There is no cure for breast cancer.

But a multi-disciplinary group at UWA is perfecting one of the best tools yet for ensuring the closest thing: the most effective surgery for the disease.

Engineers, pathologists, surgeons and radiologists have been working together for more than five years on a microscope-in-a-needle, which can be used during surgery to tell the surgeon where the edge of the cancer is, to improve the rate of success.

Their goal, of breast tumour margin identification during surgery, to prevent women from needing secondary procedures, is in sight.

They are currently using the microscopic probe on tumour tissue and hope to use it on patients within two years.

The collaboration is based at the Optical + Biomedical Engineering Laboratory (OBEL) in the School of Electrical, Electronic and Computer Engineering, led by Winthrop Professor David Sampson, who has been pioneering the use of light in non-invasive medical diagnostic and treatment techniques for many years.

Research Associate Professor Robert McLaughlin last month received the National Breast Cancer Foundation’s Innovation and Vision in Research Award, presented by the Governor-General, Quentin Bryce. In 2011, he was awarded a fellowship from the Cancer Council WA of $300,000 over three years.

He, along with Professor Sampson and Winthrop Professor Christobel Saunders (School of Surgery), are spearheading the project.

“When you are pulling together something as complex as this, it’s not something you can do by yourself,” said Professor McLaughlin, despite being singled out for the prestigious award.

The microscope-in-a-needle can produce an image of the cancer to tell where the edge of the tumour is.

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About 34 per cent of patients who have breast-conserving surgery to remove tumours have what are known as ‘insufficient margins’.

“Breast-conserving surgery is where they remove the tumour and surrounding tissue,” Professor McLaughlin said. “When a surgeon removes the tumour, a safety margin of healthy tissue is also removed. An insufficient margin does not mean that any cancer is left behind, but it means that there wasn’t a large enough safety margin.

“If the margin is small, less than 5mm, there is an increased risk of recurrence, so many of these patients will need to go back for more surgery. About 26 per cent of patients will need more surgery because of insufficient margins.

“The microscope-in-a-needle can guide the surgeon. It is like an ultrasound probe, but it uses light rather than sound so we can see much smaller things. We can see individual fat cells. Cancer cells are a bit smaller, but we can see groups of cancer cells,” Professor McLaughlin said.

“We are working on ways to improve our cancer detection. The group is trying a couple of things. One is elastography, which takes a ‘picture’ of how something feels. We know that cancers usually feel different – that’s why women are encouraged to check their breast for lumps. We’ve come up with a way to ‘see’ that difference with our probes.

“We have recently submitted a patent, through UWA’s Office of Industry and Innovation, for doing elastography with the microscope-in-a-needle technology.”

The group already has a patent for its unique combination of using a needle and measuring refractive index. It is licensed to a start-up company, Diagnostic Photonics Inc, in Delaware, USA.

The patent and the group’s first paper came together in 2007, a year after they started work. They have had nine papers published and have received $2 million in funding.

“In 2007, with funding for medical devices through the Centre of Excellence in eMedicine, we assembled the engineering team that built the three dimensional optical coherence tomography (OCT)-in-a-needle system,” said Professor Sampson, who is also Director of eMedicine at UWA.

“We then developed the capacity to miniaturise the optics and associated scanning systems to fit into hypodermic needles as small as 30-gauge (310 micrometre outer diameter).”

They have published the first 3D OCT images of a human breast tumour taken with a needle probe. The paper will come out next month.

Professor McLaughlin said they had been working with patients after they had tissue removed. “The tissue is taken straight from surgery to the breast centre at QEII and we are using our microscope-in-a-needle to image the cancer cells in that tissue.

“We look forward to doing this with our first patients, during surgery, in about two years. We’ve still got a lot of work to do first to make sure the probes are safe and effective. These patients are going through one of the scariest days of their life. Our goal is to make it a little less scary,” he said.

Professor McLaughlin did his undergraduate degree and PhD in the School, followed by a post-doctoral position at Oxford University, then five years in the medical industry.

“I came back here five years ago specifically to work on breast cancer,” he said. “At that stage, only a handful of people in the world had made a needle probe and we worked for two years on making one.

“This project has involved so many skills. We have needed clinical expertise, mathematics, computer hardware skills, and a lot of optics. The reason we have got to where we are today is because we’ve been fortunate to gather a great bunch of people with such diverse expertise.”
Medical text books make way for novels, poetry, diaries and letters in the classes of Professor Femi Oyebode.

The Raine Visiting Professor from the University of Birmingham uses literature to teach psychiatry to medical students. “Humanities teach us about life, and diseases manifest in a person’s life, not just their bodies,” he said.

“The idea that medicine is very technologically-based means the person can easily get lost. You take the bloods, you hook them up to a machine, you don’t even look at the patient. All case notes are electronic, so a doctor looks more at a screen than at the patient. It has become callous by default.

“No doctor sets out to be callous, but we need to find a way to remind young doctors to get back to the person, to return to the reason they chose, at the age of 17, to study medicine in the first place: because they want to be with people and to help them.”

Professor Oyebode said that, from a very young age, he wanted to be a writer. “But my father wanted me to be a doctor. ‘You can teach yourself to be a writer – you can’t teach yourself medicine,’ he said.”

And he was right. The Professor of Psychiatry is a poet and critic and has published seven books of poetry. He has also contributed to The Oxford Companion to 20th Century Poetry.

He presented a Raine Lecture earlier this month on Humanities in Medical Education: Literature and Medicine.

Professor Oyebode sees medicine as an art rather than a science, a profession in which you apply skills to people. “And every person is different,” he said. “As psychiatrists, we are trained to understand human beings and this includes understanding ourselves.”

In the US and the UK, there are some graduate medical schools which accept liberal arts degrees. “St George’s Medical School (London University) and Swansea Medical School take graduates of arts degrees, and Swansea in particular has a significant humanities component to their course. “Durham University has a Professor of Humanities in Medicine, Martyn Evans, a philosopher by training.

“It will be a few years before we see what sort of doctors they produce.”

After studying medicine in his homeland of Nigeria, Professor Oyebode chose to specialise in psychiatry, in the UK, “because, conceptually, it is the most interesting field of medicine.

