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uniken

**Open for
business:
the Graduate
Research School**

■ Fred Hilmer,
Vice-Chancellor

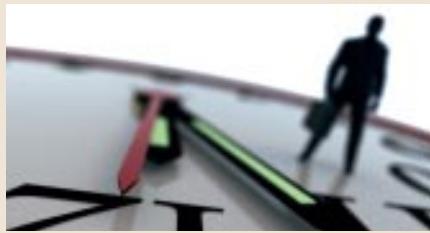
■ Meet the Executive
in Residence

■ The Helicobacter
pylori story



UNSW

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From the Vice-Chancellor

The news of the past month has focused on the appointment of a new Vice-Chancellor and the inaugural President of UNSW Asia.

The University is most fortunate to have two distinguished academic leaders to fill these positions. I am confident they will ensure that UNSW grows in national and international stature.

It is of interest to note that four of the Deans at UNSW in 1991, when Professor Michael Birt was Vice-Chancellor, have now become Vice-Chancellors of Australian universities – three of them at UNSW. John Niland was Dean of the Faculty of Commerce & Economics, Gavin Brown was Dean of Science, Fred Hilmer was Dean of the AGSM and I was the recently appointed Dean of Engineering.

As a fellow Dean for some seven years, I came to know Fred Hilmer as an excellent colleague and an outstanding leader. It is these characteristics, of great people skills, collegiality and an outstanding record of leadership in both academia and business, which will ensure that as Vice-Chancellor he leads UNSW with distinction. I very much look forward to working again with Fred to ensure that there is a smooth transition in leadership.

I am confident that under Greg Whittred as its inaugural President, UNSW Asia will fulfil all our expectations. I have very much enjoyed working with Greg, as a VCAC colleague, in my roles as Vice-Chancellor and Deputy Vice-Chancellor. He showed great leadership as Acting Dean of the AGSM and, in his three and a half years as Dean of the Faculty of Commerce & Economics, has been the major force in greatly improving its research performance and its links with business and industry. Greg has had a long-time association with Asia. I believe he is the ideal person to lead this very important initiative.

Finally, I wish to pay tribute to the senior management team who have worked so well with me and will continue to provide great leadership of their portfolios when Fred Hilmer takes over the helm. John Ingleson, in particular, deserves special mention for his leadership of the UNSW Asia project. Alec Cameron, Robert King, Les Field and Tony Dooley will remain as members of this outstanding team. Sadly, we will see the departure of Adrian Lee in the near future: he has announced his intention to retire in early 2006. Adrian has made a lasting contribution to the University and will be greatly missed. ■

Mark Wainwright



Fred Hilmer
appointed next
Vice-Chancellor

Fred Hilmer AO, most recently chief executive officer of John Fairfax Holdings, will officially take over as Vice-Chancellor of UNSW from June next year.

Mr Hilmer has had a distinguished academic and business career. He has a law degree from the University of Sydney, a Masters in Law from the University of Pennsylvania, and a Masters of Business Administration from the Wharton School of Finance, where he was appointed a Joseph Wharton Fellow. From 1989 to 1998 he was Dean and Professor of Management at the AGSM.

Mr Hilmer has held directorships with some of Australia's leading public companies and chaired a number of major public bodies, including the Commonwealth Higher Education Council and the National Competition Policy Review Committee.

In making the announcement, UNSW Chancellor David Gonski said the appointment followed an extensive search and selection process and had the enthusiastic support of the University Council.

"Mr Hilmer is the ideal person to oversee and expand the University in Australia and into Asia," Mr Gonski said. "He brings to the role a rare combination of experience at the highest levels of business, academia and public life." ■

Yeast rises to the occasion

The humble yeast cell has revealed the molecular workings of an anti-cancer drug that stops the growth and spread of tumours in humans by starving their blood supply. The UNSW scientists who developed the drug, GSAO, knew that it was lethal against endothelial cells but not why it had no direct impact on tumours themselves. A new study reveals that endothelial cells lack the so-called transport protein that tumours use to eject foreign molecules that invade their cell structure.

"It's very sexy science," said one of the research authors, Professor Philip Hogg, a biochemist with the Centre for Vascular Research and the Children's Cancer Institute Australia. "We now understand how an anti-cancer drug works in humans thanks to genetic studies using the humble yeast cell."

"The reason that GSAO is effective is that it targets tumours indirectly by attacking the endothelial cells that lack this transport protein. So GSAO is lethal against tumours because it chokes the blood supply they rely on to grow and spread." Professor Hogg and colleague Dr Neil Donoghue invented GSAO in 1999, which will be tested in cancer patients for the first time next year. ■



Britta Campion

Protected sex in a gel: \$26 million grant for HIV prevention work

UNSW is part of a consortium that has been awarded A\$26.4 million (US\$20.3 million) to accelerate the development of a vaginal microbicide. The grant comes from the National Institute of Allergy and Infectious Diseases (NIAID). The microbicide, VivaGel™, has been shown in laboratory studies to prevent the transmission of the sexually transmitted infections (STIs) that cause AIDS and genital herpes. The award is one of the largest ever made to an Australian-led consortium by NIAID, which is part of the US Government-funded National Institutes of Health (NIH).

"A vaginal microbicide, should it prove to be safe and effective, would have a great strength in that women could use it for protection against STIs without necessarily requiring the co-operation of male sexual partners," said Professor John Kaldor, deputy director of UNSW's National Centre in HIV Epidemiology and Clinical Research (NCHECR), who is overseeing UNSW's scientific contribution to the project. Within the consortium, the NCHECR will be responsible for overseeing the conduct of the clinical trials in collaboration with The Burnet Institute and the Thai Red Cross AIDS Research Centre. ■

Scientists spin the best webs

Two websites created in the School of Physics – one on musical acoustics, the other on Einstein's theory of relativity – have been acclaimed by Scientific American's 2005 Science and Technology Web Awards. No other Australian websites were recognised.

Asked why he and his team of George Hatsidimitris, John Tann and Dr John R Smith invest time and resources to create multimedia websites, Professor Joe Wolfe said: "If you do it once and you do it well, a website is there whenever you need it and more importantly, it's there whenever someone else needs it. It's also like a report to the shareholders. That is, universities are paid by taxpayers to do research and to communicate it." URLs are www.phys.unsw.edu.au/music and www.phys.unsw.edu.au/einsteinlight. ■

Hopes fulfilled or dreams shattered?

UNSW Centre for Refugee Research will host an international refugee conference this month following the journey of settlement to resettlement in Australia, with a focus on the Women at Risk special resettlement program. *Hopes Fulfilled or Dreams Shattered?* will present first-hand accounts from refugees about their experience prior to reaching Australia and settling in their new country. Conference streams include health, education, social and legal issues as well as thematic sessions ranging from refugee children to issues for those in rural and regional areas. The conference runs from 23 to 28 November. More information at www.women-at-risk-resettlement.info ■

Living paint brings sea change

Paint teeming with bacteria could protect boats from slime and barnacles and replace anti-fouling marine paints that threaten marine creatures. UNSW researchers are developing a "living paint" technology that employs bacteria found on a sea lettuce used by anglers as bait. "The bacteria stop slimes, algae and other marine creatures from settling on the sea lettuce," said Dr Lachlan Yee, a polymer chemist at the UNSW Centre for Marine Biofouling and Bio-innovation. "If the technology can be incorporated into anti-fouling paint on boats it would be a great substitute for paints that have had devastating effects on marine creatures."

