’s science centre, Questacon, and an exhibition designer at Scitech. “The lack of biology exhibits has always been lamented in science exhibitions.”

This giant plant cell will be an educational tool to help the community to understand the secret life of plants, the impact of climate change on plants, understanding where our food comes from, and how genetic modification of crops works.

“We also want to enthuse people about science and to create advocates for science discovery, which will lead to more people studying science, investing in science and supporting science research,” she said.

“A picture in a book just can’t demonstrate the extraordinary level of activity that goes on in a cell. We have managed to turn the theoretical – something you could only try to picture in your head – into something that you can get immersed in.”

Ms Trend said suites of activities – many of them just one minute long – were being developed to teach both children and adults about the workings of a cell.

“In just one minute, we can explain where photosynthesis happens or how mitochondria work and therefore how they contribute to plant energy systems, plant survival and crop yield. We can do this because it is all there for people to see, touch and explore.”

“The great thing about Bio-Bounce is that a person can BECOME a part of the cell.”

The UWA launch of Bio-Bounce will be at Open Day in August. It will already have been road-tested around the country in a series of events.

Scientists and PhD students from the centre will staff the giant cell and guide visitors through activities and immersive, free-style learning.

“As well as helping people to understand what a cell looks like and what it does, we want to create an inclusive and respectful arena where people can ask their questions about science in a fun and relaxing way. There is enormous potential here for bridging the barriers that limit teaching and learning,” Ms Trend said.

Those programs won’t be limited to school children. This is one bouncing experience for which adults will definitely be queuing.
Corporate knowledge is being lost as the workforce becomes more mobile and people rarely stay in the one job for life.

But UWA seems to breed stayers and it was one of these who helped the University to win a new $20,000 water purification system.

Professor George Yeoh, a cancer researcher in the School of Chemistry and Biochemistry, at WAIMR and in the Faculty of Medicine, Dentistry and Health Sciences, knew exactly when the last system had been bought, because he ordered it – in 1975.

Nikitas Economou, a laboratory technician in Anatomy, Physiology and Human Biology, heard about a national competition to find the oldest water purification system that was still working. He checked the records and found that Professor Yeoh had purchased it and confirmed with him and, yes, it turned out to be the oldest working system in the country.

Head of School, Winthrop Professor Linc Schmitt, said it was thanks to Nikita’s skills that the old machine was still going. “I checked the records and found that Professor Yeoh had purchased it and confirmed it with him and, yes, it turned out to be the oldest working system in the country.”

Nikitas said it was thanks to his skills that the old machine was still going. “And we’re very grateful to him for acquiring us a new one – free of charge,” he said.

The company Merck Millipore ran the competition and presented UWA with the new Milli-Q Advantage water purification system last month.

“The water station is very popular and will hopefully permanently reduce the number of plastic bottles from UWA that end up in landfill,” said Trish Howard from Sustainability Projects.

Shop owners in the Guild Village were asked what they thought of the refill station before it was installed. Trish said they were all in favour of it, even those who sold bottled water.

The Student Guild’s Environment Officer, Dan Stone, said it was “fantastic to see students given a meaningful alternative to expensive, environmentally degrading bottled water. The filtered water refill station is being used every time we look out the window. We have had only positive feedback from students, who want more water refill stations on campus.”
Sean Ashton was perhaps not the best advertisement for an active lifestyle when he launched UWA’s Global Corporate Challenge last month.

The Manager of Injury Management and Wellbeing was sporting a black eye after a rugby match on the weekend.

“Playing rugby contributes to my health and wellbeing!” he told 200 UWA employees, who had signed up to walk at least 10,000 steps a day for the next 16 weeks. (A total of 65 UWA teams, with 455 members are taking part this year.)

The Global Corporate Challenge (GCC) is a world-wide online program aimed at getting the workforce moving. Participants count their daily steps with a pedometer (or accelerometer, as it has been called this year) and their team’s progress is tracked on a world map.

UWA teams have been taking part for several years.

Last year, we were the fourth most active Australian university in the challenge. UWA teams walked 330,605 kilometres and, between them, participants lost almost 200 kilograms.

This year, there are side challenges and prizes. Send your team photo to wellbeing@uwa.edu.au by 14 June to be in the running for a $100 voucher for the University Club café.