“I chose psychiatry because it is closest to the humanities, because it requires thinking, listening to people and a degree of wisdom – which is different from knowledge,” he said.

That wisdom is needed to deal with the stigma that is attached to mental health, not just to the patients, but to their doctors.

“You don’t have your patients stride across the room at a party to proudly introduce you to their friends, as they do with, say, their obstetricians,” he said. “Some people still believe that psychiatrists can be affected by their patients. I have had some students at the University of Birmingham whose families were shocked when they found out they were studying psychiatry, and forced them to withdraw.

“But as the more serious mental illnesses are unravelled, they will become more accepted. In the 19th century, people were afraid of epilepsy, that it was a form of ‘possession’ or that it had some religious significance. But now that it’s explained and treatable, it is accepted. “We have seen it happen already with bipolar. In fact, it has become a fashionable way for some people to explain their actions, and they are asking their doctors to diagnose them as bipolar!”

Professor Oyebode is a guest of Winthrop Professor Aleksandar Janka in the School of Psychiatry and Clinical Neuroscience, for seven weeks.
Investing in a higher education for a better society

Paul Johnson
Vice-Chancellor

Philanthropy is making an increasingly important contribution to our goal of being recognised internationally as a research-intensive university of excellence producing benefits for society as a whole.

Our University was built on, and has been continuously supported by, philanthropic support from generous benefactors. Since 1911, with the original endowment by Sir John Winthrop Hackett, we have established pathways to learning and discovery that have earned our University global respect.

The tradition of giving and sharing is vital to the role of universities in advancing knowledge and culture for the good of the community at large.

Our endowment and investments provide the underlying base to our operations, but they are not the funding panacea that many in the community might falsely believe. We are finding that more and more we seek funding from other sources to ensure we can provide a world-class learning environment for the scholars, researchers and leaders of the future.

While we still aggressively pursue competitive government grants, we also look to other quarters, particularly partnerships with individuals and the public and private sectors, as well as collaborations with other institutions nationally and internationally.

We also know that the top universities in the world have very strong relationships with large groups of willing and active donors whose support – financial and otherwise – is vital to the success of their institutions. There is no doubt that if we are to commit fully to achieving our global objective of being counted among the top 50 universities in the world by 2050, we too must continue to offer new and meaningful ways for people to engage with our University.

The purpose of our fundraising is threefold. First, to secure the capital investment needed to achieve our strategic objectives; second, to diversify our income base; and most importantly, to strengthen our links with the community – because without strong links, it is impossible to achieve the first two objectives.

Effective fundraising must be based upon a comprehensive development strategy. In other words, a strategic combination of planning, management, marketing, funding, fundraising and enterprise activities needs to be linked to the University’s vision and mission. This is the approach that will underpin our Centenary Fundraising Campaign which will be launched during our centenary celebrations next year.

However, we should never forget that fundraising is not simply about raising money. Certainly, in my experience, most of those who give see their contribution in far more than simple dollar terms. This is a sentiment summed up well by US fundraiser and author Kent Dove, who writes:

“The ultimate objective is not simply to raise money … successful campaigns seek and secure investments in a better society, a higher quality of life, and an enriched culture, and they showcase humankind at its best, expressing love and hope and caring for others who have greater needs…”

If our University is to continue to be a hub of innovation that supports the prosperity of the State and the wellbeing of Western Australians, we must have clarity of purpose and action within the University, and philanthropic support from our friends and supporters in the broader community.

First the Kimberley, now the Pilbara

A second Chair in Rock Art Studies will be established at UWA.

Tens of thousands of Indigenous rock art treasures in Western Australia’s remote Pilbara region will be researched, catalogued and promoted under a six-year, $1.08 million agreement with leading international mining group Rio Tinto.

The primary focus of the research will be one of the world’s richest collections of Indigenous rock art at the National Heritage-listed Dampier Archipelago, about 1250km north of Perth.

The rock art is known to be thousands of years old – it includes pictures of thylacines (Tasmanian tigers) which became extinct on the Australian mainland about 3,500 years ago – and archaeologists will use modern technology to more accurately date its origins.

UWA and Rio Tinto announced the agreement to establish the Rio Tinto Chair in Rock Art Studies and the appointment of leading Australian rock art specialist UWA Professor Jo McDonald to the position.

Senior Deputy Vice-Chancellor Professor Bill Louden said the Rio Tinto Chair in Rock Art Studies would significantly advance global knowledge and recognition of Pilbara rock art.

Rio Tinto President, Pilbara Operations, Greg Lilleyman, who is also a member of UWA’s Energy and Minerals Institute Board, said Rio Tinto had partnered with the University over several years on projects to increase our understanding of the significant rock art of the Burrup.

“This sponsorship of the Chair further develops this relationship with UWA, as well as with the traditional owners of Murujuga. Along with other projects, this will support Rio Tinto’s drive to conduct leading-practice heritage management in Western Australia,” he said.

Professor McDonald will also become Director of UWA’s Centre for Rock Art Research and Management.

“Deepening our understanding of Indigenous knowledge is a key priority of this University and we are indeed fortunate in Western Australia to have this rich heritage on our doorstep,” Professor Louden said. “We have made a deliberate effort to attract world-renowned researchers in the field to our University to further that knowledge.”
When their communities were devastated by tsunami and cyclone, local people in Sri Lanka and Papua New Guinea asked for help to establish kindergartens.

They wanted their young children, especially those orphaned by the disasters, to have a stable life and to find some outlet for their emotions.

Little children in Galle in southern Sri Lanka and Poroi in PNG are now getting a good start in life thanks to Graduate women WA (formerly Australian Federation of University Women WA) and the International Council of Women.

Teachers from the preschools are in Perth for a month, visiting preschools and kindergartens, including the kindy at UWA, gathering ideas for their centres and attending teaching seminars with UWA graduate and early childhood expert, Dr Dawn Butterworth.

Lalani Weddikkara, a member of Graduate Women WA, was holidaying in her birthplace of Galle in Sri Lanka when the tsunami hit in 2004, killing 65 per cent of the children in the south and leaving most of the others orphaned.