Biological fouling, or biofouling, is estimated to cost the shipping industry more than \$5 billion a year. ■

Swinging through history

A part of everyday objects such as clocks and swings, the pendulum has swung its way through history to help explain the earth's shape and rotation and how gravity works. Last month the University hosted the second International Pendulum Conference to explore the significant impact of the pendulum.

"The pendulum played a crucial role in both Galileo's science and Newton's physics, and in the subsequent development of classical physics and astronomy," said the conference co-ordinator, Associate Professor Michael Mathews from the School of Education, who heads the International Pendulum Project (IPP), an ARC-funded research project examining approaches to the teaching and learning of pendulum motion. More information at www.arts.unsw.edu.au/pendulum/index.html. ■

Britta Campion



Gong for gifted ed guru

Professor Miraca Gross has won the leading international research prize in gifted education – the first time the Distinguished Scholar Award has been conferred outside North America by the American National Association for Gifted Children. Professor

Gross is director of UNSW's Gifted Education Research, Resource and Information Centre (GERRIC). Her research examining the social and emotional development of academically gifted children has raised awareness among educators and the public of the special educational needs of this group. ■

For the record

It is difficult to see how the power of preventative detention is necessary, unless the intention is to indiscriminately detail whole groups of people (such as Muslims) in the absence of reasonable suspicion or evidence of terrorism.

Dr Ben Saul of the Faculty of Law, on proposed anti-terrorism legislation – Canberra Times

Multiculturalism is a policy that recognises difference but is simultaneously based on accepted shared values and norms that uphold basic standards of human rights.

Dr Kath Gelber of the School of Politics and International Relations – The Australian

I cannot think of anything more intrusive [than linking databases with personal information to identify a person].

David Vaile of the Centre for Cyberspace Law and Policy – Computerworld Australia

[UNSW research websites are] like a report to the shareholders. That is, universities are paid by taxpayers to do research and to communicate it.

Professor Joe Wolfe of the School of Physics on the international recognition of two School of Physics websites – Australian Financial Review

We've been seduced by the idea that kangaroos are over-abundant, in plague proportions, but that's a myth based on centuries of looking at the landscape through the eyes of agricultural livestock managers.

Dr David Croft of the Fowlers Gap Research Station – Canberra Times

Resistance is one aspect of dealing with the issue of how antivirals would be used in a pandemic. It is not the whole story.

Professor Bill Rawlinson on treatments for avian influenza – Sydney Morning Herald

The results are consistent with the possibility that Viagra is reducing trade in threatened species used to treat erectile dysfunction.

Dr Bill von Hippel of the School of Psychology on his research indicating Chinese men prefer Western to traditional therapies for impotence – Courier Mail

We understand the reasons for happiness less than the negative emotions such as depression and anxiety... Freud said love and work are the cornerstone of our humanness.

Professor Phil Mitchell of the School of Psychiatry – Sydney Morning Herald

They're not interested in politics. It's all about the music.

Dr Diana Palaversich of the School of Modern Language Studies on students' reasons for applying to study Spanish – Australian Financial Review

The cream of the crop: interviewing would-be doctors

By Sarah Wilson

Understanding why a person wants to study medicine and then considering the applicant's suitability for the profession presents an intriguing challenge. The opportunity to consider these ideas arose in September when I participated in the interview process for rural candidates in the 2006 round of medicine applicants.

In 2002 the Faculty of Medicine introduced a three-tiered application process for prospective medicine students. It comprises a UAI score; an Undergraduate Medicine and Health Sciences Admission Test (UMAT); and an interview to assess the applicant's suitability. (Prior to 2003, entry into medicine at UNSW was based solely on the UAI and

suitability to practise in the country.

I was allocated eight interviews over two half-day blocks, with four interviews per day. Each interviewee had between half an hour and 45 minutes to cover eight categories of questions. A 15-minute window between each interview allowed for my fellow interviewer and me to come to a consensus on the applicant's final mark.

The interview room held chairs and a table with a water jug, cups and a box of tissues on it. The tissues were to be put to use more than I expected. Over the course of the interview, questions delved into the personal lives of the interviewees, and in sharing their history, at times tears flowed.

The students who are selected are much more likely to be keen to become doctors and we are seeing lower drop-out rates in Year One than in the previous program

UMAT scores.) The inclusion of an interview into the selection process highlights a shift away from assessing suitability to study and practise medicine entirely on academic ability.

"One positive effect of the interview has been that a group of applicants who have no desire to study medicine but have been pushed into applying by family or by their school are not selected," said Professor Richard Henry, Senior Associate Dean in the Faculty of Medicine. "The students who are selected are much more likely to be keen to become doctors and we are seeing lower drop-out rates in Year One than in the previous program."

Before conducting interviews, each interviewer must undertake training, made up of a two-hour face-to-face session and watching a video.

My role was to represent the general public. Each interview panel was made up of two people, either a doctor or UNSW medical academic and a member of the wider community. As I grew up in regional NSW, I was to interview applicants from country areas across Australia. Rural issues were an additional element for these applicants to help assess their

I interviewed five females and three males who were all either still in high school or only one year out of high school. While the interviewees demonstrated a diverse range of talents and interests, it was their personal recollections that gave me an insight into their underlying motivations and what drives them to want to study medicine.

Reaching a consensus proved to be the most thought-provoking part. Sometimes certain comments in the interview made a stronger impact on me while at other times my fellow interviewer would mention another response.

On the second day of interviewing, my interview partner and I discussed the calibre of interviewees we had seen that morning. "It's a matter of separating the cream from the double cream," he said, in reference to the fact that the applicants were obviously bursting with talent in many directions.

We made our final tally for the day and I couldn't help thinking that even if medicine wasn't the most suitable career for these 'double cream' applicants, whatever they chose to do they would be extraordinary. ■

The power of persuasion: **Peter Smith**

By Susi Hamilton

The pursuit of health, wealth and happiness for both the faculty and society might be one way to sum up the ambitions of UNSW's new Dean of Medicine, Professor Peter Smith.

"Universities have a crucial role to play in modern society, both locally and internationally," said Professor Smith, who draws on a 30-year career in clinical practice, medical research and leadership in his new position.

"There are huge health problems which need addressing. Academic research can provide new and innovative ways of delving into these issues and this can inform government policy and the industry."

But the issue of increasing revenue is also crucial to Professor Smith, a medical graduate from the University of Queensland whose research interests include molecular genetics and childhood cancer, cancer clinical trials and the measurement of quality outcomes in clinical practice and education.

He plans to supplement government research grants by engaging closely with industry and alumni, as well seeking donations from other sources. He intends to spend at least a third of his time on external relations.

"I think the power of the Dean is purely the power of persuasion," Professor Smith said. "I have to get to know people really quickly, determine what the strengths are and what the

challenges are and I have to assemble a like-minded team.

"Having done the job before helps because I know where to look and where to at least start the process."

As for his reasons in moving into the head roles, he said: "I reached the point in life where I realised I could make more of a difference by going into administration, rather than researching myself. I enjoy providing leadership for others. I see my success in the success of others."

"For me, the attraction of coming to UNSW is that it is one of Australia's leading research-led universities, one of the Group of Eight."

Professor Smith's office is dotted with artefacts from New Zealand, reminders of the past four years at the helm of the University of Auckland's Faculty of Medical and Health Sciences.

While there, he oversaw a major restructure of that faculty, including a multi-million dollar venture on a new campus. He was instrumental in almost doubling revenue to \$150 million in four years.

He has been Dean of Medicine at UNSW for only a few weeks but he already has several goals in sight. These include consolidating and growing the faculty's research base, developing infrastructure, establishing collaborative relationships with the medical research institutes and centres associated with the University and

establishing a Dean's Advisory Group.

