Beating the blues
Helping thousands of people deal with depression

Biosecurity
How do you keep bird flu and other deadly diseases at bay?

Fighting the war on drugs
Treatments to help serious drug addicts kick the habit for good.
Murdoch University and its alumni have a lot to be proud of this year.

We have seen record numbers of students enrolled on our campuses - a remarkable achievement in an era of declining application rates driven by record low unemployment in WA.

Increasing engagement with our students through initiatives such as the Learning Common and an expanding commitment to sport on campus also saw Murdoch retain its 5-star ranking for Graduate Satisfaction in the Good Universities Guide and continue its success in the Commonwealth’s Learning and Teaching Performance Fund.

Major infrastructure initiatives have commenced at the Murdoch campus, including the Institute for Immunology and Infectious Diseases, the expansion of the student village and the realignment of the roads through the campus. This reflects Murdoch’s position at the heart of a major new urban precinct linked to the Southern rail line, Fiona Stanley Hospital and co-location of the state Department of Agriculture and Food.

The Murdoch University Foundation and Banksia Association continue to build on the relationships built by our staff and you, our alumni, to grow the University’s endowment, a critical component in helping secure Murdoch’s financial independence.

From the beginning of 2008, we have seen the structural realignment of Schools into six new Faculties representing the broad future directions of the University.

In a world of change, Murdoch University has achieved much in 2007 and I look forward to your support in helping foster and shape our future.

Professor John Yovich AM
Vice Chancellor
Inside

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The latest news from your peers around the world. Here you’ll also find the closest alumni chapter to your home.

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Postcard from England
You’ll be surprised where a Murdoch Tourism Degree has taken Kylie McCabe and how many thousands of people she has helped along the way.

From little things…
A heart-warming story about a tiny playgroup deep in the Australian outback that is opening a world of opportunities to Aboriginal children.

Last year was an exciting time for Alumni, Careers and Employment Centre and 2008 is shaping up to be even bigger and better.

The highlight is first semester will be our Careers Fair on Tuesday, 1 April (no joke!), between 11.30am and 2.30pm.

While last year’s fair was a great success with 100 employers attending, we think that the 2008 fair will be even more successful with many employers already registered to come and meet our fabulous students and alumni.

Do think about joining us on the day – it could be the opportunity you’ve been waiting for to revitalise your career path!

If you are interested in promoting your own organisation or employing Murdoch graduates and students, why not consider having your own booth at the Fair? More details at http://ace.murdoch.edu.au/careersfair/

With a host of events all over Australia and with many of our overseas chapters last year we were delighted at the success and response to all our events. You can read about our alumni functions in Hong Kong, Singapore, Kuala Lumpur and Bangkok in this edition of InTouch.

I’m sure you’ll be inspired to come to one of the many events we have planned for 2008. To guarantee you receive an invitation, please ensure your contact details are up-to-date with us. You can update your details at http://ace.murdoch.edu.au/forms/changeofdetails.html

This year we will be continuing our weekly practical job hunting skills sessions and we plan to extend these with some after-hours workshops to allow our working alumni more opportunities to attend.

Career Connect will keep you in touch with these sessions and when they are occurring so make sure you log-in regularly to http://careerconnect.murdoch.edu.au

Congratulations to all our new alumni graduating this year. I extend a warm welcome into Murdoch University’s Alumni Association and look forward to seeing you at future alumni events.

Vanessa Fernandez-Kennedy
Manager – Alumni, Careers and Employment
Champagne Supernovae

Finding 10 new supernovae and a new minor planet from a backyard observatory is almost unheard of, yet that’s what Paul Luckas (Education 1994) has done in just two years.

Mr Luckas has been an amateur astronomer for 25 years but took his fascination one step further by agreeing to run a Supernovae and Minor Planet Research initiative from his home in Shenton Park as a subsidiary of Tenagra Observatories in Tucson Arizona.

“We’ve spent two years doing a Supernovae survey to discover exploding stars in distant galaxies,” Mr Luckas said.

“Scientists all over the world use it to fine-tune their theories of how the universe works.”

The Minor Planet program is concerned mainly with recovering ‘lost’ minor planets (asteroids) that have been out of range for a number of years, but there are also other motives for studying the asteroids orbiting past Earth.

“Apart from some concern that one of them will hit the planet and wipe out life as we know it, it can also help us to understand a little bit better how our solar system evolved,” Mr Luckas said.

Freya Contos

Careers Fair 2008

Murdoch University is once again hosting its annual Careers Fair on 1 April.

The popular event will be an opportunity for students and alumni to explore the career options available to them in the public and private sectors.

The fair is a chance to discuss face-to-face with prospective employers what they look for during the graduate recruitment and employment process.

This event attracts state, national and international organisations and employers.

As a valued member of the Murdoch University Alumni Association, the University would like to extend an invitation to you to attend the fair, either as a participating employer organisation or to explore your own future career options.

The Alumni Careers and Employment Centre (ACE) says more than 70 disciplines will be represented at the undergraduate and postgraduate level, with potential exposure to more than 10,000 students on each day from a diverse range of fields.

As a further reward for being Murdoch Alumni, ACE is offering a special price on the 2008 Careers Fair booths to reduce the full cost of attending the Fair by 50 per cent.

General information on the Fair and an online registration form for interested employers are now available at www.ace.murdoch.edu.au/careersfair
Genetic research into rare muscle disorders which can lead to paralysis at birth has won Murdoch alumna Dr Kristen Nowak the prestigious honour of being named the Premier’s Western Australian Young Scientist of the Year for 2007.

Dr Nowak’s world-first discoveries into the genetics of actin-caused muscle diseases have helped to make Perth the leading international reference centre assisting families with accurate diagnosis.

When she identified the first defect in the gene called ‘skeletal muscle actin’ – one of the two major genes that make the muscles contract – and saw it on the computer screen, she was astounded.

“It was an amazing feeling – knowing that we were the first people to see this,” Dr Nowak said.

“No one else in the world had ever seen a defect in this fundamentally important gene before.”

The discovery led to many different defects in this gene being identified and gave her work international renown.

Dr Nowak completed a BSc Biotechnology(Hons) at Murdoch University in 1997 and completed her PhD in 2002.