“I immediately took leave from my job at Curtin University and stayed there three months,” Ms Weddikkara said. After initially distributing food, medicine and bandages, she began helping women to regain their livelihoods with cooking utensils, sewing machines and fishing boats, funded privately and by St Michael’s Anglican Church in Mount Pleasant.

“We set up a preschool and did lots of drawing and play activities with the very young children to help them get over their traumatic experiences,” Ms Weddikkara said.

At a meeting of Graduate Women WA, Ms Weddikkara was telling then-President Hilary Silbert about the school and Ms Silbert decided the group should raise funds to support the school and help to train its teachers, which it has been doing for several years.

Asanka Bodaragama, the head teacher at the Galle preschool, was given a scholarship by the Graduate Women to come to Perth for professional development. She is learning new skills to take back to the kindergarten she runs for 42 children, whose uniforms and food are paid for by the church in Perth.

A similar story was unfolding about the same time in Papua New Guinea.

In 2008, Dr Butterworth had met PNG preschool teacher Olivia Bunari at the International Council of Women’s world assembly in Kiev.

In 2005, Dr Butterworth had met PNG preschool teacher Olivia Bunari at the International Council of Women’s world assembly in Kiev.

In 2008, after her village was destroyed by a cyclone, Ms Bunari asked Dr Butterworth to help her set up a new school to take care of the children in the wake of the disaster. Dr Butterworth went to PNG, taking supplies, and trained eight volunteer teachers.

“There is no money to pay these young teachers, so as an incentive, we have brought three of the hardest-working teachers to Perth for cultural enrichment and professional development,” Dr Butterworth said. Their trip is funded by the World Organisation of Early Childhood (WA) and supported by the National Council of Women WA.

Joseph Aripa, one of the PNG volunteers, has been photographing and drawing playgrounds in Perth kindergartens and preschools, so he can build something similar when he returns to Poroi. He has installed solar panels at the school so children can watch videos on televisions donated by Dr Butterworth.

His colleague Salina Sawaraba, is excited about taking dyes and colours back to Poroi, for water colour painting and colouring play dough.

“The children have little more than sand and sticks to play with,” Ms Silbert said. “It is difficult to send equipment because you can only get to the village on a light plane, so we are restricted in what we can give them.”

Asanka, from Sri Lanka, and the three teachers from PNG visited the School of Psychology’s Child Study Centre, as part of their professional development with Dr Butterworth.
One of the biggest excuses for giving up exercise is not having enough time.

But when Roberto Busi found his life getting busier, he took up running – and 18 months later, won his first cross country race.

Research Associate Professor Busi, from the Australian Herbicide Resistance Initiative (School of Plant Biology) is the current state 10,000 metre track champion and running is now a huge part of his life.

“It all started when I was an undergraduate in Turin, Italy, and I won a scholarship,” Professor Busi said. “With the money I bought a mountain bike. Soon I entered some races and found that I was OK. As I won more races, I found my academic results were getting better, proving to myself the importance of regular exercise.”

But, when he started his PhD, he found he was working more hours and could not find the time needed for long road training.

“My then girlfriend suggested I try running, so I gave it a go. I started with a few four-to-five kilometre runs, then tried a half-marathon, which I completed in 78 minutes. I knew that was a pretty good result and I guess my aerobic fitness from cycling had helped me.”

He started running more and more and, in February 2005 won a six-kilometre cross-country race in the snow of northern Italy.

“Later that year, I moved here to Perth on an Endeavour Award Scholarship for six months. I struggled to keep up my training because I was spending a lot of time working and improving my English. I just ran to relieve stress. But, after a while my competitive urge took over and I started racing again.

“In 2008, I bumped into a guy at UWA who coached a group of middle-distance runners, Lenny Hughes, and I joined his group. It definitely boosts your performance to train with other people.”

Professor Busi started working on a track and achieved what he calls his ‘golden year’ in 2010 when he held the state championships in 5,000 metres, 10,000 metres, half-marathon and marathon. He says his running is like a parachute: when things are not going well, it gives you a lift. “I remember 2010 as a very emotionally tough year, yet once again my everyday running helped me to get through personal difficulties.”

Last year, he had an injury to his Achilles tendon, but still managed to win the 10km Bridges Fun Run and compete in his third Perth marathon. “I wasn’t in good condition for the marathon and it was so physically and mentally hard. It’s lucky you don’t remember pain because I’m now training for my fourth Perth marathon on June 17.”

He said that after a day at the computer, he needed a methodic, rhythmic exercise like running to clear his mind. “I often have good ideas and re-evaluate problems as I run around the river in the early evening.”

Professor Busi is now sponsored by the sports clothing company Brooks, providing him with running shoes and gear.

He trains twice a week with other runners from UWA on the track at McGillivray Oval, which he says is a great place to train. He runs about 100 kilometres a week.

When he came to the end of his scholarship in early 2006, he was offered a research position with AHRI. His PhD was in the area of weeds in grass, which was a perfect fit for the UWA centre.

“Running is such an important part of my life,” he said. “It helped me to socialise and make friends when I first arrived here. Family, partner and friends as well as my colleagues are very supportive, especially our Director (Winthrop) Professor Steve Powles, who always mentions my running when he introduces me.”
Cafes and shopping bags – trappings of the western world – are the latest projects for SIFE students to make a difference in the developing world.

Students In Free Enterprise is a global network of university teams which use the power of business to change the lives of others. UWA SIFE teams have a brilliant record, with three consecutive national championships.

The production and sale of jute shopping bags through Spark is designed to empower the women of Calcutta, India, while reducing the environmental burden of even re-useable shopping bags.

Ajay Malhotra, a business student and SIFE UWA’s president, said that ‘green bags’, which were made from polypropylene (a plastic made from the refinement of fossil fuels) had to be re-used 171 times to offset their carbon-intensive manufacture. “Our shopping bags are made from environmentally-friendly jute and we are committed to offsetting the emissions associated with bringing them from India to Australia,” he said.

“Our partner, Freeset, exists specifically to provide freedom for women from the sex trade, women who were forced into prostitution by drugs or poverty. Our project is giving them new skills, new confidence and financial independence.”