"There will be some minor realignment of functions, but no major restructure," he said. "The process will be as transparent and inclusive as possible."

'Links' and 'collaboration' are regularly peppered throughout Professor Smith's conversation: with institutions, industry, alumni, government and researchers, both locally and internationally.

"When I was in Auckland, I fostered strong trans-Tasman links," he said. "I am keen to do that here too. There is a lot that New Zealand can offer Australian researchers and it gives a more robust approach."

It's more than idle rhetoric. Professor Smith has personally endowed a Trans-Tasman Travelling Fellowship for doctoral students at the University of Auckland. While New Zealand has clearly left its mark on him, he has also left his mark there. On his final day as Dean in New Zealand, Prime Minister Helen Clark came to the University of Auckland to announce that the government would match \$9 million in industry funding to establish an Institute of Health Innovation.

"It was a nice way to go out," he said. "I hope to do the same here, only bigger and better." Is he hoping to get the Australian Prime Minister to make an appearance on campus? "Why not?" he laughed. "Why not?" ■

Demonstrating continuous excellence: psychology recognition



Kevin McConkey

The School of Psychology has been honoured by the Australian Psychological Society (APS). Professor Kevin McConkey was awarded an Honorary Fellowship, bringing to only eleven the number of the APS's 15,000 members who are presently Honorary Fellows, and four members of staff were appointed as Fellows.

Honorary Fellows are those who are considered to have changed the nature and direction of psychology in Australia. Professor McConkey's citation referred to his "capacity for innovation, organisation and communication" as well as his "sustained and substantial achievements" for Australian psychology.

The four academics appointed Fellows are Dr Jim Bright, Scientia Professor Richard Bryant, Professor Gail Huon and head of school Professor Peter Lovibond. They were each cited as demonstrating continuous excellence across all of the areas of research,

teaching, professional service, and service to the APS over at least a seven-year period.

Dr Bright was cited as teaching across the full range of organisational psychology and for psychology extensively in the mass media. Professor Bryant, a clinical psychologist, has worked with acute stress disorder and post-traumatic stress disorder and was noted for his international influence in policy, science and practice. Professor Lovibond works in experimental and clinical psychology, particularly in the areas of anxiety and fear and was recognised for his contributions to the understanding of these phenomena and for his involvement in leadership roles.

Since her nomination as a Fellow of the APS, Professor Huon, whose work concerns body image and eating disorders as well as educational experience and academic achievement, has moved to ANU as Dean of Graduate Studies. ■

Young Poppies stand tall

The outstanding achievements of our young scientists were celebrated at NSW Parliament House last month when four UNSW academics received 2005 NSW Young Tall Poppy Science Awards, established in 2000 to recognise young scientists who excel at research, leadership and communication.

Katharina Gaus

Dr Katharina Gaus rates her most significant research as the development of a microscopic method for observing communication 'hardware' in living cells. Her work has revealed the presence of hot spots that form on the surface of white blood cells when they chemically communicate with each other. She is examining whether these hot spots play a role in autoimmune and related diseases.

Dr Gaus, an ARC Discovery Fellow at the Faculty of Medicine's Centre for Vascular Research, is currently working at the Max Planck Institute for Molecular Cell Biology and Genetics in Dresden, Germany.

Mike Manefield

Dr Mike Manefield is developing technologies to harness bacteria that could clean up polluted land and water environments. The technology is based



Katharina Gaus

on his postdoctoral research at Oxford University, where he developed a method for identifying bacteria that are responsible for the breakdown of specific pollutants in the environment.

"The microbes of the Earth act as its liver, helping to keep our ecosystems clean," said Dr Manefield, a microbiologist and Senior Research Associate at UNSW's Centre for Marine Biofouling and Bio-Innovation.

"The world is teeming with microscopic organisms that can degrade nearly all chemical compounds ever known," he said. "Whilst every polluted environment would end up clean if left for long enough, we can accelerate the natural decontamination process with a better understanding of microbial processes."

Brendan Burns

A leading authority on "living rocks", Dr Brendan Burns is using living and fossilised stromatolites in Shark Bay, Western Australia, to answer questions about the origins of life on Earth and beyond. Considered the world's oldest living life form, these primitive, slow-growing organisms appeared on earth 3.5 billion years ago. Their oxygen-generating activity has allowed other life forms to develop.

"They are excellent natural laboratories, teeming with life that may have helped shape the biology of the early Earth," said Dr Burns, who has consulted with NASA to better focus efforts on the search for signals that may help in the detection of life on other planets.

The winner of the 2005 Eureka Prize for Interdisciplinary Scientific Research, Dr Burns has shown a commitment to communicating

science through mass media, film projects and as an expert witness in legal proceedings. He is an adjunct lecturer in the School of Biotechnology and Biomolecular Sciences.

Rob Brooks

Dr Rob Brooks has made important contributions to evolutionary biology and forged an international reputation in the evolutionary, ecological and genetic study of sexual reproduction.

An ARC Queen Elizabeth II Research Fellow, his research examines how evolution operates on traits that make an individual successful in mating and reproduction. His findings on the "evolutionary costs" of being attractive, such as reduced life span, have been published in leading scientific journals and the mass media. His work has implications for our understanding of ageing and senescence, the basis of genetic defects on the sex chromosomes and conservation biology.

A senior lecturer in the School of Biological, Earth and Environmental Sciences, Dr Brooks is the recipient of three major internationally competitive research fellowships and eleven research grants totalling over \$2 million. ■



Rob Brooks

Greg Whittred to lead UNSW Asia

By Denise Knight

Professor Greg Whittred describes his appointment as the first President of UNSW Asia as "a once-in-a-lifetime opportunity".

"How often does a person get to build a private university from scratch and to get it right from the start?" said Professor Whittred, who takes up the role this month and will relocate to Singapore in 2006.

"UNSW Asia is a truly groundbreaking initiative. I have been passionate about Asia since the 1970s when I worked as an academic at the National University of Singapore and have been engaged with the region in a range of capacities ever since," Professor Whittred said.

"Singapore is the logical place for a hub of education excellence in Asia. It is an amazing opportunity to be able to lead the development of an Australian university in an environment where education is prized above all else."

As well as having a distinguished academic career, Professor Whittred brings a wealth of management and leadership experience to his new role. Previous Professorial appointments include the University of Sydney and the Australian Graduate School of Management, where he was director of the Executive MBA Program, Associate Dean of MBA Programs and Acting Dean. More recently, his achievements as Dean of the Faculty of Commerce & Economics have been considerable.

"In many ways I see the job of UNSW Asia President as a natural extension of this position," he said. "Four years ago the faculty set out to achieve a vision to become the leading provider of business education and research in the Asian region. I think we have moved a long way towards fulfilling these goals."

His vision for UNSW Asia is equally as strong. "Our objective is to build an innovative institution that is student-centred, industry relevant and research intensive. The academic model is cross-disciplinary, while the links between UNSW in Sydney and UNSW Asia will help remove barriers between Australia and Asia. The dissolving of boundaries and borders in all senses is what we are setting out to achieve."

While he is clearly excited about the challenges ahead, Professor Whittred says he leaves his role as Dean of the Faculty of Commerce & Economics with real regret. "But this is assuaged somewhat by the knowledge that the faculty will be a major contributor to the success of UNSW Asia and I will be able to continue to support the faculty's initiatives in my new role."

