THE UNIVERSITY OF MELBOURNE

CHIRON

Autumn 2007

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INSIDE BACK COVER
FROM OUR COLLECTION...

FRONT COVER
Above A senior woman from a village in the tribal area of Maharashtra shows Australian students how she trains women in traditional medicines using this display.

Below Farmers from Ghoregaon village near Jamkhed demonstrated participatory appraisal techniques to Jamkhed students.

INSIDE COVER
Mendhi (decorative henna) designs on the hands of Jamkhed participants.

BACK COVER
Above Senior village health worker Yamunabai (on left) and Jamkhed training coordinator Shaila, teach students about village health care practices.

Below Women's self help groups in Bhandadara (a tribal working area of Jamkhed) gather to share with the AIHI students what the self help programs have meant to them.

Photo Alison and Chris Morgan

In a time of many changes at the University of Melbourne, Chiron will now be published bi-annually by the Faculty of Medicine, Dentistry and Health Sciences.
It is circulated to alumni, students and staff of the School of Medicine. The views and opinions expressed in this magazine are those of the authors and not of the University of Melbourne Medical School.

The editors are Liz Brentnall, Linda Richardson, Jenny Conn and Janet McCalman.

The University of Melbourne does not accept responsibility for the accuracy of information contained in this magazine.

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FROM THE DEAN

TEN THOUSAND DIFFICULTIES DO NOT MAKE ONE DOUBT!

Cardinal John Henry Newman, Oxford 1801-1890

In 2005 the University of Melbourne made a major decision to develop a blueprint for the next ten years under the banner of 'Growing Esteem'. This strategy called for a triple helix model, integrating the three strands of the university's activities: research, teaching and learning, and knowledge transfer. The blueprint will be underwritten by a new approach and fundraising (advancement) to increase scholarship support for students.

James Angus

Within the teaching and learning strand, the university has created the 'Melbourne Model'. This model is based on the European 'Bologna Model' (three years undergraduate, two years masters, three years PhD). For the first part, the Melbourne Model is to have six new generation undergraduate degrees with subjects offering depth and breadth for school leavers. These degrees would allow students to savour various subjects before being committed to a professional course or research track culminating in a PhD and, as such, offer an outstanding campus experience.

In the medical school, we had a dilemma. Our current MBBS curriculum, developed under the leadership of Professors Gordon Clunie and Richard Larkins, is dual track: a six year course for school leavers incorporating one year of advanced medical science and leading to a BMedSci and MBBS upon graduation and, for graduates entering the course (30%), a four-and-a-half year course overlapping and taught alongside the school leavers. This dual entry MBBS course is unique in Australia and has been brilliantly successful. It also has two particularly attractive elements: later entry for mature students, and a chance for all school leavers to develop their research skills in the AMS year.

The dilemma for our faculty in implementing the Melbourne Model was whether we should proceed on a 'steady as she goes' path with the dual entry, partly fulfilling the model but with a transition to 66% graduate entry and 33% school leavers; or whether we should grasp the opportunity of the Melbourne model, be bold, and develop a differentiated, truly postgraduate course for our professional degrees–the first university to do so in Australia. To remain steady state, the faculty would be out of step with the rest of the university and, importantly, sidestep the issue of how our professional courses would connect with the new generation science-based degrees.

Early this year, we reached a clear position. If we are to offer truly superior graduate professional courses, they have to be delivered at a doctoral level by coursework. In the Australian standard, this means a course component of 'advancing knowledge'. Thus, each professional doctorate will offer a unique research based element (minor thesis) and advanced coursework. For medicine we will offer a four year doctorate titled Doctor of Medicine, or similar.

A graduate entering any of these doctorate degrees will need a substantial knowledge of biomedical science subjects, as there will not be capacity to teach these enabling, foundation subjects in the doctorates, devoted mainly as they will be to evidence based medicine in clinical subjects and supplemented by research. In realising this, the university has accepted that the 'preferred' pathway into the professional health courses will be a Bachelor of Biomedicine. The Bachelor of Science will also offer a pathway for students who take biomedical subjects. Students from outside the university and international students will need to satisfy prerequisites in bioscience subjects.