Spark is one of several SIFE projects this year, and the second foray into international ventures. Last year, a SIFE group organised business and driving training for women in Kenya, so they could set up a taxi service.

“Sadly, even after their training, the women were not confident in driving for a living,” said Ajay. “But another SIFE group has helped these women set up a café. They have kept the project name, Mama Shujaa, a Swahili phrase meaning ‘warrior woman’.

“The café opened at the end of February. It is in partnership with the Perth charity, BE KIDS, and SIFE UWA is running a micro-financing scheme for the 18 women who are running the café.”

SIFE students Bowen Tan and Jiamin Lim recently returned from Nairobi. Over two weeks they finalised the establishment of the business and ran a series of lectures and workshops to improve the women’s financial literacy and business know-how.

The next step in the Mama Shujaa project is to replicate the micro-finance model to set up a tailoring business for the Kenyan women.

The SIFE teams run several projects, guided by Associate Professor Doina Olaru and Dr Donella Casperz in Management and Organisations in the UWA Business School.

One of them, Advance, is the longest-running SIFE project in Australia. It is a suite of education materials covering areas of financial stability, environmental sustainability and health lifestyle habits developed by the students for local communities.

Another, the Balya Project, is helping Indigenous Australians living in remote and rural communities to achieve economic independence through a series of partnerships and mentoring workshops, to help them develop business skills.

“We are working on some really exciting projects that are very closely linked to corporate social responsibility, which is so important for students who will soon be entering the workforce,” Ajay said. “Being part of SIFE provides us with skills that are highly valued by employers, as well as the opportunity to create change in a sustainable way.”

SIFE teams have corporate sponsors, including UWA, HSBC and CSIRO. They compete nationally and internationally and their projects are judged by CEOs from successful businesses.
Local high school students have impressed the world with their knowledge and skills, thanks to mentoring by UWA scientists.

Four students from Shenton College have just returned from the Beijing Youth Science Competition, the biggest of its kind in the world, where outstanding students and teachers share their research and ideas.

They won three gold medals and one silver medal against fierce competition. More than a million students around the world apply to take part in the forum and 400 are successful.

Emily Barrett, Thomas Gambutti, Arisa Hosakowa and Edward Leman represented their school, after working closely with UWA scientists since June last year.

Arisa and Thomas are also state finalists in the BioGENEius Challenge, another international science competition. WA is the only Australian state to compete in BioGENEius and Shenton College was the first Australian school to be invited to attend the Beijing forum.

These achievements have grown out of Learning Links, the partnership between UWA and Shenton, which began in 1999 with Hollywood High School. When it was transformed into Shenton College in 2001, the partnership was renewed and has been a successful part of the school’s program, especially for bright students.

In 2005, UWA included Belmont Senior College in the Learning Links program, then added Perth Modern School in 2007.

The program brings students, teachers and UWA academics together to challenge and enrich the students and to encourage them to aim for tertiary education, particularly at UWA.

Links have been established with almost every discipline from sport to language, from music to science, from art to agriculture.

The Beijing participants spent several months working with UWA academics on specific research projects.

Emily Barrett worked with Associate Professor Jillian Swaine in the School of Surgery at Fremantle Hospital.

“Emily was outstanding,” Professor Swaine said. “She did all this extra work with me and still managed to be dux of her class at the end of last year. She worked all through the summer holidays...”
and submitted her academic report and poster in the first week of February.

“I presented her work at an international conference in Vancouver last month. Emily was fourth author on the paper I gave. I still can’t believe she is only 14.”

Emily’s research was unique since it evaluated the reliability of two cutting-edge tools to measure sitting posture in individuals with spinal cord injuries, with the intent of eventually using these technologies to prevent medically serious pressure ulcers.

“She worked with three research assistants, Marianne Romeo, Vi Nguyen and Lorraine Johnson who are occupational therapists and 26 patients with spinal cord injury recruited through the state spinal cord injury unit at Shenton Park,” Professor Swaine said.

“Emily’s study was pivotal to inform our international collaboration which is funded in Australia by the NHMRC. She learned a lot, we gained a lot – it was win-win.”

Thomas Gambutti was partnered with Dr Natasha Teakle in the Centre of Excellence for Ecohydrology. His project demonstrated that under waterlogged and saline conditions, a legume stored excess ions to prevent shoot uptake. He identified the gene which enabled the plant to survive in salty waterlogged soils.

This has an impact on further studies to find plants suitable for WA’s salt-affected farming areas.

“Seeing the change in Thomas, from when he first started doing experiments with me last June, was amazing,” Dr Teakle said.

“His confidence, his critical thinking and problem-solving skills are all excellent now.”

Thomas spent the afternoon with Dr Teakle about once a fortnight, spending a lot of time extracting ions from tissue.

“He still did a great job, learned a lot and submitted a great report and poster at the end of the project.”

Arisa Hosakowa was mentored by Dr Lars Kamphuis and Winthrop Professor Karam Singh in the UWA Institute of Agriculture where she worked in the joint UWA-CSIRO molecular plant pathology laboratory. Her project looked at the cowpea aphid, a major pest that causes big crop losses in many countries around the world. Her project was to identify regulatory genes linked to aphid resistance.

“I was very impressed with how quickly Arisa was able to grasp the significance of the work and master the molecular biology techniques we used,” said Dr Kamphuis.

“She showed great perseverance to troubleshoot and overcome technical difficulties and it was a great pleasure to work with her. The end result was a fantastic poster with promising results which could lead to improvement of resistance to aphids in legumes, important for many developing countries.”

Winthrop Professor Gary Kendrick took Edward Leman under his wing at the Oceans Institute.

They studied the environmental impact on the restoration of seagrass beds and the role of seagrass in carbon sequestration in Albany.

Shenton College Principal, Michael Morgan, said the students’ wonderful performance in Beijing was made possible by the generous support of UWA and the Learning Links program.

“We cherish our partnership with UWA,” he said.
UWA and the Cancer Council of WA has combined to present a united front in the fight against cancer.

The Council recently awarded its research grants for 2012 and nearly half of the record $2.7 million went to UWA researchers, across many aspects of the disease, including cancer of the prostate, liver, breast and lung.