Opening in 2007, UNSW Asia is Singapore's first foreign university. It is also the first comprehensive research and teaching institution to be established overseas by an Australian university. ■

I have been passionate about Asia since the 1970s when I worked as an academic at the National University of Singapore and have been engaged with the region in a range of capacities ever since



Milk and Honey

Building a strong foundation in Singapore

In the lead-up to the opening of UNSW Asia in 2007, the UNSW Asia Foundation Year program begins in Singapore next January.

Applications are now being taken for the 40-week pre-university course, which offers a university entrance qualification as well as preparing students for undergraduate study.

Students who successfully complete the inaugural program in Singapore are offered a provisional place at UNSW Asia in 2007. Foundation Year graduates will also be eligible to apply for entry to UNSW in Sydney. UNSW Asia will offer six Bachelor degree and nine double-degree programs in Science, Engineering, Commerce, International Studies, Design and Media.

The Foundation Year Asia program will initially offer two academic streams, in Commerce and Physical Sciences, with others being added subject to demand. The program covers both discipline-specific courses and an English language course. Subjects will be

taught in English and fees will be equivalent to those for the same program in Sydney.

"The program has been running at UNSW in Sydney for almost 17 years and has a high success rate, with more than 85 percent of students gaining entry to the University," program director Dr Roger Alexander said. "Our graduates do extremely well in their undergraduate courses. In fact, recent research shows they have greater success in their academic programs at UNSW than any other group of students."

The Asia Foundation Year program will be initially delivered on the campus of Temasek Polytechnic to international students and will have two intakes per year, in January and July. The approval of the program by the Singapore Ministry of Education stipulates that, at this stage, the program will not be available to Singapore nationals. ■



Open for business: the Graduate Research School

By Dan Gaffney

UNSW's new Graduate Research School is open for business and the Dean, Professor Margaret Harding, couldn't be happier.

"It's high time that a university of this standing had a facility to serve its 3000 graduate research students and my mission is to support and serve them in the best way possible," Professor Harding said.

"As a Group of Eight university, UNSW already has an enviable reputation in scholarly research. It boasts some of the best research minds in the world including Federation Fellows, Scientia Professors and academic staff. On that score alone, it's a wonderful environment for a new researcher."

"I want to enhance and stamp UNSW's reputation as a research-intensive university. Critical to our research reputation and underpinning our major research programs are our research students," she said. "Make no mistake, they are a central part of this University's future and the establishment of the Graduate Research School is formal recognition of this pivotal role to research."

Professor Harding is highly qualified to speak about research. She has held Australian Academy of Science Fellowships in three countries (USA, UK and France), has published almost one hundred research articles, has won the Royal Australian Chemical Institute's Rennie and Biota Medals, and is a member of the Australian Research Council's Physics, Chemistry and Geosciences panel.

At the same time, she has a passion and talent for mentoring young researchers. Before her UNSW appointment in July this year, she was Associate Dean for Postgraduate Research of Sydney University's Science Faculty. In that role she had responsibility for its 480 research candidatures and was awarded a Vice-Chancellor's Award for Excellence in Higher Degree Supervision.

Professor Harding sees the Graduate Research School, located on the ground floor of the south wing of the Rupert Myers Building, as a one-stop shop for current and future graduate students.

"Graduate research students are our primary customers," Professor Harding said. "We will serve them directly through provision of all services required by research students."

"At the same time we'll be supporting academic staff, including postgraduate supervisors and Associate Deans of Research/Research Training, by streamlining the administrative side of things so that they can focus on their core business – academic issues related to research.

"Put simply, the Graduate Research School is here to assist faculties by co-ordinating and streamlining postgraduate research student administration and facilitating access to the wide range of skills and training support available from the many service providers across the University. This includes providing direct support to supervisors and postgraduate co-ordinators who deal with the everyday issues of concern to research students.

"If anyone has any question – no matter how large or small – related to any aspect of graduate research at UNSW, the Graduate Research School will be able to provide the answer or source the information."

The incorporation of the Graduate Research School in the Rupert Myers Building along with Research Services and NewSouth Innovation completes the establishment of the UNSW Research Precinct.

The Graduate Research School's range of services includes administering research student candidature, scholarships, thesis examination, recruitment, information seminars, training programs and advice to potential and current students. It will also provide a central hub for social events and networking opportunities and maintain a strong working relationship with the postgraduate student body, the Postgraduate Board.

Graduate Research School manager Barbara Chmielewski leads a team of twenty-two staff. Services provided by the school are organised into two divisions: student administration, managed by Julie Fox, and marketing and communications, managed by Iona Reid. Advanced planning to achieve comprehensive and effective communication with all key stakeholders is already underway.

"We'll reach out to students in several ways, particularly through the orientation and welcome programs that capture each new cohort of postgraduate research students," Ms Chmielewski said.

"The web is a virtual storefront for that experience: a place to browse, make inquiries and test some of our offerings," she said. "It underpins everything we do. It's our job to ensure that every student who comes to the front door of UNSW – be it online or in person – and who thinks 'I might like to do research here' – gets everything they need to make an informed decision. Part of our brief is to provide a well-marked road map to services and information for new research students."

Why should a prospective research student consider coming to UNSW, and not another university?

"First, there's a critical mass of students, which is a major advantage," Professor Harding said. "Graduate research students who come here get to network and collaborate with a rich, diverse, talented group of researchers. Second, they will come to an environment that offers well-equipped laboratories and infrastructure.

"Third, they get the opportunity to work with stellar researchers: UNSW boasts some of the cream of Australian and global scholarly talent, and that's a terrific environment for a new researcher.

"When I ask graduate research students why they came here, the number one answer I get is that they were attracted to an academic supervisor and their research. That's a great natural asset that we have and one that I want to build on."

How has news of the Graduate Research School been received by the faculties, staff and students?

"We've had a fantastic welcome," Professor Harding said. "Communication of the roles and function of the Graduate Research School across the University community has been my number one priority.

"I have enjoyed immensely the opportunity to meet and interact with postgraduate co-ordinators and students in order to identify the key issues where the Graduate Research School and my office can assist. While there are areas in which UNSW will benefit from single, centralised policy, I also recognise that a great strength of this University is the diversity and breadth of research across the ten faculties, and that discipline-specific needs must be recognised.

"My job as Dean is to ensure that every research student who graduates from UNSW has been provided with the research environment required to excel in their discipline and that in the course of their studies, they have experienced University life and culture and acquired a breadth of skills to equip them for their future careers."

One thing's for sure: with Margaret Harding on board, no organisational stone will go unturned in that endeavour. ■

The UNSW Graduate Research School is online at www.grs.unsw.edu.au.

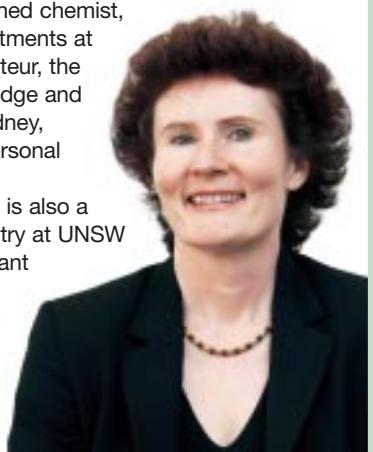
She's got chemistry: Margaret Harding

"Graduate research students are the future lifeblood of the University's research reputation and the Graduate Research School has been established to support and assist them," Professor Harding said of her new role as Dean of Graduate Research at UNSW.

Professor Harding, who took up her appointment as Dean of Graduate Research in July, holds PhD and DSc degrees and brings a wealth of research and management talent to the newly created role.

She was formerly Associate Dean for Postgraduate Research of the University of Sydney's Science Faculty. A distinguished chemist, she has held appointments at Université Louis Pasteur, the University of Cambridge and the University of Sydney, where she held a Personal Chair in Chemistry.