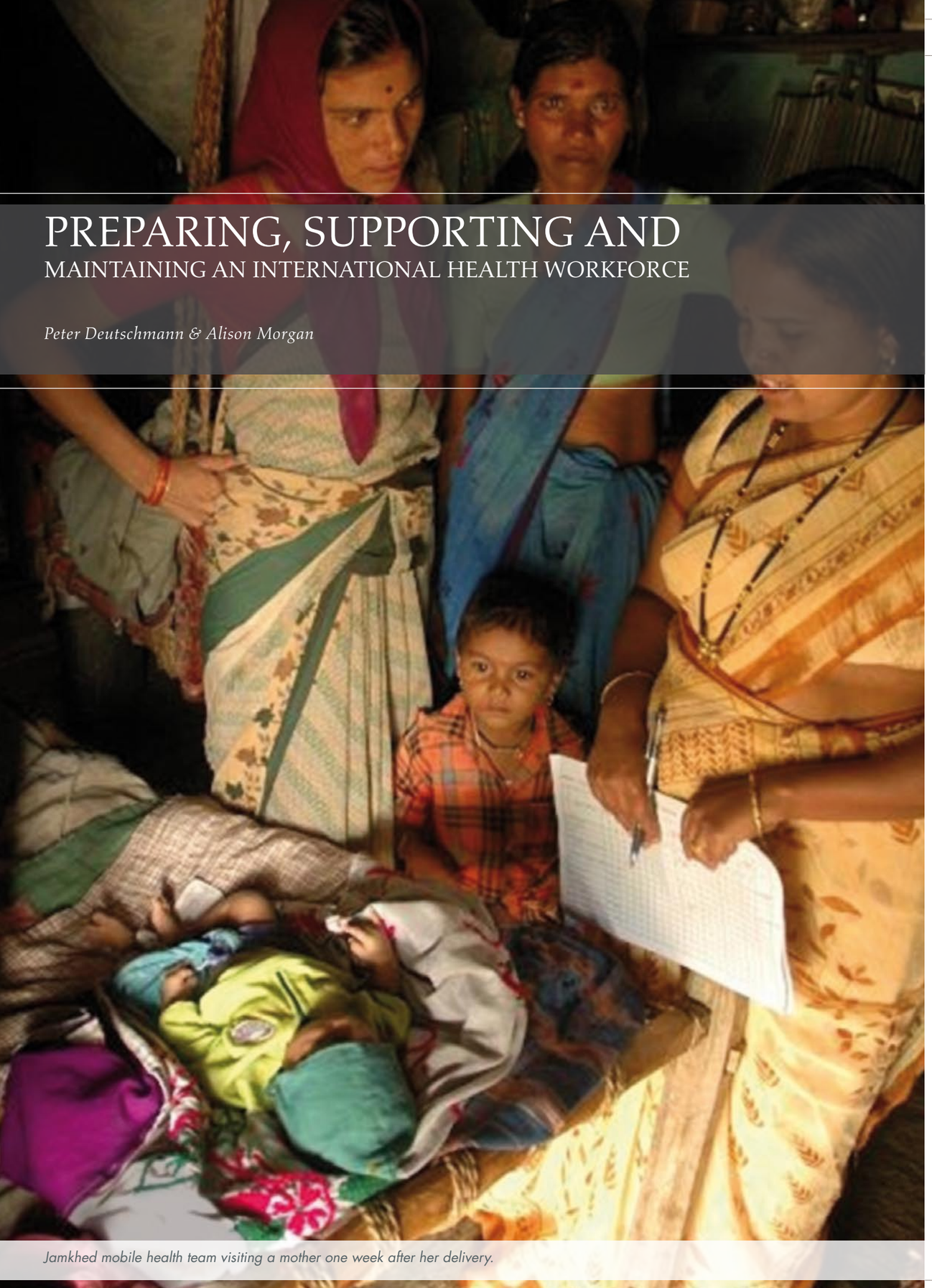
There is still much to be determined. We are consulting closely with colleges, hospitals, medical research institutes, health professionals, and accreditation and community health bodies. There needs to be careful course design that satisfies the doctorate standing and its articulation into pre-vocational and specialist training programs, and we are working collaboratively with the medical colleges towards this outcome.