The biggest grants are $318,610 for a continuing Chair, the Cancer Foundation Professor of Clinical Cancer Care, to Winthrop Professor Michael Millward; and the second $100,000 installment of a $300,000 Research Fellowship over three years to Research Associate Professor Robert McLaughlin (see page 1 of this issue).

There are small vacation scholarships ($3,000 for a student to help with research into outcomes of breast reconstructive surgery); top-up PhD scholarships ($12,000 to help an investigation into lifetime sleep quality as a risk factor for developing breast cancer; and $8,000 to assist research into advanced radiotherapy techniques) and Honours scholarships of $7,500, but even the small grants can make a big difference.

Jonathon Thompson is an Honours student in the School of Physics and says his $7,500 grant will go a long way to towards better results in his research, by easing financial pressure and allowing him to focus on his work.

He turned to cancer research after his older sister Anna had breast cancer a few years ago. She is now in remission and the mother of two young children.

His Honours project is in biophysics and he is studying dose calculation for radiotherapy and brachytherapy for prostate cancer treatment.

“More accurate doses mean more effective treatment and fewer side-effects for the patient,” Jonathon said.

Cancer Council Director of Education and Research, Terry Slevin, said the early career grants supported the work of the best and brightest young cancer researchers.

A Suzanne Cavanagh Early Career Investigation Grant was won by Dr Cornelia Bertram in the School of Pathology and Laboratory Medicine. She has received $24,000 towards her research into improved tea tree oil-based formulations that can eradicate cancer cells and can be used to treat superficial and deep skin cancers more efficiently.

Dr Bertram has a background in medical biotechnology and she works in collaboration with the tea tree oil industry.

“I hope this research will lead to the development of a better topical treatment for common skin cancers rather than the existing surgical treatment,” she said. “Hopefully this grant will help to translate our research, which has been a five-year project so far, from the laboratory into a clinical trial.”

The 17 grants included seven newly funded research projects, which received up to $90,000 each. In the School of Medicine and Pharmacology, Dr Borut Klopcic is working on colorectal cancer; Associate Professor Fiona Pixley is studying regulation of tumour progression; Dr Cleo Robinson is modelling malignant mesothelioma; Professor Anna Nowak is looking at immune response to chemoimmunotherapy; and Winthrop Professor Gary Lee is expanding his work on pleural effusion.

In the School of Chemistry and Biochemistry, Professor George Yeoh continues his work on liver cancer and Professor Charlie Bond is studying gene regulation.

Combined assault on killer of our time

Connie Bertram hopes tea tree oil is the answer for skin cancers

All UWA staff have the opportunity to donate to the fight against this disease of our time through the Cancer Council’s annual Biggest Morning Tea.

Last year, Cindi Dunjey from the Centre for Exploration Targeting and Lindy Brophy from Public Affairs, hosted a Big Morning Tea by the Reflection Pond and raised nearly $2,000, which helped to fund this research.

This year, the Big Morning Tea will be held on the new terrace of the University Club, with generous sponsorship from the Club. The Deputy Vice-Chancellor, Professor Bill Louden, has also already donated $500.

The event will be on Thursday 24 May between 10am and 11.30. Please mark this in your diaries.

Tickets are $5 and are available from Cindi Dunjey, Centre for Exploration Targeting, Robert Street building; Lindy Brophy, Public Affairs, Hackett Foundation building; Greg Madson, CLIMA reception, Agriculture building; Deb Bolton, UniPrint campus shop, first floor, Guild Village; Fiona Maley, Population Health, Nedlands campus; HR reception, the Michael building; and Jacqui Prosser, reception at FNAS. Please have the correct money when buying a ticket.
Co-operative Research Centres have been one of Australia’s most successful scientific ventures.

The idea of CRCs was the brainchild of UWA graduate Ralph Slatyer during his term as Australia’s first Chief Scientist. He completed his Bachelors, Masters and PhD in agricultural science at UWA.

UWA can claim three of the 21 new Fellows elected to the Australian Academy of Science.

Winthrop Professor Hans Lambers, Head of the School of Plant Biology, an expert in plant mineral nutrition and the physiological basis of variation in plant growth and productivity. His work has revealed the mechanisms by which plants function and grow in different and challenging environments. His interests include the phosphorus nutrition of Australian native plants and the uptake and use of phosphorus by plant crops. He hopes his work on Australian native plants, which thrive in poor soil, will lead to a more sustainable agriculture in WA.

Winthrop Professor Stephen Powles, also in the School of Plant Biology, is Director of the Australian Herbicide Resistance Initiative. He is renowned for foreseeing the problem of herbicide resistance and pioneering herbicide resistance science nationally and internationally. As well as his fundamental research, Professor Powles works with the farming community and industry to develop ways to overcome herbicide resistance and to encourage sustainable cropping across Australia.

Winthrop Professor Michael Tobar, who leads the Frequency Standards and Metrology Research Group in the School of Physics. An Australian Research Council Laureate Fellow, he aims to build instruments with world-class precision and performance that can be used in applications including in space, and which can be used to test one of the founding theories of modern physics: Einstein’s Theory of Relativity. “Many developments today – the Global Positioning System, optical fibre communications and mobile phones – are based on high-quality clocks and oscillators,” he said. “We aim to improve these devices.”

Every year the Academy, representing Australia’s leading research scientists, honours a small number of Australian scientists for their outstanding contributions.

One of WA’s most exceptional scientists, Professor Slatyer is now immortalised in a Medal to be awarded to biologists who follow in his footsteps.

The Ralph Slatyer Medal for outstanding research in the field of biology has been established in his honour at the Australian National University’s Research School of Biological Sciences, where he worked for a large part of his life.

Former Vice-Chancellor and fellow agricultural scientist Alan Robson was chosen to deliver the inaugural Ralph Slatyer lecture for the Association of Co-Operative Research Centres in May last year.

“Co-operative Research Centres were a masterstroke for Australian science,” Emeritus Professor Robson said. “They enabled the development of great science with great application to industry.”

Professor Slatyer became the country’s first Chief Scientist in 1989 and came up with the idea of Co-Operative Research Centres, which have flourished since then.