Professor Harding is also a Professor of Chemistry at UNSW and brings a significant research group and grants with her that will enhance chemistry research at UNSW. ■



The manager: Barbara Chmielewski

"Establishing the Graduate Research School is a real opportunity to create something from the ground up – quite a rare opportunity in an administrative career in higher education," said Barbara Chmielewski, manager of the Graduate Research School. "In that respect, it is also a very exciting challenge."

Ms Chmielewski brings a wealth of administrative and management experience to the Graduate Research School from a long and varied career in higher education administration at Sydney College of the Arts, the University of Technology, Sydney and the University of Sydney.

Ms Chmielewski's most recent experience in faculty and international management in particular are important assets in developing the new administrative structures of the Graduate Research School.

Appointed to the role of manager in August, Ms Chmielewski believes that the Graduate Research School has a mandate from the University to streamline, centralise and consolidate research student administration across the University. ■



Disability and discrimination: the centre link

By Alex Clark

UNSW's Social Policy Research Centre (SPRC) released two major studies last month, both commissioned by the Commonwealth Department of Family and Community Services.

Disability and workplace discrimination

Australian workplaces continue to be discriminatory and inflexible environments for people with disabilities, according to a study of new recipients of the Disability Support Pension (DSP).

"While most participants want to work, few workplaces are willing to provide the flexibility they require," said Dr Alan Morris of the School of Social Science and Policy and lead author of the first study. "DSP recipients also report being discriminated against by employers and being constantly denied opportunities. The chance of a DSP claimant finding employment is very low."

The study also examined social and community participation and found that many participants were socially isolated. They generally didn't have the finances to socialise or engage with the community. The sense of being stigmatised was also important, especially for younger people.

"Several participants said they avoided community activity because of this perception. Not being socially involved further undermined their self-esteem and sense of identity," Dr Morris said. "Older participants in the study were more likely to be involved in the community, and volunteer work gave participants a sense of purpose and provided a space for social interaction."

Many participants felt that the information they received from Centrelink was not helpful and very few had been offered counselling when they went on the DSP.

Researchers conducted six focus groups to examine DSP recipients' motivation and experiences of work, education and social participation, barriers to participation and perceptions of the support offered. The groups involved men and women, in age groups from 16 to 24 up to 55 to 64, with a range of physical and psychological disabilities.

Penalties cause hardship, debt, homelessness and risky behaviour

Penalties (known as 'breaches') imposed on income support recipients for not meeting Centrelink requirements can cause homelessness, increase risk-taking behaviour such as drug and alcohol use, and impede future compliance, according to the second SPRC report.

A national telephone survey of more than a thousand unemployed people who were breached in late 2002 was conducted as well as in-depth, qualitative interviews and a national survey of almost a hundred welfare agencies dealing with unemployed people.

Chief investigator and senior research fellow at UNSW, Dr Tony Eardley, believes the situation could be worse than the research indicates. "Contacting people by phone means we inevitably missed out on hearing the stories of some of the most disadvantaged people, such as those who were homeless at the time, so it's possible our study underestimated the worst impacts," he said. "Even so, it's clear that many people who get breached have a very hard time without it necessarily improving their capacity to look for work effectively."

In response to an open-ended question about the impact of the most recent breach, fewer than seven percent of people surveyed reported increased participation in job search or work. When prompted, most respondents reported looking harder for work or otherwise attempting to comply with the rules, but many said breaching made this more difficult. Welfare agencies also felt penalties did not assist their clients to comply with income support obligations.

"Interestingly, four in five respondents felt it was fair for Centrelink to breach people who were not 'doing the right thing,'" Dr Eardley said. "However, two-thirds of the respondents still felt the level of penalties were too harsh and that Centrelink didn't take people's circumstances properly into account."

Other key findings found that the groups more likely to be penalised were the unemployed under-25-year-olds and Indigenous respondents. Various hardships were also directly attributable to the imposition of breaches: up to one in every five recipients either lost their accommodation or had to move to cheaper housing; 17 percent reported having to cut down on medication they needed; and 13 percent increased potentially harmful behaviours such as drinking and drug use.

Commenting on the new system of payment suspensions foreshadowed in the 2005 Budget, Dr Eardley said, "restoring payments once compliance is resumed will help those that can convince Centrelink that their reason for not complying was acceptable, but a system which retains a heavy loss of payments for some infringements is still likely to cause hardship. Our research suggests that it's often the most disadvantaged people that lose out most." ■



“Businesses that have a strong set of ethics survive”:

**John Doumani,
Executive-in-Residence**

By Susi Hamilton

Ethics, corporate accountability and making a contribution are key motivators for John Doumani, the new executive-in-residence at the Faculty of Commerce & Economics.

“There’s this perception that people in business are all like JR Ewing [from the TV series Dallas], that we’re all out to make a dollar at any cost,” said Mr Doumani, who is the past president of Campbell’s International. “But it isn’t like that. Strong ethics guide most business people.

“Businesses that have a strong set of ethics survive; those that are cut-throat don’t last.”

In his new role in the faculty, these passions are combined. He hopes to give back to the University where he studied and to develop stronger links between the faculty and industry.

“I believe that a university degree provides terrific technical training in a formal sense,” Mr Doumani said. “If that can be enhanced by adding a level of practical experience, I think that’s a huge advantage to the students and a huge service to industry.”

The faculty has already made great strides in this area through outstanding initiatives like the Co-op Scholarship program and the Meet the CEO series. He hopes to help build on that by bringing his own practical experiences and perspectives into the faculty, as well as by enlisting support from a range of industry colleagues and contacts.

Asked about the key to success in business and he responds with passion. “You need a collaborative business environment, based on an open culture with no hidden agendas. Those are the organisations that are able to move faster and smarter than any other company.”

He is keen to share this perspective with students.

“The point of entry is having the technical skills,” Mr Doumani said. “But what makes people powerful in terms of getting things done is

their ability to work with others.”

This philosophy has taken him through his career in the consumer goods industry, including positions with multinationals such as Unilever Australasia, Johnson & Johnson and Campbell’s. Lately, he has used the same approach with the non-profit sector.

He is one of the founders of Corporate Countdown, a philanthropic organisation that has raised \$750,000 from three annual events to date.

“We have had some well-known performers play alongside some leaders in business,” he said. “We’ve also unleashed some great musical

You need a collaborative business environment, based on an open culture with no hidden agendas. Those are the organisations that are able to move faster and smarter than any other company

talent. I’m in a rock band now and we have provided a spark for others, like another alumnus David Lowy from Westfield, to strut their stuff in a more serious way.”

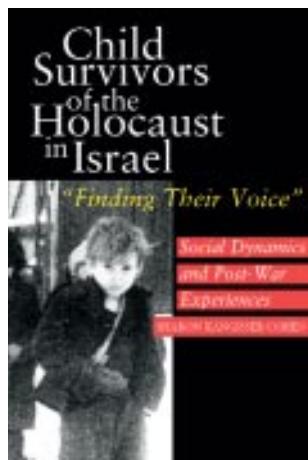
Mr Doumani is also looking at ways in which the Faculty of Commerce & Economics can develop links with the community and with non-profit organisations.

“There is such great intellectual capacity in the faculty,” he said. “It would be great to share that around a little. Philanthropic organisations run on such a tight budget, so perhaps we could help build their capabilities in terms of business planning and marketing, for instance.”