Our faculty distinguishes itself in Australia by its research excellence and its affiliation with leading hospitals, such as the Royal Melbourne, Women's and Children's hospitals and St Vincent's and Austin hospitals, with a large number of medical research institutes, as well as a range of community health facilities. It is significant that of all the students undertaking PhD work in medical research institutes across Australia, the largest number (60%) are studying through the University of Melbourne. By ensuring integrated research experience and advanced clinical experience, these new doctorate level professional entry courses will be designed to provide the community with the academic and clinical leaders and specialists of the future. This plan, I believe, can be achieved to further enhance our reputation and deliver graduates with attributes that do justice to our motto 'to grow in the esteem of future generations'.

James A Angus, Dean, Faculty of Medicine, Dentistry and Health Sciences

PREPARING, SUPPORTING AND
MAINTAINING AN INTERNATIONAL HEALTH WORKFORCE

Peter Deutschmann & Alison Morgan

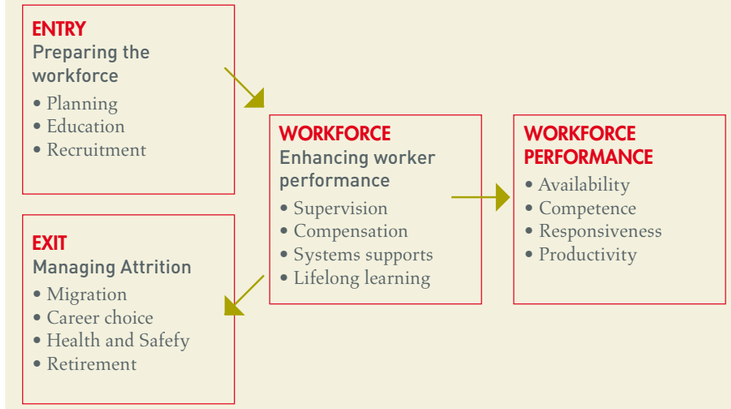


Jamkhed mobile health team visiting a mother one week after her delivery.

Media reports highlight the growing medical workforce shortages that restrict access to health services for many in Australia, especially those living outside our main cities. The situation is also of significant concern globally, and in 2006 WHO focused its annual World Health Report on challenges to the worldwide health workforce. With an estimated global shortfall of 4.3 million health workers and a distribution of existing health workers in inverse proportions to the global burden of disease, the challenges involved in addressing the problem are complex.

WHO has identified strategies to address three domains: health workforce entry (e.g. pre-service training); workforce support (e.g. supportive supervision and ongoing learning); and the management of workforce attrition (see diagram below). The University of Melbourne, through the Australian International Health Institute (AIHI), has been working in each of the three domains to improve health workforce capacity. The new Nossal Institute of Global Health has the potential to increase the university's role in preparing, enhancing and supporting a health workforce.

WORKING LIFESPAN STRATEGIES



PRE-SERVICE TRAINING

TIBET UNIVERSITY MEDICAL COLLEGE

Alison Morgan is the coordinator of education and training at AIHI. She has an ongoing role as the training coordinator in the Tibet Health Support Sector Program and spends four weeks a year assisting in both pre-service and in-service health worker training. Last year she was asked to introduce problem based learning (PBL) into the medical curriculum in the Tibetan University Medical College (TUMC), and given three weeks in which to do it.

Over the last ten years AusAID has been funding improvements to the health system within the Tibet Autonomous Region. The current five year program is committed to strengthening the Regional Health Bureau of Tibet, working on HIV prevention and in primary health care. Although program's emphasis is on in-service capacity building, the request from TUMC provided an opportunity to change the way pre-service training was undertaken.

The doctor training we encountered at TUMC resembled, a little, some of my own training in the late 1970s–a heavy dependence on lectures and a marked divide between pre-clinical and clinical training. Added to this, however, many faculty members were recent graduates and their only teaching resource was a single textbook. Consequently, a day in a student's life consisted of five one-hour lectures: a lecturer reading out of the textbook, while students read their copy and underlined important points. The timetable for students might read 'medicine 10-11am', but have no further information. There were no learning objectives for any of the teaching sessions, no tutorials, no current journals or recent medical texts in the library, and very limited internet access. For the final year, in the hospital, there was no structured learning or clinical schools, and students had no set tasks. A challenging setting.