There are monthly prizes of café vouchers, massages and healthy cookbooks to be won. And the Club has sponsored a prize for the winning team at the end of the challenge.

UWA Sport and Recreation is also supporting the GCC. Everybody taking part has been given five free passes to the gym. There is a Treadmill Challenge this week (June 10 – 15) for teams to clock up extra steps. In July, to coincide with the Tour de France, the Tour de UWA will be run in the gym from 15 July, with kilometres cycled on stationary bikes converted to steps. And from 26 August, Sport and Recreation will provide a team with bicycles and a guide (if needed) for a cycle around the river.

Everybody at UWA is urged to encourage and support their colleagues in the GCC.
Master chefs on campus

“Sake-seared ocean trout fillet, wattle seed pan-fried veal sweetbreads, celeriac and porcini silken, soft cooked quail’s egg, shimeji mushrooms and micro leaves” … and that was just the entrée.

It takes almost as long these days to read and digest a menu as it does to eat the dish described.

But that dish, along with a main course and a dessert, was a winner for the University Club. Executive chef Costa Simatos and his team won a High Silver Medal at the recent Pacific Rims Continental ‘hot kitchen’ competition, WA Oceanafest 2013, also known as The Restaurant of Champions.

The week before the finals, in which the Club team had to cook an original three course meal for 80 people, about 30 UWA staff were treated to a practise run.

They were served the Club kitchen’s best in a private dining room, and asked to score various aspects of the food and presentation.

During the competition, the chefs had to cook under the eyes of the judges in a pop-up kitchen where they had no experience of the ovens or other equipment. They were allowed to do up to 20 per cent of their preparation before the day, for example, making custards or sauces and preparing vegetables.

It wasn’t all about how the food tasted and looked. The team was judged on the presentation of the chefs, their skills and their methods of preparation.

The food was judged on presentation, balance, taste, texture and temperature.

The Club team scored 89 out of a possible 100 marks, coming second to the Australian National Culinary Team. Also competing were teams from around Australia, Singapore, Hong Kong, Thailand and Germany.

At the practise run Costa spoke to the staff after they had eaten and scored the team’s efforts. He said there were some constraints on their choice of menu.

“We had to use sweetbreads (the thymus gland of a calf) so we poached it in stock, then pan-fried it in wattle seed and brown sugar. It’s quite difficult to successfully poach a tiny quail egg, so we have had this on the menu for the past four weeks so we can all practise.

“For the main course, we had to use a secondary cut of beef or lamb and we chose lamb.”

The main course was lamb done two ways: a slow roasted loin, wrapped around with pulled braised shoulder. With the lamb, the chefs served ricotta and mint tortellini, pea puree, baby carrots, jus and parmesan foam.

The dessert was a South African-inspired dish: gingered malva pudding with coconut ice-cream, molasses crumble, pineapple and chilli compote and a sesame seed biscuit.

University Club manager, Gary Ellis, is a former chef who did most of his work in big hotels and clubs in South Africa.

He said that, while he was delighted with the results of the competition, it was also important for the young chefs to be involved in such events because they learned so much from the other professionals.

At the risk of echoing those irritating EOFYS jingles, the next few weeks would be a great time to make a donation to charity.

Late last month, UWA staff raised $3,303 for Cancer Research at the Cancer Council Biggest Morning Tea. The event was run, for the fourth year by Cindi Dunjey from the Centre for Exploration Targeting, and generously sponsored by Gary Ellis from the University Club. UWA graduate Shane Langsford donated the raffle prize, a weekend in a Quindalup beach cottage.

The Guide Dog campaign continues, with a successful car boot sale in May, raising more than $1,200. The total is up over $11,000, thanks to the support and enthusiasm of staff and students.

But there is still a long way to go if we are to make this a gift from UWA for the Association for the Blind/Guide DogsWA centenary.
High achieving students lead the way

A group of Indigenous high school students recently spent a week on campus, going to lectures, meeting students, learning about courses.

But one of the things that made them feel most comfortable about taking on tertiary education was the age of the undergraduate students.

“They’re so young – just like us!” they said to teacher Natasha Mavec from Broome Senior High School.

“They had this idea that university students were much older and more mature and I think it made them feel a bit nervous,” Ms Mavec said. “But seeing them walking around the campus, chatting to them, they realise now that many students are only a year or so older than them, and they feel more relaxed about joining them.”