Julie Shuttleworth (Extractive Metallurgy 1995) has won the 2007 Telstra Young Business Women’s award.

Ms Shuttleworth, a Process Manager for Barrick Gold, is responsible for leading engineering, procurement and construction management to develop the Buzwagi Project, a new gold/copper mine in Tanzania, East Africa.

She is responsible for overseeing the development of infrastructure, and mine and process plants.

Ms Shuttleworth has held leadership positions on major mine sites for the past eight years, and is a member of the Australian Institute of Mining and Metallurgy.

The Telstra awards program honours women whose achievements, commitment and vision have made them leaders in their chosen fields of endeavour.

Julie Shuttleworth

Andrew Lua Dai Jun (Bachelor of Arts in Screen Studies, 2004) is enjoying a diverse acting career in Australia and Singapore.

Majoring in film and with a minor in theatre, his recent credits in Singapore include TV and cinema commercials, lead roles in two telemovies, theatre and voice-over for an animation feature film ‘Sing to the Dawn’, due for release later this year.

Murdoch alumnus and one of the world’s leading biotechnology experts, Dr Yap Kok Wei, has been appointed by the University to the position of Adjunct Professor in Pharmacy.

Professor Yap is the President and CEO of Singapore-based Gleneagles CRC Pty Ltd and Group Vice President (Research) of Parkway Health Group of companies as well as a former Murdoch postgraduate student.

To coincide with his appointment to Murdoch, Professor Yap recently gave a presentation to a leading group of Western Australia’s biotechnology experts about the evolution of biomedical research in Singapore.

Mariana Surya (Biotechnology, 2003) was among 16 finalists at the Indonesian Novartis Biotechnology Leadership Camp 2007.

The Biocamp is for selected postgraduate students who have an interest in biotechnology and runs each year to support the development of biotechnology in Indonesia.

“"The progression of biotechnology and the effects it has had on civilisation has always fascinated me, and generated within me a profound interest in the biotechnology," Ms Surya said.

Members of Murdoch Business School alumni were left without any doubt as to whether it’s luck or choice which influences their professional productivity after listening to Dr Peter Dingle, guest speaker at the School’s first ever alumni event on 13 November 2007.

Dr Peter Dingle, from Murdoch’s School of Environmental Science, entertained more than 50 alumni guests with his energetic presentation “Luck or choice? Ever wondered how you can increase your personal and professional productivity and energy?”

The School plans to hold a number of events in 2008 with the assistance of the Alumni Careers and Employment Office, including a career planning seminar.
Intouch 6

Connecting

Singapore shindig
The Murdoch graduation ceremony in Singapore was a perfect opportunity to host a get together for Murdoch Singapore Alumni. The 15 October cocktail event was at The Raffles, The Plaza.

Murdoch link with China
Murdoch University has collaborated with the ACAA to work more closely with Murdoch alumni in China. Director of Development at ACAA, Karen Surmon, says Murdoch’s alumni in China can expect ongoing career advice, a range of professionally oriented events and support. Further information is available at ace.murdoch.edu.au

Boost for expert pool
A vet graduate who heads up a leading consultancy group in the pig industry is working with the University to help produce even better trained graduates under a new academic teaching agreement. Veterinary and Biological Sciences Dean, Professor John Edwards, said the innovative collaboration with Portec’s Principal Dr Kim Nairn (1984) would bridge the gap between industry and academic staff. “The company will provide select teaching services to build on the University’s expertise pool in a range of intensive industry subjects such as pigs, poultry and aquaculture,” Professor Edwards said.

Hong Kong reunion
More than 100 Hong Kong alumni reunited at a special cocktail function in the Chief Executive Suite of the Grand Hyatt Hotel on 13 July 2007. Murdoch’s Careers and Employment and Murdoch International staff made their way to Hong Kong for the event. The guest list was like a Who’s Who of Hong Kong CEOs and senior executives. The ACE team was extremely proud of the success that Murdoch graduates have achieved over the years and it was inspiring to see so many professional and influential alumni under one roof. One of the most delightful features of the night was a photo board of past graduation ceremonies that provided an opportunity for reminiscing as well as much amusement at the fashions of the day.

Open Day
The School of Veterinary and Biomedical Sciences invites Murdoch alumni and their families to visit the School on Sunday, 25 May. The Open House day will include tours, presentations, and an informal lunch. For more details and to rsvp contact Andy David, a.david@murdoch.edu.au or (08) 9360 2104.

JET Program sees Murdoch Alumni jet setting to Japan
Murdoch alumni are taking advantage of the Japanese Exchange and Teaching Programme (JET).

The JET programme invites young overseas graduates to assist in international exchange and foreign language education in local governments, boards of education and elementary, junior and senior high schools throughout Japan. Murdoch Asian Studies graduate, Michael Montague, is working in the Prefectural Government Office Kobe in the Kansai region of Japan. “It is fantastic to have been able to move into a job which draws widely on the skills and knowledge I acquired during my time in Japanese Studies at Murdoch,” he said. The WA JET Coordinator, Yuichi Takatsuka, is also a Murdoch alumni. Further information can be found at www.jetprogramme.org.

Dream job bears fruit in Orange
Media Studies graduate Jessamy Perriam has found her dream role working as an online producer and field reporter for the ABC in Orange, New South Wales. “I was one of those kids who was building their first website at the age of 13, using HTML,” she said. “I love the fact that almost 10 years down the track, not only has it become easier to publish on the internet but I get to use photos, audio and video as well.” “I couldn’t have imagined a cooler job if I tried.” Ms Perriam’s first experience of Murdoch was at age 17 when she joined the Media Frenzy program, when high school students spend a week on campus to get a taste for journalism.
Wolfgang Bylsma (Economics, 1982) is the new WA Business News editor.

Since graduating with honours, Mr Bylsma has worked for the Commonwealth Treasury, the Australian Financial Review, The West Australian, and various corporate and PR consulting jobs before taking time off to raise his three children.

"I think the study at Murdoch certainly got me into Treasury, and everything else has evolved from there. I still draw, from time to time, from things I learnt at the University," Mr Bylsma said.