The ability to effect change on the whole course in such a limited time was minimal so, during the first week, we worked with the faculty to assess the current situation and identify where changes could be made. We changed the goal from introducing PBL to the more achievable goal of developing strategies to support student centred learning. Many of the faculty were deeply suspicious of any change. In one reflection exercise a lecturer stated: 'I will lose respect if I do not know the answer' (so his teaching discouraged any questions), while another stated that 'Tibetan students are not suited to participatory learning'. Focus group discussions with students supported change, however, as they expressed some frustration at the current system.

Constraints included a limited faculty (with respect to both the number of staff and their prior clinical experience) and an inability to alter the textbook, assessments or the hour-long lesson format. Consequently, in the second of

Staff of the TUMC workshopping the curriculum materials. Photo Alison Morgan

the three weeks we focused on working with the faculty to introduce different teaching methods within the one-hour teaching period. These included structured clinical cases, role-plays, more interactive PowerPoint presentations and basing material on local Tibetan clinical scenarios.

In the third week we applied these skills to reworking the paediatric component of the curriculum. Neonatal mortality in Tibet is greater than anywhere in China. Paediatric department lecturers met with senior paediatricians of Lhasa and together they prioritised the child health problems of Tibet. These differ from the rest of China, due in part to the high altitude: while tetanus is not seen, neonatal cardiac disease is more common, and malnutrition and stunting affect many pre-school children. We structured the teaching around these priority areas, wrote specific learning objectives for each session and added student tasks to encourage more learner involvement.

At the end of the week we had produced a handbook for students that included learning objectives for the subject and for each session, important references, and student exercises. For the first time, students had a framework for the paediatric component of the course. Lecturers incorporated the revisions into their teaching methods. As one lecturer said at the end of the revision, 'Lecturing won't be so boring any more'.

IN-SERVICE TRAINING IN HIV PREVENTION

EMMANUEL HOSPITAL ASSOCIATION, INDIA

Peter Deutschmann is executive director of the AIHI. He lived and worked for many years in rural India. His desire to expose other Australian health care workers to ettings that made a profound impact on his life and work are evident in these examples of the work of the institute.

India is home to the greatest number of HIV infected people of any country in the world. The twin epidemics of drug use and HIV infection in the northeastern states of India that border Myanmar present the challenge of preventing HIV whilst dealing with the consequences of addiction and infection. New HIV infections in this setting are intimately associated with illicit drug use and commercial sex work.

Services provided through the formal health system to prevent the spread of infection have limited impact on these epidemics. Those most in need of such services are reluctant to access them because the very activities that promote infection are illegal. Prevention services in these circumstances are therefore best provided by community-based organisations that are trusted by those whose actions place them outside the law and the formal health system. Whilst this may appear an unorthodox approach to a complex set of problems, it has become well accepted by health authorities within the governments of Asia and by international agencies with a mandate to assist, namely WHO and UNAIDS.

Community members entrusted by health authorities need to be equipped to provide sophisticated services. This is normally the province of professionals with a medical education or a public health qualification. Those with such qualifications are best placed to teach and supervise community members who have the best chance of accessing those most at risk of HIV infection.

This response to a major health problem in India, driven primarily by the nature of the epidemic, is indirectly making a considerable contribution to global health workforce needs. The response requires the few formally trained health personnel in this remote and largely neglected region of India to adopt the roles of trainers and enablers to ensure an informal workforce drawn from the community is well taught and prepared.

A project of the AIHI and its major Indian partner organisation, the Emmanuel Hospital Association, has adopted this approach to support the government-led response to the HIV epidemic in two states of northeast India, Nagaland and Manipur. With support from the Gates Foundation, the project funds 25 community-based organisations to develop and provide services, including programs of needle exchange and oral drug substitution therapy for injecting drug users, and the prevention and treatment of sexually transmitted infections among drug users, their partners and sex workers. At the core of this support is a competency-based education and training program that equips community members, many of whom are peer outreach and education workers drawn from the affected communities, as well as the few doctors and nurses available to assist.

SUPPORTING AN AUSTRALIAN CONTRIBUTION TO THE GLOBAL WORKFORCE

JAMKHED, INDIA

A rural and remote village in India provides the setting for a unique orientation to health care and community development for Australian health care professionals and graduate students. The Comprehensive Rural Health Project, established some 30 years ago at Jamkhed by Indian doctors, Raj and Mabelle Arole, plays host to a three-week residential training course offered by the AIHI. Many of the 170 people who have participated in the course since its inception four years ago have undertaken the training either as preparation for working in a developing country or as a part of formal training in the Masters of Public Health offered by the university.