The Ralph Slatyer Medal will normally be awarded annually, to a person who has made an outstanding contribution to biological science or somebody whose work has a significant Australian relevance. Nominations will be invited each year, with a closing date of 31 July.

Professor Slatyer, who is now 83, lives in Canberra with his wife June.

For they are jolly good Fellows
Law students book a future with Perth firm

Five Indigenous law students have been welcomed into the ‘family’ of major Perth law firm, Lavan Legal.

The first and second year students were all presented with scholarships in the form of $1,000 worth of book vouchers to help them through the early days of their law studies.

The scholarships came out of Lavan Legal’s Reconciliation Action Plan which was launched last month at a lunch to which the students were invited. Chairman of partners Dan Mossenson hosted the event and managing partner Greg Gaunt presented the students with their scholarships. Fred Chaney was a guest.

The students were recommended by the School of Indigenous Studies as those most likely to benefit from the firm’s assistance. They are Micah Kickett, Laura Vincent, Katja Gvozdenovic, Dylan Collard and Angela Crombie.

“We are forging a relationship with these students,” Mr Mossenson said. “They will be invited to Lavan Legal events and encouraged to participate in firm activities, to build a relationship with the staff.

“Our intent is to employ Indigenous lawyers and we hope that, when these students graduate, we can do that.”

Mr Mossenson is the driving force behind and the chair of the committee for the Reconciliation Action Plan which was launched last month at a lunch to which the students were invited. Chairman of partners Dan Mossenson hosted the event and managing partner Greg Gaunt presented the students with their scholarships. Fred Chaney was a guest.

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Mr Mossenson is the driving force behind and the chair of the committee for the Reconciliation Action Plan. The firm supports the Aboriginal Legal Service and Yirra Yaakin Aboriginal Corporation, among others.

“The whole firm is on board,” he said. “It’s not just about what we do at work but the conversations we have when we leave the office. We take great pride in being experts in the law, but also in being real people, in touch with real people’s needs and problems.”

The School of Indigenous Studies welcomed Lavan Legal’s involvement.

“There are few specific scholarships for Indigenous law students at UWA,” said Gabrielle Garratt, the School’s academic co-ordinator. “So the Lavan Legal Scholarships are an excellent incentive for students, not only financially, but also to connect students with a major law firm to assist with mentoring and in their future careers.”

Step up and challenge yourself to get fit

Look around your office, your lab or your workshop.

Are there six other people who would benefit from being more active? If so, recruit them, make up a team of seven, and join the Global Corporate Challenge.

The GCC is a world-wide movement to get people up, out of their chairs and walking. It is designed to target people who work in offices and sit at their desks most of the day.

Participants count their daily steps using pedometers and plot their course on the GCC website. They take a virtual walking journey around the world, increasing fitness, team spirit and workplace morale as they go.

Last year, 133 UWA staff joined the challenge and, in total, walked around the world 2.8 times.

It costs $100 to sign up but the University will reimburse half the joining fee, to make it just $50. Before you start you receive a GCC back pack, two pedometers, access to the website (where you plot your progress, can see what other groups are doing, and find walks to join), walking socks, nutrition guides and the chance to win weekly prizes.

Past participant Belinda Pope, from the Faculty of Natural and Agricultural Sciences, said she found the challenge very motivating. “Our team held lunchtime walking sessions and scheduled meetings at the Matilda Bay tearooms or at the other side of the campus, so we would all don our walking shoes and get some exercise on the way there and back,” she said. “It was also a great way to boost team morale.”

The aim of the GCC is to get people to take 10,000 steps a day over the 16 weeks of the challenge. It begins on Thursday 24 May.

UWA is also offering prizes to GCC participants.

UWA team registrations (seven people) are now open at gettheworldmoving.com/portal/6838-02404/university-of-western-australia

Contact Health and Wellbeing officer Sarina Radici (sarina.radici@uwa.edu.au or 6488 7931) for more information.

Students Laura Vincent and Micah Kickett with Dan Butler from Lavan Legal
LIWA riders go hard for lung research

There will be no shirking during a 24-hour bike ride in the south west later this month.

Researchers from the Lung Institute of WA, the ride’s charity partner, will be offering free lung tests for riders and spectators, so everybody will know how hard a participant has ridden.

The ride, the Delirium 24hr Cycle Race, will raise funds for research into respiratory disease at LIWA.

Dr Sally Lansley, a senior researcher at LIWA and the UWA Centre for Asthma Allergy and Respiratory Research, is heading up a team of six riders who will compete against other teams over a gruelling 24 hours to see who can cover the most kilometres around a four kilometre track.

Joining her will be UWA team mates Dr Alistair Cook (School of Medicine and Pharmacology) and Tarek Meniawy, a student in the School.

All three are regular riders and were keen to meet the challenge of the unique competitive event organised by the Cowaramup community and the South West Cycle Club.

“It is great to see medical research being highlighted through this event,” Dr Lansley said.

“Chronic lung disease affects one in four Australians and we need awareness of this as well as funds for research.”

Delirium takes place in Cowaramup from 10am on 21 April, finishing 24 hours later on Sunday morning, 22 April.

You can sponsor Dr Lansley and the LIWA team at everydayhero.com.au (search for Sally Lansley or Lung Institute of WA).

VC’s team on a roll

The Vice-Chancellor’s XI has again won the coveted trophy in the Twenty20 cricket challenge against the Guild President’s XI.

The Guild team set an imposing 174 target, thanks to a 112 partnership between Viv Paver and Louis Richards. Viv top scored with 85 before being run out. Commentators cited tiredness as a factor, after Viv hit six sixes and five fours.

Jeremy Gray (Unipark) was chief wicket taker for the staff team, taking two for four, including the prized wicket of Guild president Matt McKenzie.

The VC’s XI steadily chased the total and hit the winning runs with five balls to spare, making this the closest match for many years.

The staff team had contributions from all members, with Jeremy Harvey (School of Indigenous Studies) top scoring with 39 while Rhett Brennan (School of Population Health) chipped in 26 runs.

Wickets were shared around by the students with the stand-out being UWA Sports Council President Alistair Marchesi claiming the prized wicket of Mark Henderson (Faculty of Engineering, Computing and Mathematics).