Melissa Parke (Master of Laws, 1998) has been elected to Parliament in last year’s Federal election as the new House of Representatives member for Fremantle.

After completing her Master of Laws (LLM) in Public International Law, Ms Parke lectured at the Murdoch Law School, teaching Criminal Law and Procedure.

She went on to work for the United Nations from 1999, later becoming a senior lawyer in the Office of the Under-Secretary General for Management, New York.

She provided advice and oversight in respect of the UN justice administration system and prepared draft decisions on behalf of the Secretary-General.

Melissa Parke

House of Reps

Wolfgang Bylsma (Bachelor of Arts, 1996) has just released Waldo’s Hawaiian Holiday, the official sequel to the 1980s cult film Repo Man which has a huge following, particularly in the US and UK.

Mr Bylsma has been operating his own multimedia design enterprise Anima Creative since 1996 and is the managing director of sequential art publishing company Gestalt.

“We’ve also got another anthology coming out shortly to coincide with our exhibition of comic art at Heathcote (Applecross, WA), a graphic novel by Justin Randall called ‘Changing Ways’ and a few other projects in the works," Mr Bylsma said.

Wolfgang Bylsma

Novel enterprise
Life in veterinary hospital captured on canvas

Watching donkeys and dogs go about their business may seem a strange way for an artist to spend the day but for Audrey Fernandes-Satar it is a constant source of inspiration.

Ms Fernandes-Satar – Murdoch’s first Art Meets Vet Science artist in residence – studied the movement of dogs, donkeys and horses at the Murdoch vet school, recording her observations in a series of sketches.

The program, run by the Murdoch University Veterinary Trust, brought together artistic, creative and scientific methods of viewing and understanding the world.

The work was then put on display throughout the vet school.

“I’ve spent time talking to students and staff and I’ve sat in on classes like anatomy,” Ms Fernandes-Satar said.

“One thing that showed up (during my residence) is the deep respect students have for animals and how they are briefed to respect them.”

Looking for Lost Alumni

Murdoch University now has almost 40,000 alumni, people who graduated from the University over the last 32 years.

Many of you still have a strong relationship with the University through your connections with Alumni chapters, with academic staff and through our publications and the services that you still access at Murdoch. Some of our alumni however, have moved a number of times and have not updated their details, so it’s no longer easy for us to keep in touch.

2008 will be the year of ‘Looking for Lost Alumni’ with the goal to update alumni details on our database and to make contact again with those alumni that may not have heard from us in a while. Over the next few months we’ll be asking all of you to help us locate lost alumni and to identify those alumni that we should make a special effort to connect with.

We’ll also be rolling out a number of initiatives aimed at recognising some of our successful alumni and a program of new events for some of our earliest graduates.

We look forward to working with many of you on these initiatives and we’ll keep you up-to-date as our plans progress during 2008.

Vicky Dodds
Director of Development
+61 8 9360 7594
v.dodds@murdoch.edu.au

Did you know that Alumni members of Murdoch University can join the Guild Health and Fitness Centre for $9.00 a week? That’s a huge 25% discount.

Alumni special offer:
• Ezypay monthly membership $36.50 (normally $48.00)

And benefits include:
• ongoing fitness appraisals
• structured programs tailored to your needs
• access to all fitness classes
• continuous training and nutritional evaluations

FREE towel and drink bottle with every Ezypay monthly membership.

Guild Health and Fitness Centre
Telephone: 9360 2318

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Alumni members can stay fit for less.
Murdoch University will play a key role in helping to build a sustainable future for Australia through the newly established National Climate Change Adaptation Research Facility.

The $50 million hub was a winning bid by a consortium of Innovative Research Universities Australia (IRUA), of which Murdoch is a key member. It will deliver sustainable climate change adaptation solutions under a major federal government plan.

The centre will focus on areas including climatology, ecology and conservation biology, statistics, engineering, psychology, urban planning, hydrology, law and policy, community development, architecture and social research.

Murdoch University Vice Chancellor and Chair of IRUA, John Yovich, said the University was ideally positioned to assist industry collaboration on climate change and sustainability initiatives.

“Murdoch has been a pioneer in climate change research and is building on this strength in a number of initiatives in the areas of renewable energies and sustainability,” Professor Yovich said.

“Our new Faculty of Sustainability and Environmental and Life Sciences will focus strongly on research into renewable energies, sustainability, global warming, ecosystem management, biofuel development and desalination technologies.”

In another development, a major international consortium led by Murdoch will develop a strategy to help countries along one of Asia’s major river systems adapt to the challenges of climate change.

The Asia Development Bank has given Murdoch’s environment experts US$200,000 towards phase one of the study, which will help countries along the Mekong River deal with the impacts of global warming.

“Fungicides and breeding for plant genetic resistance are currently the main forms of control used by farmers against SNB,” Professor Oliver said.

“Fungicides are effective but they are expensive and need repeated application. Breeding wheat to improve disease resistance has so far been a complex, expensive and not overly successful process.

“Stagonospora nodorum is closely related to a range of fungal diseases that affect wheat, barley, canola and legumes.

“It looks like many of these diseases are also controlled by toxins. We believe that the completion of this sequencing project provides us with knowledge that we can apply to other major fungal diseases.”

Professor Oliver said that the work had shown that it was possible for a small team to tackle successively and usefully the genome sequence of a eukaryote (fungi, animals and plants).

“Indeed we think this is the biggest genome (38 million base pairs) analysed by the smallest team anywhere in the world,” Professor Oliver said.

The sequencing project was funded by the Grains Research and Development Council.

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Project leader, Associate Professor Frank Murray, said his team would investigate how countries like Thailand, Viet Nam, Cambodia Lao and the Yunnan Province of China, can adapt to changes in water availability, land degradation, rising sea levels, threats to food security and biodiversity.

“The projected increase in frequency and intensity of heat waves, storms, floods and droughts will dramatically increase the vulnerability and damage the livelihoods of many millions of people in the Mekong region,” Professor Murray said.

The study will assist the Mekong countries to integrate adaptation to climate change into development policies by pursuing innovative and emerging solutions, creating new opportunities and diversifying rural livelihoods.