In this unusual setting the classroom is an Indian rural village and the course faculty are village health workers, mostly women with little formal education.

Course participants are also taught by Raj Arole and tutors from AIHI, but much of the learning comes from community members who care for the health needs of their own village people, largely through disease prevention and health promotion. They ably demonstrate the benefits of the many measures introduced in rural villages that have eliminated infant and maternal mortality from causes still endemic in most parts of India. The role of the community and the contribution of formally educated health workers as teachers (like the Aroles) is well demonstrated in an otherwise unsophisticated setting.

The training at Jamkhed, of Australian health professionals who go on to contribute to the global health workforce, has the added benefit of equipping them with a degree of cross-cultural competency, because working in a culturally appropriate way requires a commitment to skills transfer and capacity development of individuals and the recognition of the human capacity inherent in a setting where needs are greater.

WORDS AND PICTURES

Megha Singh and Jennifer Yan each spent their AMS year with the AIHI. They completed the community-based primary health care course in Jamkhed prior to undertaking research projects in India: Jennifer, evaluating an education program run by the Comprehensive Rural Health Project (CRHP) for unmarried adolescent girls in villages surrounding Jamkhed; Megha, using an innovative research technique to explore the health needs of adolescent girls in Uttaranchal, at the foothills of the Himalayas.

I am surrounded by adolescent girls, aged 11 to 17, giggling, shouting and dancing. For the moment, there are no siblings to look after, food to cook, water to fetch or pots to clean. Though considered to be of marrying age, they are still unmarried. They listen to the messages of health education and self–empowerment they are being told: that girls are not lesser people than boys; that school is important; that their bodies are too young

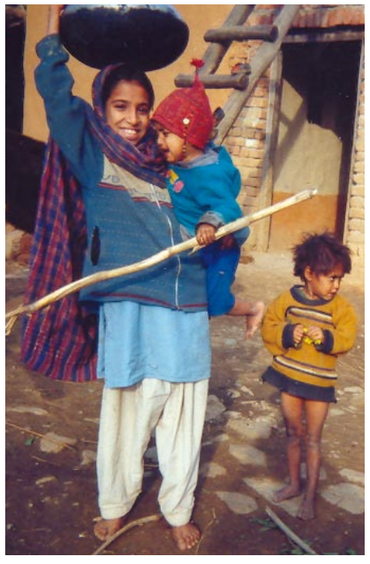


Photo and caption by Sunita. In this picture the young girl is doing the housework and helping her mother take care of the younger siblings. The environment in this household is such that the girl cannot attend school.

for childbirth; that life has options; and that they can be a part of the decisions about their lives. For the moment, they have no husband or children of their own.

Adolescence is a time of change, of risk and opportunity. There are more than 1.2 billion adolescents in the world; four out of five live in developing countries. In the context of rural India, early marriage results in girls becoming wives and mothers while in their teens. Schooling and livelihood choices are often compromised.

Through activities including health education, social awareness discussions, self-defence, singing and dancing, the adolescent girls' program at Jamkhed sought to increase girls' confidence, promote their overall development, give them greater choices and increase the age at which they married.

In the words of the adolescent girls: 'I want to complete my education. I too will shine. I will become something.' 'I did not want to marry him, and told my mother. But I would never have had the courage to, had I not come here.' 'I have become bold and brave.'

My research was a response to an expressed desire by CRHP for feedback as the program neared the end of its funding. It concluded that this was a strong program which met the needs of its participants and appeared to encourage resiliency and empowerment. Sadly, the program ceased shortly after. It was as much a lesson in the realities of NGO work as the field experience itself.

Jennifer Yan, final year MBBS/BMedSc

It was my childhood fascination with my birthplace, and my growing interest in global health, which saw me travel to India for my AMS year in the hope of understanding more about the gender disparities that exist in Indian society.

These inequities are evidenced by statistics from the 2001 Census of India, which reveal that the sex ratio is sitting at 933 females per 1000 males, and the female literacy rate is just 59.16 percent in comparison with males at 75.85, with the situation deteriorating in rural districts.