“At the same time, this will offer great practical experience to our students. It will be a real win-win.” ■

Hidden stories of the Holocaust

By Alex Clark



Born in France in 1939, Noah was separated from his Jewish migrant parents at age three. His parents were deported to Auschwitz and murdered. Between 1942 and 1950 he and his sister hid with a French family in the countryside. They took refuge in pigsties and holes underground for days on end. Finally, in 1953, Noah moved to Israel where his uncle lived and began the process of rebuilding his life.

Noah is one of thousands of children who survived the Holocaust now living in Israel. Dr Sharon Kangisser-Cohen of the School of History has collected 25 personal stories, including Noah's,

for her new book *Child Survivors of the Holocaust in Israel*.

A lecturer in the Jewish Studies program, Dr Kangisser-Cohen wanted to give a voice to this group of survivors who she saw as experiencing the Holocaust in a distinctly different way from adults.

"I wanted to understand how these survivors rebuilt their lives after the trauma particularly in the post-war environment," Dr Kangisser-Cohen said. "Most of the case studies in the book were orphans. Often the hardest part of retelling their experience was when they talked about the moment they were separated from or lost their parents."

Often the hardest part of retelling their experience was when they talked about the moment they were separated from or lost their parents

"Many childhood survivors hid during the war to survive but, because they were not in camps, they didn't feel as though they had a story to tell or that their experience was valid. Since the war, most had focused on finding a sense of belonging that left the past behind."

Dr Kangisser-Cohen says interviewing each of the survivors was a privilege. She grouped the stories into four categories. The first is comprised of those who had been in camps and felt very much at the centre of the Holocaust and therefore felt they had a story to tell. The second are those who had hidden through the war and had never spoken of their experience, as they felt it was invalid, but were now eager to integrate their pre-war and war experience into their own histories. The third were those who had never spoken of their experience and still didn't want to; they didn't want to be identified as Holocaust survivors as they believed the image of Holocaust survivors was so troubling. The final group were survivors who initially didn't tell their stories, then began to speak but have subsequently recoiled because it was too difficult to relive the trauma.

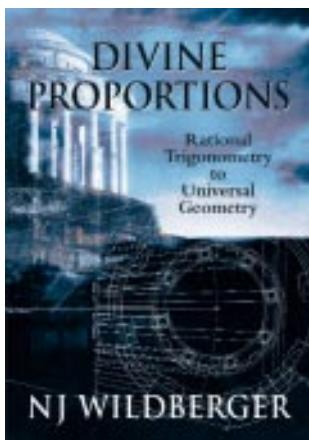
Until now there have been few books exploring the memory of child survivors and their interpretation of their experience. "I wanted to explain how, even though a person looks fine from the outside, many are still working through the incredible trauma of their experiences today."

Child Survivors of the Holocaust in Israel was based on Dr Kangisser-Cohen's doctorate. She has now begun a study comparing child survivors in Israel and Australia. ■

Child Survivors of the Holocaust in Israel is published by Sussex Academic Press and is available at the UNSW Bookshop.

Rewriting the mathematical rules

By Dan Gaffney



Two thousand years after trigonometry's genesis, a UNSW mathematician has delivered this verdict: classical trigonometry's conceptual framework is wrong and should be consigned to the dustbin of history. Associate Professor Norman Wildberger, author of a new book titled *Divine Proportions: Rational Trigonometry to Universal Geometry*, has produced a revolutionary framework likely to cause controversy in academe and celebration among students.

Professor Wildberger, of the School of Mathematics, has argued that classical trigonometry makes

the subject unnecessarily complex and leads to inaccurate solutions. He stumbled on the idea of a new framework for trigonometry four years ago while he was researching relativistic geometry.

"I had several small Eureka moments, no single big one," said Professor Wildberger, who came to UNSW 15 years ago following appointments at Stanford University in the United States and the University of Toronto in his native Canada.

"It gradually dawned that I'd discovered a new way of thinking about elementary trigonometry. The penny dropped slowly but when it did, I knew it would change things. At first it seemed almost too good to be true – as if the tools I was working with were too soft and simple – but as I tackled more complex problems I realised that this new methodology worked. Rational trigonometry cleanly separates circular motion and geometry."

Based on work of the ancient Babylonians and Greeks and introduced by the astronomers Hipparchus and Ptolemy, trigonometry's essential role is to explain the relationships between the sides and vertices of a triangle. Today it is used in fields as diverse as acoustics, medical imaging, navigation, engineering, industrial design and surveying.

Countless generations of scholars and learners have accepted the assumptions that distance is the best way to measure the separation of two points and that angle is the best way to measure the separation of two lines. Professor Wildberger doesn't agree.

He says that mathematicians, being a conservative mob, have been content to build upon trigonometry's classical foundations rather than question them. Distance and angle seem simple enough, so the idea of replacing them hasn't come up.

Written for scholars and the mathematically inclined, *Divine Proportions* recasts trigonometry's arcane rules and removes the transcendental trigonometric functions – sines, cosines, tangents and their inverse functions – from the trigonometric toolkit.

Instead, Professor Wildberger has brought geometry's essential quadratic nature to the fore. He has supplanted the quasi-linear notions of angles and distance with new concepts called 'spread' and 'quadrance' so that trigonometric problems can be solved with straightforward algebra and arithmetic. As a consequence, calculations can be done without trigonometric tables or calculators, often with greater accuracy.

Professor Wildberger's provocative new ideas represent a Kuhnian paradigm shift in the fields of trigonometry and Euclidean geometry. Whether they are the stuff of scientific revolution remains to be seen. ■

Divine Proportions: Rational Trigonometry to Universal Geometry published by Wild Egg Pty Ltd is available online: <http://wildeg.com/>.

A tangle of success: *Superstudio 05*

By Sarah Wilson



A low-lying Sydney skyscape of tangled buildings, layered and overlapping each other, captured the attention of judges in the recent *Superstudio 05* to win first prize in the collaborative design competition.

Students from the Faculty of the Built Environment, the Faculty of Engineering and the College of Fine Arts took part in the competition involving four NSW universities.

Organised by a team of UNSW students, *Superstudio 05* included students from the University of Sydney, the University of Technology, Sydney, the University of Newcastle and UNSW working together in multidisciplinary groups over one intensive weekend in a studio environment to create a design for East Darling Harbour. The design brief was simply "Sydney: Local? Global? (X)?" – and required students to think outside the square to form their own visions for this site.

"Superstudio provided an opportunity for a mix of students in different years studying in the fields of the built environment, engineering and the fine arts to work together in a studio-like environment," said Natalie Bevan, a member of the *Superstudio 05* organising committee, and third-year UNSW Architecture student.

Thirty-two teams of four students participated in the *Superstudio 2005 Weekend* in September. "Superstudio provided a great environment for collaboration," Natalie said. "Industry and academic mentors were also on hand to help."

The *Superstudio* final exhibition and awards night was held in October at Pier 2/3 in Walsh Bay. Six finalist teams had been selected from the *Superstudio* weekend to be given the opportunity to develop and finetune their work and present it to a judging panel at this grand finale event.

The winning entry, entitled *tangle*, impressed the judges with its horizontal mix of interconnected buildings. The winning team members were Ricky Wai Kuen Suen, Raymond Siu Hin Ng and Michael Young Chan Chong from UNSW and Vicky Hui Ling Chang from the University of Newcastle.

"We conceptualised Sydney as a series of layers tangled or knotted together," UNSW team member Ricky said. "These layers include commercial, residential, cultural and recreational. Our aim was to connect the strands together, or 're-tangle' them."

"*Superstudio* was a very exciting experience and I learnt a lot through the collaborative nature of it."