Gene sequence gives new hope to wheat farmers

The biggest genomic sequencing project in the Southern Hemisphere has been completed at Murdoch University, identifying the genetic make-up of the fungal pathogen *Stagonospora nodorum*.

*S. nodorum* causes the wheat disease Septoria nodorum blotch (SNB), which results in an annual damage bill of about $60 million to Australian crops.

Professor Richard Oliver, who headed up the research team at the Australian Centre for Necrotrophic Fungal Pathogens, said the completion of the sequence provided a new approach to battle major diseases in wheat.

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Biosecurity research gaining ground

The recent equine influenza crisis highlighted deficiencies in Australia’s border security and demonstrated the devastating impact that an exotic disease can have on the economy, Jane Hammond reports.

Across the nation the multi-million dollar racing industry was brought to its knees by the arrival of the virus. Thousands of people involved with horses from pony club members to thoroughbred breeders, vets to farriers, felt the impact.

The outbreak of equine influenza was just a taste of what could come.

Had the disease that broached our strict quarantine been something more sinister in terms of human health, the impact would have been even more devastating.

Around three-quarters of all emerging infectious diseases in humans over the past two decades have been zoonoses – diseases passed to humans from animals.

The effects of climate change may bring new diseases and pandemics.

Australia’s island status and quarantine procedures have protected us from exotic diseases and pests for decades but as the equine influenza outbreak demonstrated, the nation is still vulnerable and we need more than closed borders to remain secure.

Scientists and researchers at Murdoch University’s School of Veterinary and Biomedical Sciences are leading the charge in the battle to keep exotic diseases out of Australia and under control in other parts of the world.

Murdoch is rapidly gaining a reputation as a world leader in the area of biosecurity research and response, particularly in the South-East Asian region.
The University has research projects covering all of the major biosecurity threats in the region including avian influenza, swine fever, surra, Jembrana disease and foot and mouth disease.

Dean of the School of Veterinary and Biomedical Sciences Professor John Edwards said there were close to 30 PhD students currently working on biosecurity research projects attached to the school.

More than half of the PhD students are from South-East Asia and other Asian countries. Some are based in South-East Asia, others around Australia.

Murdoch staff, students and alumni are active throughout the region researching biosecurity issues and breaches, developing biosecurity plans, responses, diagnoses and disease tracking.

Interdisciplinary teams are working on social issues relating to disease spread and analysis, using geographic information systems and other tools to help contain and control exotic diseases in areas like Cambodia, Taiwan, China, Indonesia, Myanmar and Malaysia.

Professor Edwards said animal biosecurity at Murdoch was a rapid area of growth and covered everything from animal health and aquatic animal health to public health.

Murdoch alumna Dr Lisa Adams is a pioneer in the field of biosecurity.

Long before biosecurity was a buzz word she was following a non-traditional veterinary career focusing on both public and animal health and emerging infectious diseases.

A graduate of the School of Veterinary Science of 1987, Dr Adams describes her career path as crab-like.

"It has always been moving forwards and sideways at the same time," Dr Adams said.

On graduating Dr Adams realised her passion was the intersection between animal and public health and in epidemiology.

She began her career working in small animal practice while at the same time working as a research officer in public health.

At the time there was no postgraduate coursework training available in Australia in the field of veterinary public health and epidemiology.

Dr Adams pursued her interest following a career path that included teaching medical students about epidemiology and establishing the WA Biomedical Research Institute.

"Then the ideal project came along, which was to establish a cooperative research centre (CRC) in emerging infectious disease. It truly brought together animal and public health research expertise to address complex biosecurity issues," she said.

Dr Adams was the foundation executive director for the Australian Biosecurity CRC for Emerging Infectious Disease and has since held various management roles with the CRC in Perth.

She continues to work closely with staff and students from Murdoch on a range of biosecurity issues and is working to develop a Biosecurity CRC mark II that will further build research and education links to the livestock industries, environment and public health.

"Murdoch has been absolutely critical in facilitating the role of the Biosecurity CRC in South East Asia. It is one of the CRC’s greatest strengths," Dr Adams said.

Vet graduate a pioneer in the science of biosecurity
“We teach biosecurity in our undergraduate program as well as research projects, training programs and postgraduate study. We also do consultancy work in Asia and Australia,” Professor Edwards said.

The University partners with a number of organisations including the WA Department of Agriculture and Food, public health authorities and the Australian Biosecurity CRC.

Murdoch staff have also been involved in research into avian influenza (bird flu) and the development of a marker vaccine for the disease.

Professor Edwards said the greatest biosecurity threat facing Australia was foot and mouth disease and the University was working in conjunction with many partners to help contain and eradicate the disease in Asia and ensure it did not become a problem in Australia.

“In terms of biosecurity, recent history shows that there will be a continuation of new emerging diseases of livestock and humans. As we have more climate change and as we bring humans and animals into close contact with new environments the risk of either the re-emergence of older diseases or the emergence of new diseases increases,” Professor Edwards said.

“One of the more important things for us to do as educators is to help build capacity in Australia and our neighbouring countries to be able to respond to new and emerging diseases. We need to train the next generation of specialists to be able to respond.

“What we need for the next emerging disease is early detection and effective means of control to limit the spread. The only thing we know is that there will be new diseases and we need to be able to respond quickly.”

Tackling FMD in Cambodia

Understanding the social reasons for cattle movement and trade in Asia is just part of the puzzle when working out ways to eradicate foot and mouth disease in Cambodia and Laos.

Murdoch 1994 alumnus and epidemiology consultant Ben Madin has been using tools like geographic information systems and social network analysis to get to the bottom of the cross border cattle trade in the developing nations.

By understanding the reasons behind trade across borders, Dr Madin will be able to start to comprehend the complexity of disease spread and from there to better work out ways to reduce the risk of future outbreaks.

“If you eradicate a disease from a particular area you are wasting your time unless you can stop it returning,” Dr Madin said.

“We are using a range of approaches including movement records, tagging animals and looking at the sociology of why and when people trade.”

Funded by the Australian Centre for International Agricultural Research, the ambitious project is partnered by Murdoch, the WA Department of Agriculture and Food, the Australian Biosecurity CRC and the private biosecurity consultancy company Dr Madin works for, Ausvet.