The Vice-Chancellor’s XI have now taken the title for four consecutive years, which put VC Paul Johnson in a strong position as he cheered both sides, met the staff team and mingled with the student players and supporters.

Learning about social responsibility

A process fault at a fictitious chemical manufacturing company released complex ammonia compounds and potentially toxic nanoparticles – and engineering students had to sort out the mess.

The simulated exercise in transporting and disposing of hazardous waste saw 250 final year Engineering students tramping across the campus on a sunny Friday afternoon, wearing white protective suits and serious faces.

The exercise was part of a unit called Engineering for Sustainable Development, co-ordinated by Winthrop Professor James Trevelyan.

What they were really dealing with was harmless coloured water but they were learning valuable lessons in communication and other practical skills.

“As an engineer,” Professor Trevelyan told his students, “you will almost certainly have to organise activities that can have serious unintended consequences, whether you are updating the software in a major telecommunications facility, constructing a temporary diversion road for a traffic interchange upgrade or, as in this project, transporting material that is hazardous.”

The students learned how to transport the waste, how to check for compliance with procedures and how to dispose of the waste. They also learned that companies need to develop a ‘social licence to operate’, by gaining the support of their community.
Tour the oldest house

Shenton House, home of the School of Indigenous Studies, stands out from the other buildings on the Crawley campus.

It is a rare surviving Colonial house, dating from around 1846 and the UWA Historical Society is conducting a tour of the building on Saturday 21 April.

It was built on a farming property developed by Henry Sutherland (who adopted the name Crawley in memory of his mother Maria Crawley) originally known as Crawley Park.

The property was later owned by George Shenton Junior and, many years later, in 1963, the name of the building was changed to Shenton House.

Joan Pope, Vice-President of the UWA Historical Society, said the pig sty, duck pond and chook yard of the original farm were situated where the Guild Village is now.

When the University was built at Crawley, the house, still known as Crawley Park, was used by the School of Mining and Engineering, then Education. In 1988 it became the home of Aboriginal students and programs.

Crawley Park Walk, at 2pm on Saturday 21 April, will be conducted by heritage architect Ron Bodycoat.

To join the tour, please contact him on 9384 6166 or at ronaldbodycoatarchitect@iinet.net.au as soon as possible. It is $5 for UWAHS members, $10 for non-members.

Solar displays the winner on a showery day

Despite a few sun showers the Perth Sun Fair continued its tradition of proving that energy-saving can be a part of everybody’s lives.

“Solar panels and solar hot water displays continue to be a crowd favourite despite the recent changes in government schemes and policy,” said organiser Leonie Wight.

“LED lighting was another stand-out area for strong public interest,” she said “I think people feel that just one small step in the right direction towards a more sustainable existence is feasible without disrupting their lives. The changes in technology over the past few years also contributes to the appeal.”

This year the Sun Fair felt the effects of competing with big events on the same day, including the Blues and Roots music festival, the Joondalup and Autumn River Festivals and the popular Angove Street Festival in North Perth. “But a steady flow of people still attended the Sun Fair and spirits were high,” Leonie said.

“Despite lower than normal crowd numbers the free seminar series was one of the best patronised in recent years.

“The sharing of knowledge and expertise flowed profusely as it always does at the Sun Fair and it was a really pleasant Sunday on the Oak Lawn.”

Children loved coming to grips with hammers and nails at the wood workshop
employees deal with potentially conflicting goals such as safety and performance.

She is an elected member of the University’s Academic Consultative Committee. In 2011 she was elected to the executive of the Management and Organisational Cognition Division of the Academy of Management. She is also Associate Editor for one of the most influential journals in organisational behaviour, the Journal of Organisational Behaviour.

RESEARCH GRANTS

Grants Awarded Between 17/03/2012 and 1/04/2012

ADELAIDE RESEARCH AND INNOVATION PTY LTD EX SA
DEPARTMENT OF WATER
Associate Professor Matthew Hipsey, Louise Bruce, Earth and Environment (School of); “Drain L and M Water Management and Diversion Rules” — $52,440 (2012)

CURTIN UNIVERSITY EX WA
DEPARTMENT OF HEALTH
Professor George Milne, Computer Science and Software Engineering (School of); “Development and evaluation of prototype structures for delivery of web-based consumer resources for education and evidence-based self-management of musculoskeletal pain” — $18,625 (2012)

DIISR AUSTRALIA CHINA SCIENCE AND RESEARCH FUND
Dr Muhammad Hossain, Professor Yuxia Hu, Professor Mark Randolph, Shah Ullah, Civil and Resource Engineering (School of), Offshore Foundations Systems (Centre for), Woodside Energy Limited, Dalian University of Technology, Hohai University. Advanced Geomechanics: “Geotechnical challenges in oil and gas extraction from shallow to deep waters” — $37,800 (2012)

MURDOCH UNIVERSITY EX ARC DISCOVERY PROJECT
Dr Joseph Dorch, Dr Michael Bunce, Social and Cultural Studies (School of); “Ancient DNA from Cave Sediments: A New Horizon in the Archaeology of Aboriginal Australia” — $49,440 (2012-14)

NATIONAL STROKE RESEARCH INSTITUTE EX NHMRC PROGRAM GRANTS
Clinical Professor Graeme Hankey, Medicine and Pharmacology (School of); “Improving Stroke Outcomes – Attenuating Progression and Recurrence” — $1,802,955 (2012-16)

ROYAL PERTH HOSPITAL MEDICAL RESEARCH FOUNDATION
Assistant Professor Natalie Ward, Medicine and Pharmacology (School of), Fellowship (2012-15)

Assistant Professor Jon Pfaff, Psychiatry and Clinical Neurosciences (School of), Fellowship (2012-15)

UNIVERSITY OF MELBOURNE EX CSIRO SUSTAINABLE AGRICULTURE FLAGSHIP CLUSTER
Associate Professor Philip Vercoe, Animal Biology (School of); “Comparison of Open-circuit Calorimeters and Micrometeorological Methods” — $64,000 (2012-14)