The judging panel included academics from UTS, the University of Sydney and UNSW, including the recently appointed Professor of Multidisciplinary Design, Richard Hough. ■

Plug in to new media performance

By Alex Clark

An international symposium examining the cross-disciplinary and multidisciplinary investigations of issues around media and technology-based performance is being held at the University next month called *e-Performance and Plug-ins: A Mediatized Performance Conference*.

Organised by the School of Media, Film and Theatre, the conference will be held on 1 and 2 December and will explore the diversity of artistic and theoretical approaches to media-based performances.

"Contributors will present papers both in person and through live video from around the world to reflect the hybrid nature of new media performance being discussed," said Dr Yuji Sone, conference

co-ordinator. "The conference has attracted internationally recognised artists such as Stelarc and Johannes Birringer, key theorists, critics, and academics in the area of electronically mediated performance, such as Philip Auslander and Michael Rush."

The conference will also include a performance evening on 1 December including work by local artists Hellen Sky and Unreasonable Adults (Julie Vulcan and Jason Sweeney) and international artists Russell Richards and Michaela Reiser.

For more information on *e-Performance and Plug-ins* see <http://media.arts.unsw.edu.au/eperformance/> ■

Right: Stills from title animation by Marshall White



By David Gonski, AO Chancellor

Council met on 26 September 2005. Following the meeting, Council met with members of the University community for refreshments.

AUQA Panel visit

The Pro-Vice-Chancellor (Education and Quality Improvement) briefed Council on the AUQA Panel Visit to commence 17 October 2005. The Panel will meet with the current and previous Chancellor and selected Council members, including student members and the chairs of Council Committees.

Paid Outside Work policy

Council approved the revised policy on Paid Outside Work (subject to minor amendments). The policy, which has been the subject of extensive consultation in the academic community, will be implemented on 1 January 2006. An Implementation Working Group chaired by the Deputy Vice-Chancellor (Academic) has been established, and the Vice-Chancellor will provide progress reports to Council on implementation.

UNSW Asia update

The Deputy Vice-Chancellor (International and Development) reported on research funding opportunities for UNSW Asia, noting that all avenues of research funding

in Singapore would be open to UNSW Asia on a competitive basis. Council approved a suite of masters programs to be offered at UNSW Asia, and noted that the structure of masters programs at Kensington had been reviewed as a result.

Childcare services update

Council noted that the Vice-Chancellor had promised additional funding to childcare, and that the childcare strategy would be completed by the end of the year.

Temporary Protection Visa Scholarship Program

Council approved the extension of the TPV Scholarship Program for 2006 entry, while the Commonwealth revises the TPV legislation.

Update on Gender Equity Project

Council received an update on the project, introduced in 2002 to further initiatives to address the under-representation of female academics at UNSW. Council noted that there had been a greater than 20 percent increase in the number of women achieving promotion to Associate Professor in the 2005 round of promotions.

Report on distribution to faculties of ISFEE and LFEE income

Council received a report on the

distribution to faculties of international fee paying and local fee paying student income, noting that the report could be made available within faculties, and that every faculty would be expected to identify distribution of the budget within the faculty.

Commercial activities

Council approved UNSW's involvement in the Sydney Harbour Institute of Marine Science Ltd, a marine research facility at Chowder Bay, in partnership with Macquarie University, the University of Technology, Sydney, and the University of Sydney. Council also approved amendments to the UNSW Guidelines for Commercial Activities, noting that additional exemptions and revised guidelines would be brought to a future meeting.

Council minutes

Council minutes and other information can be accessed by all members of the University via the Secretariat Services website (www.secretariat.unsw.edu.au).

For further information on matters relating to Council or its Committees, please contact Victoria Eyles, v.eyles@unsw.edu.au, 9385 3068 or Helen Parks, h.parks@unsw.edu.au, 9385 3072.

The Chancellor is the chair of Council.

Report of 4 October 2005

The Academic Board's 'hot topic' discussion was the Course Experience Questionnaire. Issues considered included the improved response rate; promotion and awareness; the phrasing of questions; online delivery; the practice at other universities; the analysis of the CEQ data; administering the CEQ and GCCA; validation checks; the substantial improvement in most of the indicators; timing issues and the future direction. Members were invited to submit their comments and suggestions to the Deputy Vice-Chancellor (Academic).

The Board also discussed the draft model for Postgraduate Coursework Program Nomenclature and Structure, which is currently being developed by the Postgraduate Coursework Committee, to ensure consistency in the naming and credit value of postgraduate coursework programs. Members identified issues for further consideration, and it is anticipated the final model would be submitted to the November meeting of the Board.

We recommended that Council approve the introduction of new combined Masters programs at UNSW@ADFA; the Master of Health Informatics and Master of Health Informatics (Extension); the Graduate Certificate in Spatial Information; the Graduate Certificate in Statistics; the new first-year program structure for the Bachelor of Engineering; the revised Bachelor of Engineering programs and the renaming of the Graduate Diploma in Remote Sensing to Graduate Diploma in Spatial Information.

The Academic Board approved the 2006 schedule of meeting dates; the revised Graduate Diploma in Remote Sensing; Master of Science and Technology in Spatial Information; Master of Art; Bachelor of Science Bachelor of Education; Bachelor of Digital Media, Bachelor of Fine Arts; the revised majors in Asia Studies, Global Studies, Theatre & Performance Studies; new majors in Interpreting and Translating; Media; Performance & Education; Applied Ethics; Development Studies; Media; Culture & Technology; Aboriginal Studies and Asian

Studies; and noted the report of Student Academic Misconduct Cases for Session 1, 2005, and the revised Academic Promotion Policy and Procedures.

Members noted the election result for the Faculty Presiding Members 2006–2007. The elected members are Associate Professor Stephen Fortescue (FASS); Mr Peter Murray (FBE); Ms Carol Longbottom (CoFA); Dr David Clements (Engineering); Ms Lesley Hitchens (Law); Associate Professor Deborah Black (Medicine) and Dr David Cohen (Science). The election for the Presiding Member for ADFA was still underway and a further call for nominations from the Faculties of Commerce & Economics and the AGSM would be conducted in due course.

If there are issues you would like me or Academic Board or its Committees to consider, or if you would like to attend a meeting, please let me know via a.dooley@unsw.edu.au or 9385 2393.

Tony Dooley
President, Academic Board



Alex Clark

Dr Soon Ng Administrative Officer, School of Philosophy

Having done ten years of tertiary study and gone through three distinctive education systems, in Singapore, the United States and Australia, I guess it was only natural that I've ended up working in the education industry. My current appointment is administrative officer in the School of Philosophy. I also teach on a casual basis for the school, as well as for the Department of Philosophy at the University of Sydney. My areas of specialisation are in Greek philosophy, especially the philosophies of Plato and Aristotle, moral philosophy and critical thinking.

Being both an academic and a general staff member definitely has its advantages. Not only am I knowledgeable of the various student administrative and admission procedures and processes, I am also knowledgeable of the academic programs and courses (including content) offered by my school. In this respect, I see myself as a multi-tasker.

How did you come to UNSW?

I made my first trip to Sydney in 1994, when I was close to finishing up my MA degree in upstate New York. I was instantly drawn to this beautiful city, and before I knew it, I was back in the summer of '95 to commence my PhD studies at the University of Sydney. Upon graduating, my first full-time job was with UNSW.

What do you like most about your job?

Meeting and working with people from diverse

cultural backgrounds. It's like working for the United Nations but with an educational focus.

What are you reading?