I chose to adopt the Photovoice technique for my research project, which involved using cameras in the hands of the participants, and asking them to express their views on a particular issue through photography.

My project was implemented within the Comprehensive HIV/AIDS Services in North India (CHASINI) program for

Photo and caption by Shabhana. Many traditionalists believe that girls should not be allowed outside the house. If this does happen people will raise fingers. But no one ever asks a girl about what her wishes are or what she wants.

adolescents, where I recruited fourteen peer educators to be research photographers.

Cameras were given to participants, many of whom had never used a camera before, and after appropriate training, they were required to document the deficits and assets in their communities, with respect to young women. The resulting thought provoking photographic display was used to trigger critical group discussion about the issues that they had identified and prioritised. This collective reflection is part of the empowerment and critical consciousness process integral to the Photovoice method. Gender discrimination, poverty, the lack of educational opportunities and family responsibilities, were some of the factors identified as having the most influence over the lives of young women.

Finally, the selected photographs and the accompanying insightful narratives were displayed in an exhibition entitled, 'Through Their Eyes,' at Herbertpur Christian Hospital, to raise awareness of the identified issues amongst key policy makers from the hospital, community health and development team and members of the community.

Megha Singh, final year MBBS/BMedSc

2006 PETER G JONES
ELECTIVE ESSAYS

McLeod Ganj, home to India's largest Tibetan community

PALLIATIVE CARE AND THE WHEEL OF SAMSARA

AN ELECTIVE AT THE TIBETAN DELEK HOSPITAL, HIMACHAL PRADESH, INDIA

As the funeral rites begin, the younger monks open their prayer books and recite the Holy Scriptures; the older monks, well practiced, chant from memory. The low, deep murmuring almost drowns out the barely audible clicking of prayer beads. Soon the sweet smell of incense will have filled the room. The deceased man passed away barely twenty minutes ago, but haste is required if his soul is to be guided into a favourable reincarnation. In this private, peaceful room it is easy to forget that just down the hallway the everyday workings of a modern hospital are continuing. This is a style of medicine where the *Tibetan Book of The Dead* is every bit as much required reading as *Harrison's Principles of Internal Medicine*.

In 1950-51 the Chinese People's Liberation Army invaded Tibet. In 1959 His Holiness the XIV Dalai Lama, then only 24 years old, was forced to flee the Tibetan capital, Lhasa, under the cover of darkness and make the arduous trek across the Himalayan mountain range to the safety of neighboring India. Granted asylum, he eventually he made his way to McLeod Ganj, a former British hill station and garrison town in the state of Himachal Pradesh in India's northwest. Thousands of Tibetan refugees have followed, and McLeod Ganj is now home to India's largest Tibetan community. The Tibetan Delek Hospital was opened in 1971 to service the Tibetan and local Indian community, and now consists of a 30 bed general inpatient ward, specialist tuberculosis ward, directly observed tuberculosis treatment service program, and general medical and antenatal outpatient clinics. Just next door is the Mentsekhang, the institute of traditional Tibetan medicine and astrology. Here traditional healing and diagnostic methods, such as the use of herbal preparations and the analysis of tongue and radial pulses, are taught and practiced by doctors who have studied for up to five years.

An elderly Tibetan man with inoperable carcinoma of the stomach has given up hope. No longer wanting to be treated, refusing even to eat, he seeks a personal audience with the Dalai Lama to ready himself for the transition to the next life. When he returns to the ward a few hours later the change in him is astonishing. Where before he would avoid eye contact with family and hospital staff alike, he is now bright, engaged, and actively asking the staff for 'all possible treatment'. Such a change is not unprecedented; the Dalai Lama regards medical professionals as highly spiritually evolved beings, and counsels all Tibetan Buddhists to follow their advice to the letter. A paternalistic model of health care it may be, but many doctors in the west would sacrifice their stethoscopes for such divine sanction. Similarly supernatural, although less predictable, are the oracles some older Tibetans consult before making life changing decisions.