The annual residential camp, organised by the School of Indigenous Studies (SIS), has been running for 21 years.

This year the camp took on a leadership theme. “These students are obviously going to be role models in their communities just by doing the subjects that can get them into university,” said Ray Garrett, senior project officer at SIS. “So we want to help them to take on that role.”

A total of 44 Year 11 and 12 students from both metropolitan and regional schools attended the camp, with their confidence growing by the day.

They heard from Indigenous leaders including Member of Parliament, Ken Wyatt; the Dean of Indigenous Studies, Winthrop Professor Jill Milroy; Noongar elders Professor Len Collard and Dr Richard Walley; and Dr Jody Eatt, a recent UWA medical graduate. They encouraged the students to challenge themselves to reach their goals.

Brendon DeGois, co-ordinator of the camp, said 70 per cent of the new Indigenous enrolments at UWA this year were students who had attended one of the camps. “The program is really making a difference to the number of Indigenous students who are choosing to come to University,” he said.

The students were assigned a ‘buddy’, an Indigenous UWA student, and spent time together, including going to a lecture.

Their comments, on the last day of the camp, indicated how much they had learned and how well prepared the students would be if they came to UWA.

“Now I know what a lecture is like, and what to expect,” said Hayley Ford from Seton Catholic College.

“And I understand what a major is – I had no idea before,” said Carmel Adventist College student Jalla Alley.

Ben Cable from Rossmoyne SHS said he particularly liked the broadening units. Other comments from the participants included:

“The camp was great. Before the camp I really wanted to go to another university but after hearing about all the support here it really encourages me to come here and study.”

“This Leadership Seminar was a great camp to attend. UWA was an unforgettable experience. Met some amazing people.”

“The leadership seminar is a great way to gain knowledge of UWA and Shenton House, also to make friends before you attend uni.”

“The leadership seminar is a great opportunity to get in-depth knowledge about UWA and other things like Aboriginal culture. It was a good experience”.

That’s where end-of-financial-year comes in. Make a donation in the next few weeks and you can add it to your tax deductions – and everybody wins. Another way to donate is to give one hour’s worth of your fortnightly pay. If everybody donated just one hour’s pay, it would help to change the life of a blind person.”

UWA staff are driving one of only a handful of totally electric cars in Western Australia.

Facilities Management, which is committed to sustainability, took delivery of the Mitsubishi Innovative Electric Vehicle (i-MiEV) in mid-May and, in its first week, about a dozen staff clocked up close to 300 kilometres in it.

The i-MiEV replaces a standard petrol-fuelled Mitsubishi Lancer. It is used for travel to construction sites, off-campus meetings and other UWA campuses. When FM staff need to attend meetings in the city, they usually take a bus using a Corporate Smart Rider. To round up their suite of sustainable vehicles, FM also have a fleet of bicycles, including an electric bike, for short trips around the Crawley/Nedlands campus.

Director of FM, Clint Walker, said there were only ‘dozens’ of these cars in Australia. It was purchased with advice from Professor Thomas Braunl (Electrical, Electronic and Computer Engineering), the University’s expert on electric cars, who also helped FM with options for charging the vehicle.

“We’re very happy with the i-MiEV,” he said. “GM-Holden makes an electric car, the Volt, which is not yet available in Australia. The other option was a Nissan LEAF, but the capital cost and the neater, more efficient i-MiEV vehicle swayed our decision.”

The car is charged using mains electricity in the basement carpark of the Ken and Julie Michael Building. It takes a few hours to charge an empty battery to 80 per cent of its capacity or overnight to gain full capacity: a range of up to 130 kilometres on a ‘full tank’, costing around $5 in electricity.

The i-MiEV cost $29,000 and has most of the features expected of a 21st century car: USB port, iPod port and air-conditioning.

Its carbon footprint is 40 per cent less than a petrol-powered vehicle. If it was powered with solar energy, the footprint would be zero: 100 per cent less than a petrol car. It also costs 70 per cent less to run than a standard petrol vehicle.

The small four-door car is surprisingly roomy and even Mr Walker, with his 195cm frame, finds it reasonably comfortable. It can reach a speed of 100km/hour but FM staff are advised that, if they want to drive on the freeway, they should use the department’s remaining petrol car, the Toyota Yaris.