Based in Broome Dr Madin spends his time investigating disease outbreaks and developing information systems to match the needs of users.

His current research is part of a PhD thesis he is doing through Murdoch.
From little things...

It’s well known that big things grow from little things.

While working in Carnarvon to provide some professional development for local teachers, Murdoch education senior lecturer, Dr Libby Lee, was asked to talk to mothers at Mungullah playgroup about child development.

Mungullah is an Indigenous community in the Carnarvon town area with a population of about 150, with about 40 percent of the residents aged under 15 years.

“I looked for support materials for mothers and found there was really nothing around,” Dr Lee said.

“The stuff on how play benefits children’s learning was all about white kids.”

But when she looked closely at what was happening at the playgroup at Mungullah, Dr Lee was impressed.

“What they were doing was really on the ball and highly appropriate. But nobody was documenting what was being done. I suggested we should produce something and the mums were really excited about that,” she said.

“We borrowed a video camera from one of the local schools and asked the mums to film aspects of the program they felt were useful,” Dr Lee said.

The final product, called Best Start, was launched at Mungullah and copies of the DVD and booklet are now being used around Australia.

The next step was to follow Best Start children into school and monitor their progress.

“What we think is ‘normal’ might not necessarily be seen that way by an Indigenous mum,” Dr Lee said.

“We wanted to see how these mums monitored their babies to ensure they were developing in a normal way.

“Parent involvement is very important because they’ve often had bad experiences at school, so while they understand that education is the key for their kids to enjoy a better life, they are battling a number of social factors.”

The research project will be expanded this year to look at improving attendance, lifting literacy and numeracy performance, ensuring Indigenous children are ready for school and inspiring their parents to work with the school.

The methodology to be used by the researchers will be one of yarning, backed up by video footage, interviews and observation.

And from this project something very big may emerge.

Les Everett

Dr Libby Lee with Duane from Mungullah playgroup
Most graduates will at some point be faced with the choice of working for themselves or becoming an employee, with many doing both during their working life.

And those who think they probably would be, or are, happiest working for themselves, have now been officially proven right.

New research by Murdoch Business School Dean Michael Schaper and colleagues in Queensland and the US has found that most people who choose to go into business for themselves have a greater sense of satisfaction and contentment in their work.

“The results are pretty clear: if you really want to get a sense of satisfaction and contentment in your work life, then you should seriously consider going into business for yourself,” Professor Schaper said.

Using data from the national Household, Income and Labour Dynamics in Australia (HILDA) survey, Professor Schaper, Associate Professor Justin Craig (Bond University) and Associate Professor Clay Dibrell (Oregon State University, USA) compared the level of satisfaction and well-being between 526 business owners and 6,840 wage and salaried employees. They found that self-employed business owners reported both higher levels of overall life satisfaction and job satisfaction.

The researchers examined a range of issues, including satisfaction with one’s own life and job, individual priorities, perceived prosperity, risk preferences, and individual health and well-being.

“Self-employed business owners reported significantly higher levels of overall life satisfaction and job satisfaction,” Professor Schaper said.

“More specifically, the self-employed are significantly more satisfied in regards to their life conditions, employment opportunities, their financial situation, their personal safety, in feeling part of the community, their personal health, and the neighbourhood in which they reside – all of which are commonly accepted measures of well-being.”

But employees were more satisfied with the hours they worked, and their leisure activities, than the self-employed.

Professor Schaper says the research is particularly relevant to professional graduates, who make up one of the largest groups of self-employed people in Australia.

“Professionals such as lawyers, doctors, chiropractors, accountants and vets are the second biggest group of business people in Australia,” Professor Schaper said.

Finishing a degree is one thing, deciding what to do with it is a whole new deal.
Beau Woods is enjoying running his own business.

**Brains for business**

The enthusiasm of the young is one thing Beau Woods had in spades when he charged headlong into business for himself within weeks of finishing his Chiropractic degree at Murdoch University in 2006.

In reality, Mr Woods had much more than just enthusiasm, but it’s undoubtedly that asset which has sustained him through six-day weeks involving more than 1,000km of travel a week to service his three practices.

Unlike many graduates Mr Woods, whose practices are in Narrogin, Katanning and Armadale, was never in any doubt as to whether he’d work for himself or for someone else.

"I came from a family of chiropractors, whose practices are in Narrogin, Katanning and Armadale, and so I went to university planning to start my own business, which is why I did a double degree in chiropractic and commerce, with a major in management," he said.

"If I hadn’t done the commerce degree it wouldn’t have been so easy. My dad’s a chiropractor, and I remember him telling me that when he graduated he didn’t even know how to sign a cheque."

"He knew all the nuts and bolts about how to be a good chiropractor but not how to run a business"

Mr Woods said that going straight into business was not something he necessarily recommended for all graduates.

"Although I started my business with a hand-me-down table and very little capital, I'm in a bit of a unique position in that I am a third generation chiropractor and I have about eight chiropractors in my family, so I did have a support network in terms of advice and knowledge."

Twice a week Mr Woods does the round trip between Armadale, Katanning and Narrogin, spending three half-day sessions in each of his three practices.

It’s a workload he’s happy to commit to as a single man but admits he could not sustain it if he had a family.

"It’s a workload he’s happy to commit to as a single man but admits he could not sustain it if he had a family."

"If I had a wife and family I’d have to adjust my working life, but by the time that happens the business will be at a different stage," he said.

"I guess my practice has grown much quicker than I had anticipated."

"I’ve built a reputation within the community faster than I thought I would have, which is very nice, and eventually I’ll have to employ another chiropractor but at this stage I’m happy to be on my own."

"Brains for business"

"A university degree often equips graduates with tools they need to pick up a range of skills in other areas that can help them in business."

Professor Schaper said that it was also interesting to note that many people moved between being an employee and self-employed a number of times during their lives.

"This would indicate that people might, for example, run their own business when they are young, but move into paid employment for a time, probably when they have a young family and a mortgage and need more security, then move back into business once their family are older and they’re more financially secure.

"We often think that there are two groups of people, those that work for themselves and those that work for other people, but in reality there’s a lot of movement between the two groups."