Associate Professor Philip Vercoe, Animal Biology (School of); “Cross Validation of Micro Meteorological Measurement Technologies, Trace Techniques and Respiration Chamber Protocols” — $22,000 (2012-14)

Associate Professor Philip Vercoe, Animal Biology (School of); “Landscape Evaluation of Methane Emissions from Ruminant Livestock – Campaign in North West Western Australia” — $184,000 (2012-14)

UNIVERSITY OF NEW SOUTH WALES EX ARC LINKAGE PROJECTS
Winthrop Professor Mohammed Bennamoun, Computer Science and Software Engineering (School of); “A Theoretical Framework for Practical Partial Fingerprint Identification” — $58,333 (2012-14)

UNIVERSITY OF NEW SOUTH WALES DEPARTMENT OF HEALTH AND AGEING
Dr Kathleen Potter, Associate Professor Christopher Beer, Winthrop Professor Leon Flicker, Medicine and Pharmacology (School of); “Deprescribing in Frail Older People – a Randomised Controlled Trial” — $40,000 (2012)

WESTERN AUSTRALIAN ENERGY RESEARCH ALLIANCE WAERA EX WOODSIDE R203
Associate Professor Christophe Gaudin, Offshore Foundations Systems (Centre for); “Browse LNG Development – Pipeline Geotechnical Centrifuge Testing” — $156,800 (2012)

CLASSIFIEDS

TO LET

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 Toby Inlet Reserve, and is a great cottage for all seasons. Please go to quindalup.net.au for further information.

SOUTH FREMANTLE: Charming, fully renovated and fully furnished family home in South Fremantle. Available for rent from early July 2012 to mid-January 2013. Three bedroom, two living areas, office/studio, modern kitchen and bathroom, alfresco dining, wireless broadband. 5 minutes walk from cafes and beaches. If you are interested, please contact Carolyn Oldham, carolyn.oldham@uwa.edu.au

PARIS: Interested in staying in a lovely apartment on an island in the Seine? Choose between seven apartments in inner city Paris for holiday or longer term accommodation – Ile de la Cite, lle St Louis, Montmartre, Le Marais, Nation, Unesco-Plaest. Contact Carlotta for arrangements: carlotta@beerparis.com

IN A CAMPUS EMERGENCY

DIAL 2222

When life is not plain sailing ...

The Employee Assistance Program offers free confidential counselling to UWA staff and immediate family, for personal or work problems.

To arrange an appointment contact one of the following service providers

PPC Worldwide
Level 16, 251 Adelaide Tce, Perth
Tel: 1300 361 008 (24hrs)
Web: au.ppcworldwide.com

UWA Counselling and Psychological Service
1st Floor, Social Sciences Building, South Wing
Tel: +61 8 6488 2423 (Office Hours)
Web: counselling.uwa.edu.au

For further information on the UWA Employee Assistance Program see safety.uwa.edu.au/policies/eap
How you can avoid lawyers

Lawyers are hard to avoid, but it’s well worth the effort!

As General Counsel of the University, I get to see a lot of the University’s business processes and the way staff are sometimes unsure as to the right way to fill out a form, or the right management decision to make. Often I’m asked to review a document for compliance, on the assessment that adherence to policy is a legal matter or that risk management is mainly about the legislation.

While sometimes these assessments do need legal attention (and I’m always happy to check), in many instances the risk management and vetting of a document should be by experts in the subject-matter. This University is a remarkable, robust institution with very talented and skilled staff: often the answer to a question lies in policy and procedure rather than legalities.

Recently a good example of this was drawn to my attention. There have been a few questions about the University’s use of the software Turnitin, used by some Schools routinely to check essays for plagiarism. The way the software works is that essays are submitted – de-identified – to Turnitin which analyses each essay against a growing database of essays from students worldwide. Some Schools use it, some don’t want to; however there are repeated questions raised as to whether it is ‘legal’ to require students to submit essays through Turnitin and some nuances on whether it can be compulsory in certain circumstances.

A US court decision – Vanderhye v. iParadigms – established that the Turnitin software was not an infringement of the students’ copyrights in their essays under the ‘fair use’ doctrine in American law. We don’t have exactly the same words in the Australian Copyright Act, but there are analogous legal principles embracing University prerogatives and contract law which would tend to the proposition that it is ‘legal’ to require our students to use the software when submitting essays for marking.

However, in a place like the University, other considerations apply, including academic management of such policies by the Academic Council, and there is a UWA policy on this issue.

Details of the UWA policy are at teachingandlearning.uwa.edu.au/staff/policies/conduct/plagiarism if you want to follow the example, but my point is that Schools needn’t think they have to battle these sorts of questions themselves. Our University has many experts, and lots of experience, in managing the sorts of challenges that any School Manager or Head of School may confront in a working day.

The best and first guide to who can make a decision, or approve a document is in the University’s Delegation Schedule (delegations.uwa.edu.au/university_delegations). This schedule ties in with the HR Delegations and authorities under the University’s Finance Manual (www.finserv.uwa.edu.au/fin_accounting/finance_manuals/ufm).

Once we know who can make a decision or approve a document, the next step is the University Policies website (universitypolicies.uwa.edu.au) which has a search function by name or subject area. The University has developed policies via an inclusive process which try to accord with best practice, so the policies typically take into account all the University perspectives that a single business unit might not know.

Additionally, the sort of activity gives guidance to the section of the University that may have developed policies or procedures. For example, Academic Policy Services has a useful website ataps.uwa.edu.au which deals with many issues around curriculum management and the formal approval processes, including drafting rules.

Facilities Management have policies on the use of campus physical assets, and a well-established panel of pre-qualified contractors for all sorts of contracting work. Strategic Procurement looks after the University’s list of preferred suppliers and Government-authorised procurement arrangements; the University’s Insurance Office can help with the commercial decisions a project leader may need to make about the University’s usual insurances, indemnity clauses and special insurance arrangements for unusual risks.

On this campus, Legal Services is just one of the Academic Services and not usually the ‘policy owner’, so bear in mind there may well be a section of the University that specialises in the policy around your query and don’t forget to use the collective wisdom of your professional colleagues.

Kimberley Heitman
General Counsel, Director of Legal Studies

UWA NEWS