Staff have also been advised that, as the car runs silently, they should take care as pedestrians and cyclists may be unaware of it approaching.

‘The first time you hop in, it is a little disconcerting, as you expect to turn the key and have something burst into life,” Mr Walker said. “Instead, a small bell chimes that the car is ‘ready’ and that’s it – off you go. But you soon get used to it.”

What drives FM staff? Something clean, quiet and low-carbon

The Winthrop Singers at Gingin

UWA’s élite choral group, The Winthrop Singers, have performed in chapels and prisons, in China and in the bush.

Now they are sending their music into space at the Gravity Discovery Centre in Gingin.

The choir, directed by Nicholas Bannan from the School of Music, will perform there on Saturday 22 June at 2pm.

The concert came about after a chance encounter between Nicholas Bannan and UWA’s gravity guru David Blair when both of them presented at the Perth Institute for Contemporary Art earlier this year.

“I have, for some time, been fascinated that the father of Galileo Galilei was a composer and music theorist, and that Galileo himself made use of musical phenomena (rhythmic and pitch proportions) as a means of quantifying divisions of a second in his experiments on acceleration and ballistics,” Associate Professor Bannan said.

“So, a piece by Vincenzo Gallei is on the program, together with other works that amount to a journey Around the World in Choral Music.”

Tickets are $8 ($5 concessions) available in advance from reception at Gingin on 9575 7577 or bookings@gravitycentre.com.au

The Winthrop Singers at Evensong in St George’s Chapel (Photo by Michael Grebla)
In a time when most female artists were painting still life and family portraits, a group of Perth women broke the chains of domesticity and looked outside the home for their inspiration.

Towards Perth is an exhibition of their work at the Lawrence Wilson Art Gallery in the Dr Harold Schenberg Art Centre.

The oils, watercolours and wood engravings created by seven women in the first half of last century are all part of the Cruthers Collection of Women’s Art, housed at UWA.

Landscapes and seascapes dominate. Audrey Greenhalgh (1903 – 1991) has painted three oils of beach scenes, capturing the texture of the waves and sand, and the quality of light and shadows, punctuated with glistening seagulls.

Elise Blumann (1897 – 1990) has also painted oils of beach and bush, including Rottnest Island and Salt Lake.

Portia Bennett’s (1898 – 1989) watercolours of the city in the 1940s and early 1950s reveal wide tree-lined streets with gracious low rise red brick buildings.

Lawson Flats Riverside Drive has been painted from just about where the new Elizabeth Quay will be developed – and the changes to that landscape will make it almost unrecognisable.

Hotel Adelphi, Perth shows a quiet St George’s Terrace with Foys department store, a big sign advertising Dodge cars and, of course, the original Adelphi, which became the Parmelia Hilton.

An unusual element of this exhibition is a series of small wood engravings by Edith Trethowan (1901 – 1939). There are beautifully detailed pictures of the Round House and beaches in Fremantle and a view of Mounts Bay Road, looking towards Perth, with what might be Government House vegetable gardens in the foreground.

A favourite is View from Back Door (1928-29), looking beyond the washing fluttering on a clothes line next to a picket fence, to rows of corrugated iron roofs with brick chimneys and a flock of birds swooping past a church and steeple.

Everybody who see it imagines it is their old neighbourhood.

In another gallery is ORIENTing, a collection of Ian Fairweather’s paintings, some of them created on pieces of cardboard, painted while living in a hut he had built on Bribie Island, Queensland.

Fairweather was an eccentric nomadic artist who is remembered for building a raft and trying to sail from Queensland to Indonesia.

He also lived in China for a while and his work from that time has obvious Asian influences.

Perth gallery owner Rose Skinner recognised Fairweather’s talent and promoted him, so a lot of his work is in private collections in WA. ORIENTing follows his career from the 1930s to the 1960s. Next door is ORIENTing: With or Without You. It is a response to Fairweather’s work, by several contemporary artists.

Works include three-dimensional cardboard fibre and fabric pieces, blackboard drawings, digital silk screens and traditional Tiwi Island woven and painted wall sculptures.

Both exhibitions run until 13 July.

Artwork: View from back door: Edith Trethowan 1928-29, wood engraving
For all your design needs

UniPrint’s in-house designers offer a comprehensive design service.