"There’s also a new career concept emerging, called the portfolio career, in which people have a mixture of work that can include working for both themselves and for someone else."

Professor Schaper said that people going into business had different skills at different times in their lives.

"Each age group has relative advantages and disadvantages," he said. "Young people as a group, have the advantage of energy, enthusiasm, and an ability to tap into new trends very quickly."

"But the disadvantages of youth are that they generally don’t have a large amount of capital to start out with, they don’t have experience in the workplace and they haven’t had the opportunity to develop a network of colleagues."

Professor Schaper’s ongoing research into Australian entrepreneurs has also found that the old motto ‘if at first you don’t succeed, try, try and try again’ certainly applied when it came to people who started out in business for themselves.

"About 20 to 30 per cent of business owners are on to their second or third business, either because they’d failed but learned lessons the first time around, or because it worked so well they did it again," he said.

"Overall, the results are pretty clear: working for yourself can be a very attractive career option."

Denise Rice
Dr Nicole Highet is proof of where an excellent university education, combined with a lot of drive and passion, can take you.

Dr Highet is deputy chief executive officer of the national depression initiative, beyondblue. The independent, not-for-profit organisation was established in 2000 to address issues associated with depression, anxiety and related substance misuse disorders in Australia.

Dr Highet’s responsibilities include the development and implementation of a national action plan to combat postnatal depression and related disorders such as substance misuse and anxiety.

Dr Highet’s responsibilities include the development and implementation of a national action plan to combat postnatal depression and related disorders such as substance misuse and anxiety.

The accomplished psychologist received her Doctorate in Clinical Psychology from Murdoch University in 1997.

She also became a mother last year and knows first hand what is involved in nurturing a baby and managing the work-life balance at the same time as maintaining a healthy mind and body.

It is the mission of beyondblue, through the national postnatal depression action plan, to ensure every woman is screened during and after pregnancy and that those diagnosed with the condition are referred to appropriate treatment services.

"Postnatal depression is an area we have invested a lot into and will be in the future," Dr Highet said.

"We have looked at prevalence rates of postnatal depression across Australia and found that about 16 per cent of women experience postnatal depression and up to 10 per cent experience depression during pregnancy (also known as antenatal depression).

"We have developed a national screening program and this will become a routine part of health care as soon as possible."

She said the Australian Government had committed $80 million over five years to make postnatal depression a national health priority.

Some of that money will be spent on educating health professionals, which is a key component of the plan.

General practitioners, child health nurses, obstetricians and other health workers involved with pregnant women will receive training to ensure they screen for depression.

Dr Highet said at present some women were screened and others were not.

"It is fairly sporadic at the moment, it depends on the child health nurse and whether there is a commitment to it," she said.

Many specialists seeing women during pregnancy were also unlikely to screen patients.

Dr Highet said the education of health professionals was paramount to ensure cases of postnatal depression were detected early.

Demystification of the condition and improved community awareness is also a priority of the action plan in order to ensure more women reach out for help when they recognise the signs and that they are supported by their loved ones.

Dr Highet said often women experiencing postnatal depression thought that they were not competent at motherhood and sometimes society made them feel that way.

"Motherhood can be quite a competitive environment. Some people seem to have everything going their way, a good birth, a baby that sleeps well while someone else may have a child that wakes constantly and is unsettled. They may be too embarrassed..."
to seek help because they want to appear as though they are coping,” she said.

“But left untreated, postnatal depression can have terrible consequences for the whole family with research showing that partners can also develop depression.

“Part of the screening process is an education component. Women might not have depression at the time they are screened but if they are aware of the symptoms and develop them later, they can seek help.

“All women will be provided with education material on postnatal depression and health professionals can talk to them and find out if they have support networks in place in order to prevent the situation developing where they cannot cope.”

Dr Highet said another key plank of the action plan is to ensure good access to treatment services. It is vitally important that women with postnatal depression or related disorders have early intervention.

“The faster the condition is identified the faster the recovery,” she said.

Wendy Pryer

### What Is Depression?

Most people assume that depression is caused simply by recent personal difficulties. While depression can be triggered by stressful events such as separation, divorce, death of a loved one, changing schools or jobs, moving house, trauma or abuse, other long-term risk factors also play a part. Women who have had depression in the past are also at a higher risk of developing postnatal depression. Other risk factors include:

- **family history**
- **chronic illness** – about 50 per cent of people with a major chronic illness such as a stroke, Parkinson’s disease, heart disease, cancer and diabetes also have depression.
- **substance use** – taking drugs and drinking heavily has been found to be common in people with depression. Almost 50 per cent of women and 25 per cent of men with a substance-use disorder also have a mood disorder. It’s hard to know which comes first - the substance use or depression.
- **gender** - from puberty, women are twice as likely to experience depression as men. Depression is more common in younger rather than older women. Women who are likely to develop depression will usually experience their first episode during their reproductive years between the ages of 15 and 45 years. Men, however, are less likely to seek help for depression than women.

### Symptoms And Risk Factors

Common behaviour associated with depression includes:

- moodiness that is out of character
- increased irritability and frustration
- finding it hard to take minor personal criticisms
- spending less time with friends and family
- loss of interest in food, sex, exercise or other pleasurable activities
- being awake throughout the night
- increased alcohol and drug use
- staying home from work or school
- increased physical health complaints like fatigue or pain
- being reckless or taking unnecessary risks (e.g. driving fast or dangerously)
- slowing down of thoughts and actions.

Source: [www.beyondblue.org.au](http://www.beyondblue.org.au)

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Imagine a world where protein-rich, allergy-free, environmentally sustainable, salt and frost-tolerant grains requiring little water grow in abundance without the need for pesticides.

This is the vision that scientists like Murdoch professors Mike Jones and Rudi Appels have for a genetically engineered future.

Both scientists see genetically modified (GM) foods as offering cleaner, greener, climate change-ready crops and a solution to world hunger.

They see biotechnology as offering a panacea for a myriad of environmental issues including how we will develop and grow our food sustainably in the future.

Gene discovery and genetic manipulation are part of the field of biotechnology being researched and developed at Murdoch.

The University is a leader in the application of gene technology to the development of new crops.