I started reading Dan Brown's *Angels and Demons* while on holidays in Italy last April. It was highly recommended by my Italian tour guide who was an expert in Renaissance art. I'm reading *Deception Point* at the moment. It's light reading – definitely much easier than the classical Greek texts of Plato I read in my postgraduate days.

You're inviting famous philosophers to dinner. Who is on your guest list?

You wouldn't want too many philosophers under one roof; the neighbours might talk. I would invite David Hume for his good taste in food and philosophy as well; Descartes, because I like his *Evil Demon*; Confucius, just to humanise the whole evening and to provide a fusion between East and West; Peter Singer, for his liberal ethical views. It would be interesting to see how the other philosophers react to Singer's views. And finally, Socrates – definitely a must when your guests are reluctant to call it a night. (Note to self: remember to keep a bottle of hemlock handy.)

What does philosophy mean to you? Why is it important?

A difficult question – no doubt one that is often asked at Courses and Careers Day. To me, philosophy is a path or a way of life that

transcends a person from being an ignoramus to a well-reasoned and principled being. It's a big ask for a lot of people but think of what the world would be like without ignorance and prejudice.

What do you mean by ethics? Can ethics be taught?

Another difficult question. It's almost like asking whether man, by nature, is good. Ethics, to me, spells out exactly how one should behave in everyday contexts: it encompasses tolerance, sensitivity, objectiveness and rationality.

Having been brought up in the Chinese tradition where moral training plays an important role in one's upbringing, especially through Chinese fables and parables, I would have to say that ethics is teachable. Otherwise, the world would be in a much sorrier state than it is right now.

What would you have done in another life?

Haven't really thought of the question before. A space explorer perhaps. I guess there's a lot more to see out there. After all, space is infinite. Or is it? Zeno's Paradoxes.

What can't you do?

Many things: swim (which is a shame in Sydney), play the piano and cook, to name a few. But I am told I make good reservations.

The ideal start to a holiday...

... is sipping champagne in First Class. ■

On the pathway to an Australian Nobel Prize: the *Helicobacter pylori* story

By Adrian Lee

Australian science received a great boost with the award of the Nobel Prize in Physiology or Medicine 2005 to Robin Warren and Barry Marshall for their discovery of the bacterium *Helicobacter pylori* and its role in gastritis and peptic ulcer disease.

In brief, pathologist Warren looked down his microscope in 1979 at a section of a stomach biopsy and saw what he thought were bacteria. He now noted these organisms in specimens from many other patients, always apparently associated with gastritis or inflammation of the stomach lining. In 1981, he showed the bacteria to a young intern, Barry Marshall. A study was carried out on 100 patients and the association with gastritis was proven. The bacterium was first grown in 1982.

Barry Marshall concluded that the micro-organism, later named *Helicobacter pylori*, was probably the major cause of nearly all duodenal ulcers, caused the majority of gastric ulcers and was likely to be responsible for gastric cancer, one of the major malignancies. These hypotheses all turned out to be correct. Yet it took ten to twelve years before there was acceptance of the concept of ulcers being an infectious disease, a discovery that has resulted in a paradigm shift in the treatment of gastrointestinal disease. This was why the pair was awarded their richly deserved Nobel Prize last month.

The story that has not been much explored is why recognition took so long and what happened in the 26 years since that first microscopic observation.

It took ten to twelve years before there was acceptance of the concept of ulcers being an infectious disease, a discovery that has resulted in a paradigm shift in the treatment of gastrointestinal disease

When Marshall first faced the gastroenterologists to expound his hypothesis, the physiology of ulcers was well established. The stomach was full of acid to aid in the breakdown of foodstuffs and to protect the stomach from ingested pathogenic bacteria. The dogma drummed into all medical students was: NO ACID NO ULCER! This became the basis of very successful ulcer treatments that gave rapid pain relief and the ulcers healed. Indeed, Sir James Black was awarded the Nobel Prize in 1988 for the development of cimetidine and the introduction of a new principle in the treatment of peptic ulcer.

The acid dogma was so firmly entrenched that the gastroenterologists simply did not believe that a micro-organism could be any part of the ulcer process. Then came the evidence they could not explain away. In a paper in 1993* it was shown that a combination of an antacid and two antimicrobials cured the *H. pylori* infection; ulcers healed and did not recur. One year later, only one out of 46 patients (2%) who had had the infection cured suffered recurrence of their duodenal ulcer, compared to 45 out of 53 patients who still had the *H. pylori* infection (85%). In other words, antimicrobials had cured the ulcers. This and other trials finally resulted in a consensus conference of the US National Institutes of Health (NIH) in 1994 that concluded "ulcer patients with *H. pylori* infections require treatment with antimicrobial agents in addition to antisecretory drugs, whether on first presentation with the illness or a recurrence". This high-level advice to medical practitioners still took a depressing time to take effect. Before the NIH conference only 6.5% of US medical practitioners were treating duodenal ulcers. Two years later it had risen to 10%!

Microbiologists were much more impressed by Marshall and Warren's discovery. As microbiologists, we did not have dogma to overcome, we knew nothing about stomachs as we thought the acid environment would not allow bacteria to live there – and yet here was irrefutable



Looking for *Helicobacter pylori*: Adrian Lee and Barry Marshall with the UNSW *Helicobacter* team in the then-School of Microbiology and Immunology, 1993.

evidence that they could. We became instantly interested and many switched research interest to this new organism and later became major players in the field.

The discovery by Warren and Marshall, that ulcers were due to infection, posed a major challenge to the pharmaceutical industry and there is no doubt that acceptance of antimicrobial therapy for ulcers was slowed by a reluctance of companies to include the hypothesis in their educational activities. To put this in perspective, it has to be appreciated that at the time the anti-ulcer therapies were the highest grossing products on the market, making millions of dollars annually. Ten percent of the population could expect to suffer from ulcer disease in their lifetime. The antisecretory drugs caused instant and complete symptom relief for ulcer patients, acid secretion was stopped quickly and thus the ulcers would rapidly heal. Many patients were put on maintenance therapy for life. This continuing usage contributed greatly to company profits.

These profits were jeopardised by the discovery of *H. pylori*. Ulcers could now be cured by a two- to four-week course of therapy. The ulcers did not come back and maintenance therapy was not needed. Until the evidence became overwhelming, it was not in a salesman's best interest to promote the new discovery.

Marshall and Warren's discovery started off a remarkable twenty years of biomedical research. Many gastroenterologists, microbiologists, immunologists and epidemiologists were not only convinced of the importance of the discovery but also fascinated to learn about a completely new organism inhabiting a very unlikely location. More than 20,000 scientific papers have been published with the name CLO or *Helicobacter* in the title since 1982.

Marshall has edited a book entitled *Helicobacter Pioneers* which invited those who nearly got there to tell their stories as well as giving Warren's and his own. This engaging book should be read by everyone starting out on a career in medicine or the biomedical sciences as it highlights the importance of keeping an open mind, being prepared to challenge orthodoxy and to persevere in the face of significant opposition. These are the traits that allowed Robin Warren and Barry Marshall to walk the complete journey from discovery in 1979 to the Nobel Award ceremony in Stockholm next month. ■

*Hentschel E et al in *N Engl J Med* 1993; 328:308-312.

Adrian Lee is Professor of Microbiology and Pro-Vice-Chancellor (Education and Quality Improvement). He attended the original 1983 conference and has worked on *H. pylori* ever since. Adrian and Nerissa Lee will be Barry Marshall's guests next month in Stockholm at the Nobel ceremony and banquet.

Information about the Helicobacter Foundation is at www.helico.com/. This article is an abridged version of a piece which first appeared last month in the *Australian Financial Review*.