Our designers have full knowledge of our University’s visual identity guidelines and can assist in the implementation of the style, or the migration of your current promotional materials to meet the University’s requirements.

See UniPrint for all your design needs.

uniprint.uwa.edu.au

The University Credit Society Ltd

Introductory Home Loan Special Offer

Staying true to our commitment to WA’s Universities, Unicredit is pleased to announce a very special introductory rate home loan offer, exclusive to University staff and your families.

New borrowings only
Exclusive to University staff and your families
Borrowings up to 95% of the value of the property

4.75% p.a. Fixed for 12 months
5.38% p.a.

Comparison Rate
Reverting to Unicredit’s Classic standard variable home loan rate currently 4.95% p.a. (Comparison Rate 5.44% p.a.) after the introductory period.

Contact Unicredit today to discuss this special offer and what it means in savings for you and your family.

UWA Branch
1st Floor, Guild Building
Telephone: (08) 6488 1218
E: uwa@unicredit.com.au
Hours: 11am-3pm, Mon-Fri

Mobile Lender
Geoff Parkinson
Mobile: 0458 335 177
E: mobile@unicredit.com.au
Will visit anywhere, anytime

To decide if a product is right for you, please consider your personal needs or financial circumstances. Unicredit recommends you read our Information, Terms & Conditions and Fees & Charges brochures, and our current interest rates – available online and from any Unicredit branch. The University Credit Society Ltd. ABN 90 087 651 901 AFSL 244168

For all your design needs

UniPrint’s in-house designers offer a comprehensive design service.

Our designers have full knowledge of our University’s visual identity guidelines and can assist in the implementation of the style, or the migration of your current promotional materials to meet the University’s requirements.

See UniPrint for all your design needs.

uniprint.uwa.edu.au
**HOUSESITTING**
Mature academic couple seek longer term house-sitting opportunity starting in late 2013 or early 2014. Prefer location within 10 km of UWA. Happy to maintain or improve garden, and pay reasonable rent. Prefer no pets. Please contact stephen.glasby@uwa.edu.au

**FOR SALE**
CARAVAN: Windsor Genesis Popout 2007 for sale at $19,950. 16 feet with rear door and front boot. Tare weight 1010 Kg. Gross mass 1450 Kg. Tow ball mass 124 Kg. Features: roll out awning, four burner gas cooktop and grill, Samsung 850W microwave, 90 litre fridge/freezer gas/electric 12/24V, new reverse cycle air con unit, 2 single beds with innerspring mattresses, dining area, 60 litre water tank, ample 240 V power points, TV aerial, CD/radio, new battery, gas bottle, water hoses and mains extension, and ample storage space. Contact: John Love 6488 3270 or William Leech 6488 2853.

**TO LET**
HOLIDAY HOUSE INJIDUP BEACH: Zamia House is an elevated, north facing contemporary home with 180 degree views across Wyadup valley and an ocean view towards Canal Rocks. Injidup Beach is 2km away. The house is set on five acres of bush and is central to Margaret River wineries, restaurants and attractions. The house has 3 bedrooms and 2 bathrooms (one an ensuite), a large covered deck and open plan living. The house sleeps 8. Discount prices for inquiries through UWA News, starting from $200 per night. Contact Jani on 0418 949 318 or zamiahouse@gmail.com.

**COTTESLOE UNIT:** $475 pw. Available 30 June until September. Dates are negotiable. Fully furnished and equipped. Spacious bright two bedroom unit in small quiet block of four units. Reverse cycle air-conditioning. Ground floor. Large outdoor area. Only two minutes to beach, bus and shops. Phone Marilyn: 9385 6404 or 0420 869 492.

**FRANCE – DORDOGNE:** Holiday accommodation. Self-contained apartment in one of the most beautiful Medieval Villages of the Périgord Noir, Belves. Train and all amenities. For more details see website www.belvess.info or contact Susana Melo de Howard on 9246 5042 or 0438 878 425. Email: susana@belvess.info

**QUINDALUP:** A charming, recently renovated, fully self-contained redbrick cottage only 400m from beautiful Geographe Bay and 2km from Dunsborough township. Located at the end of a private road, this cottage offers privacy and security, a lovely natural vista out over Toody Inlet Reserve, and is a great cottage for all seasons. Please go to www.quindalup.net.au for further information.