Far from being a technology of concern Professors Jones and Appels see genetic modification as a fast-track form of natural selection that capitalises on the universal nature of genes.

Professor Jones, who is also the head of the WA State Agricultural Biotechnology Centre at Murdoch, said genetically modified crops were probably safer and more environmentally sustainable than conventionally grown and organic crops.

He said that the much more rigorous testing of GM foods compared with conventional foods ensured that the possibility of unwanted toxins or other allergens were minimised.

"In developing GM foods scientists manipulate only one or two genes to produce a new property rather than the thousands of random gene recombinations that have taken place over centuries of selective breeding in plants and animals," Professor Jones said.

Crops genetically modified to control weeds and resists pests use less herbicides and pesticides and are therefore likely to be healthier than conventional products, Professor Jones argues.

Professor Appels said gene technology allowed scientists to take a single gene and enhance a product.

"We have been able to take a gene from a bacterium and use that to confer resistance to insect attack in cotton: that has greatly reduced the use of toxic insecticides in the cotton industry," Professor Appels said.

He said using a gene from a fish to provide frost resistance in wheat and then eating bread made from the wheat was no different than eating a fish sandwich made from conventional wheat.

"When the GM bread in the sandwich hits your stomach it is no different at the cellular level than eating a fish sandwich made with conventional wheat. Inside your stomach you would be digesting the genes in the same way from both foods," Professor Appels said.

"GM is not a matter of crossing a fish with a tomato plant to produce goodness knows what, it is simply a matter of reproducing the information from the gene of one living thing and using it in another to confer a certain
property such as frost tolerance,” Professor Appels said.

“If I produce a new genetic variant in wheat it takes eight to 10 years of testing to bring it to market. If there is anything unsafe the testing will bring it out.”

Both scientists acknowledge that GM is a word feared by some consumers and blame the media for scaremongering and misinformation.

Current state laws limit the commercial production of genetically modified foods in WA but Professor Jones and Professor Appels both see a time when GM will be at the forefront of agricultural production.

In the meantime, scientists are using gene technology and other spin-offs from GM research for a host of other scientific investigations including the development of new pharmaceuticals, biofuels and disease control.

“Humans have been genetically engineering dogs for as long as you can imagine using natural variation. Gene technology is just the next step. Genetic engineering simply expands the boundaries of variation,” Professor Appels said.

“A gene is a gene, is a gene, no matter where it comes from. When you isolate a gene sequence from an organism it ceases to be that organism, it is just DNA.”

Professor Appels said GM could help save valuable fish stocks by producing omega rich oils in crops like canola or algae to meet growing world demand for omega 3.
Professor Jones said GM was one of the few options the world had for ensuring we can grow enough food to feed the hungry and another 3 billion people by 2050.

“Organic farming won’t feed the world. We have to use all the technologies we have to produce high quality food in a sustainable manner into the future. GM is the a major technological advance that can help ensure that the world has enough food,” he said.

“Golden Rice, a GM rice with pro-vitamin A, has been available for a decade. Each year there are several hundred thousand deaths in poor countries from vitamin A deficiency because polished rice, the main food in the diet of many people, lacks vitamin A. The failure to make Golden Rice widely available to the people who would benefit from it has been likened to a war crime by its developer, Professor Ingo Potrykus.

“Golden Rice is not being deployed because people in countries particularly in Europe who don’t suffer from vitamin A deficiencies have prevented its growth in countries where it would do most good.”

Jane Hammond

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**Murdoch alumnus leading biotechnology development**

After completing a PhD at Murdoch specialising in molecular biology, alumnus Dr Stewart Washer has moved from development of genetically modified food to pharmaceuticals, animal health and more recently, biofuels.

He has had a high profile career founding successful biotech companies and developing a range of new and innovative drugs.

While at Murdoch Dr Washer co-founded the first private wheat breeding biotechnology company in Australia, Grain Biotech Australia, with Dr Ian Edwards.

Because of the current ban on GM crops in WA the company moved away from GM foods into more conventional areas of plant breeding and development.

Dr Washer said GM would eventually gain acceptance in Australia and it was already widely used overseas.

But while he sees GM foods as the long-term future for agriculture he sees the more immediate future for agricultural biotechnology in biofuel development.

“The immediate potential for ag biotech is as an industrial fuel stock, turning plant matter into fuels. It’s a massive field for Australia,” Dr Washer said.

Dr Washer sits on a number of biotechnology company boards and until recently was the chief executive officer for another company he helped found, Perth based biotech company Phylogica.

Phylogica focuses on a range of drug leads for common diseases including rheumatoid arthritis, allergy, traumatic brain injury and acute lung failure.

Dr Washer is also a member of the University Senate and is a passionate advocate for Murdoch.

“The big thing at Murdoch is that students aren’t constrained by their degree. I’m a trained molecular biologist but most people see me as a science executive,” Dr Washer said.
Did you know?

• Scientists believe GM will provide greater genetic variation not less. It allows us to stay ahead of newly evolving pests and pathogens.

• GM involves the integration of one or two genes from one organism with another.

• It takes 8 to 10 years of testing and field trials to bring a genetically modified food to the market. Scientists, farmers, researchers, regulators and others are involved in the process.

• People have been using selective breeding to manipulate crops for centuries.

• GM foods use less pesticides, herbicides and fertilisers than conventional crops therefore they are cleaner, greener and more environmentally sustainable than conventional crops.
When it comes to community focus surrounding drug abuse, the spotlight seems to centre on prevention.

And while there is no disputing that prevention is better than cure, with so many people falling prey to illicit substances, part of the key to dealing with this growing problem is finding effective treatment programs.

According to Murdoch University’s School of Psychology Senior Lecturer Marjorie Collins, one of the toughest problems facing reformed substance abusers is finding rehabilitation strategies that do not rely heavily on brain function damaged by drug use.

Dr Collins, who is co-director of the East Perth Neuropsychology Clinic, has been researching rehabilitation options for former ICE users and has found success in tailor-made treatment programs that effectively side-step cognitive damage caused by drug use.

She said ICE, a form of amphetamine, was much stronger than other forms of the drug, and as such the long-term effects of its use were more profound and sustained.

ICE abuse is a growing problem in Australia. In 2004, there were twice as many ICE addicts as there were heroin addicts.