**LONDON:** Newly converted fully equipped London accommodation (can sleep four) with panoramic views and excellent transport to Central London (including the new Overland or ‘Museum’ Line, connecting twelve museums). Available in nice area of Peckham from one week to three months, at a very reasonable price from $400. Cleaning fee of $100 and 50 per cent deposit required at time of booking with $500 damage deposit and remainder of rental due before arrival. Contact melhon@optusnet.com.au

**ACCOMMODATION**
SUBIACO HOLIDAY ACCOMMODATION: Are you looking for short term holiday accommodation in Perth? Inner-city fully furnished spacious loft (about 100 m²) accommodation in Subiaco available for short term stays, for up to four people. Rate per night: $150 for minimum stay of seven nights. The loft accommodation has: a queen bed and two single beds, ensuite bathroom; dining suite; reverse cycle air conditioner. For more information and booking contact: latha.samuel@uwa.edu.au

**WINE SHOW by the Bay**
Saturday 22 June | 11am - 5pm

There will be something for everyone at this year’s Wine Show by the Bay as we help celebrate The University of Western Australia’s Centenary year.

General Admission $20 | 6488 8770 for tickets | Book Now!
www.universityclub.uwa.edu.au
The UWA Fathering Project – a powerful health promotion strategy

Winthrop Professor Bruce Robinson, School of Medicine and Pharmacology, Director of the Fathering Project and 2013 West Australian of the Year

The problem: When writing books about busy fathers I discovered that the absence of a strong and appropriate father figure was the most significant factor in many major health and wellbeing issues for young people.

These include substance abuse, participation in sport, self-esteem, school behaviour, crime and lack of personal values. Unfortunately, exposure to risks have increased at the same time that fathers’ ability to deal with those risks has reduced.

Kids now face pressures from drugs, cyber bullying, childhood obesity, and greater sexual pressures than ever seen before. At the same time, fathers and father figures have a reduced capacity to deliver what kids need, with longer hours away from home at work, less help available from distant extended family, fewer good role models, little training in how to be a good dad and the challenges of separation/divorce.

The vision: To improve future health and wellbeing in adolescents by giving every child the opportunity of input from a strong and appropriate father figure.

The strategy: The School of Medicine and Pharmacology SCGH Unit has hosted a Fathering Project, funded by Healthways, the Federal Department of Education and private donations.

Our research has shown us that men need DVDs, not long books. We have successfully produced DVDs with short booklets, and a website with social media resources. We are now creating similar high-quality resources for specific situations, including FIFO workers, drugs, exercise, education, daughters, sons and Aboriginal father figures.

In order to get the resources to the men and make some real change, we must reach out and engage directly with them. We have a track record of success at getting to men and changing their knowledge and behaviours. We have presented to more than 13,000 people at schools, workplaces and community groups as well as through our website, weekly emails and Twitter.

Importantly, our research has taught us to get to fathers early. We aim to get them in the first years of their children’s primary schooling, and to get to every school in WA, within five years, and every school in Australia within 10 years.

As a University-based organisation, it is vital that all of our work is underpinned by careful research and strong publications. We get accurate statistics of current problems (personal and economic) as well as evaluating the effectiveness of our resources and outreach. We have six UWA students studying the relationship between father figure input and substance abuse and eating disorder. We are collaborating with ECU, and Professor Donna Cross (Curtin) who helped found the project.

The combination of an urgent need to help father figures plus an effective program to do this could make vastly more difference to the future of Australian children than many other projects. Through our unique approach, with quality resources, targeted outreach and research, we have a real chance of making a major difference.

Leadership: The Fathering Project has a Director, three staff and a strong interim Board, chaired by John Bond, and Advisory Group, chaired by Mimi Packer. Endorsement has come from community leaders and experts in the field including Michael Chaney, Donna Cross, Steve Biddulph, Tim Costello, Fiona Wood, John Akehurst, Justin Langer, Geraldine Doogue, Dennis Lillee, Peter le Souef, Kim Beazley and the Presidents of the WA Primary and Secondary School Principals associations.

The Fathering Project has also already been recognised with several awards, including Family Service and Men’s Advisory Network Awards.

To volunteer or learn more, go to The Fathering Project website: www.thefatheringproject.org