About nine per cent of Australians report lifetime amphetamine use, making it the second most commonly used illicit drug following cannabis.

And enquiries to the drug and alcohol telephone information service in Western Australia relate mostly to amphetamine use.

Earlier this year on a visit to WA, Rob Bovett, legal adviser to the Oregon Narcotics Enforcement Association, said ICE was the number one problem drug in North America and in time, the same would be true in WA given the State’s close proximity to South East Asia, where the key ingredient, pseudoephedrine, was made.

He warned that governments needed to make good decisions now to avoid the miseries caused by the drug in the US.

Dr Collins said ICE made users feel confident and invincible and was particularly attractive to people with low-self esteem.

But users paid a high price, with negative physical effects quickly taking a toll.

"It actually changes the chemical composition in the brain and interferes with function," she said.

"So it damages things like working memory, decision making ability, ability to learn and to pay attention.

"With long term use, the impact of this damage can be quite profound and a lot of people I see say they are not thinking the same way they used to."

Dr Collins said research into the damage caused by ICE had recently shown there was a chance that with continued abstinence, some of the damage could be repaired but the jury was still out as to how much healing could occur.

Part of the problem with ICE is that the substance was relatively new on the drug scene and so there isn’t a huge amount of data available relating to long-term damage and recovery.
Similarly, when it first surfaced some 10 years ago, there was no in-depth street knowledge of the drug, so users did not have a clear picture of what they were getting themselves into.

“People in the 30-something age range have seen their friends take ICE and they’ve seen them land in hospital. The street knowledge kids have these days is better and fewer are inclined to take it in the same sort of way as others were, say a decade ago,” Dr Collins said.

But reform for users who want to turn over a new leaf is not easy, since cognitive damage often makes it difficult for them to remember to attend appointments, and if they do make it, poor memory, concentration and problem solving skills make it difficult to implement strategies provided in counselling sessions.

Dr Collins said testing the cognitive function of former users to find out the extent of damage enabled drug counsellors to discover pathways to treatment that don’t rely on mental function affected by the drug use.

In other words, treatment can be tailor-made to suit the patient’s remaining cognitive strengths.

For example, abstinence strategies might be provided in a visual format rather than verbally via ‘talking therapy’, since many ICE users have difficulty remembering what is said to them.

“The effects usually extend to working memory, ability to make decisions, focus on tasks and also they can create rigidity of thinking so that the person can’t generate alternative ways of seeing something,” Dr Collins said.

“And so it is very hard to keep them on track. If they have rigid thinking, it is difficult to generate alternative ways of behaving and it is difficult for them to see how their drug use is impacting on themselves and their family.”

“But not everybody has the same problems and the way I have been working is to provide the counsellors with information such as ‘this individual is having problems with these cognitive abilities and these are the alternatives’.

“If they have verbal memory problems they don’t remember much of a verbal counselling session so we tap into visual memory, by doing things on a white board, representing things in drawings and taking notes.”

Murdoch University counselling masters student Tegan O’Malley (Psychology 2006) spent 18 weeks working under the supervision of Dr Collins at the Salvation Army’s Harry Hunter Drug Rehabilitation Centre.

Ms O’Malley said clients were offered the chance to participate in a range of tests to find out what areas of their brain function had been damaged by drug use and what strengths they could instead use to try and make positive behaviour change.

The clients who did the testing came out with a far better understanding of the types of programs and intervention that would best suit their own needs.

“They see that it assists others and they want to give it a go,” Dr Collins said.

“Some of them can get down for a bit when they realise the impact their drug use has had but in the long run they can be much more proactive because they know what strengths they can play to.”

Making sure the client had some positive options often helped them to stay focused on abstaining from drugs.

“We want them to know that it is never too late to stop using drugs because the brain has the capacity to repair itself, so abstinence may help them recover some cognitive function,” she said.

The amount of damage in relation to the exposure to drug use varied from person to person, so it was impossible to predict the outcome of the testing for each individual.

“I had one lady who had used amphetamines for 10 years and she was functioning relatively normally but another client who had used for 5 years had minimal ability to learn and no problem solving ability,” Ms O’Malley said.

Dr Collins said it was likely that neuropsychological testing for drug users would become more commonplace.

“We have looked at some evidence we have compared people undergoing rehabilitation who have made use of our service relative to people who didn’t make use of it and the outcomes are significantly better for the first group,” she said.

And perhaps most telling of all is that the demand for neuropsychological testing was on the increase among people who wanted to reform.

“They see that it assists others and they want to give it a go,” Dr Collins said.
Tourism alumna Kylie McCabe (2005) has the enviable task of travelling the world in the name of charitable causes.

After finishing the Tourism degree at Murdoch University I worked in many tourism positions in Perth and saved to move to London.

The degree and experience enabled me to secure a graduate job at Classic Tours, a specialist tour operator in London. They are leaders in the charity challenge market, with more than 250 itineraries around the globe.

I help people raise money for charity and fulfil physical and mental challenges such as climbing up Kilimanjaro, trekking the Great Wall of China, cycling through Vietnam to Cambodia.

I work as a project manager and my role includes working with more than 100 charities, marketing the challenges, preparing participants for the challenge and responsible tourism.

Taking part in the challenges is a major highlight. You spend a year and a half planning them! When you cycle or trek through a country you experience the real destination. I cycled for six days through the Rajasthan Desert in India, staying in an Indian palace, camping in the desert, visiting the Taj Mahal.

I trekked the Inca Trail and helped 33 people complete the challenge. I play a support role on the events and encourage the participants all the way. Helping a 65-year-old trekker with Parkinson’s Disease reach Machu Pichu makes everything worthwhile. The participants start off as 33 strangers and by the end of a 10-day challenge they are friends for life. I’ve also cycled from London to Amsterdam and London to Paris and climbed Mount Etna Volcano in Italy. I’m hoping to trek in Iceland this year and cycle in Russia (from St Petersburg to Moscow’s Red Square).

The challenges can be a real turning point in people’s lives.

I’ve just started a Masters in Responsible Tourism Management. I’m hoping to become a tourism consultant and work overseas, such as South-East Asia, and come back to Australia.