Medical professionals are confronted with illness, death and dying on a daily basis and things are no different in the Himalayan foothills. Tibetan Buddhists believe that life and death are merely illusions. The soul is continuously reincarnated, moving on from one realm of existence to the next, yet many are still anxious about the end of this life. One high-ranking Rinpoche (an honourary title meaning 'precious one') became anxious as his end drew near, and was counselled by the Dalai Lama that, having been a good Buddhist all his life, he should have no fear now, but rather continue on with the 'Powa' exercises he had been learning and practicing for many years to ready his mind for the cessation of self, and enable his soul to emerge from the crown of his head and transmigrate to a higher realm of existence. Rinpoche died peacefully a few days later and as one life came to an end, in another ward a child was born; the wheel of Samsara continues to turn.

Central to Tibetan Buddhism, and to medical practice at Delek Hospital is the virtue of cultivating compassion for all sentient beings. Throughout time, every being in this universe has had an infinite number of past lives, so we must learn to view every other living being as having been, at one time, our own mother, father, child or friend. As the incarnation of Avalokitesvara, the Bodhisattva of Compassion, the Dalai Lama has vowed not to enter Nirvana until all sentient beings are released from suffering. One suspects that he may be waiting for a while, yet the compassion displayed by staff at Delek Hospital and the Mentsekhang suggests that many are following his example. This combination of ancient wisdom, traditional healing arts and modern medicine provides a holistic view of the patient, one which takes into account not just their life and circumstances, but those of their previous lives too.

Simon Liubinas, MBBS 2006

HOT TOWN, SUMMER IN THE CITY

AN ELECTIVE AT THE MELBOURNE INNER-CITY NEEDLE AND SYRINGE EXCHANGE PROGRAM

In the just too-loud voice of someone who not too subtly, is talking, not to one person but a whole room full of people, one of our clients paraphrased from the day's newspaper; 'Hey mate, some eleven-year-old in Scotland's overdosed at school!' Howls of laughter and a sarcastic response from across the table, where another client, eyeing his free bowl of cornflakes with intent, his hair matted with the grimy remnants of breakfasts past, grinned toothlessly as he said, 'So what the hell am I doing here? Get me to Scotland. Now! The stuff around here couldn't drop a fly!'

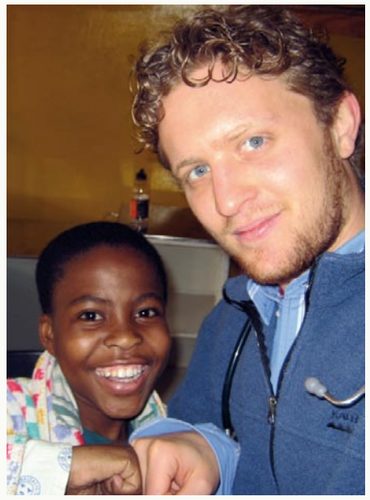
The other users, and the staff, nodded a silent 'Amen' to these words, for they weren't the crazed delirious offerings of some desperate heroin user, but rather the gospel truth, as spoken by a desperate heroin user. We'd hit drought times and just as sure as there's suffering when the rivers run dry, when the flow of heroin to addicted users slows to a trickle, their suffering is obvious to anyone–even a final year medical student.

Over late 2005 and early 2006, I spent four weeks in Smith Street, Collingwood at the Melbourne Inner-city Needle and syringe Exchange program (MINE) and the Next Door primary health care facility for injecting drug users. The two services are located immediately next to one another and run under the auspices of North Yarra Community Health.

MINE is a primary needle syringe program where anyone can walk in the door and, without any requirement that they give their name and mostly at no cost, collect needles, alcohol swabs, cotton wool, containers for disposal, sterile water and a myriad of other products. MINE also offers users a space to relax; have something to eat; use a phone; pick up one of the hundreds of pamphlets on topics ranging from individual drugs to working with Centrelink; and talk to some of the staff about getting help, getting off, if they're ready. Next door, at Next Door, doctors, nurses, social workers, counsellors and other staff help users on a more individual level. They manage users' medical problems, including a high rate of psychiatric illness, on a walk-up basis. Most importantly, the staff at Next Door work to connect users with services to address the often devastating social pathology associated with drug use, such as crime (and its punishment), homelessness, and physical and sexual abuse. These days, every medical student is familiar with the word 'biopsychosocial' even before they've bought their much-coveted stethoscope. At MINE and Next Door, the reality of this concept is inescapable.

I arrived late every day. So did the staff. One of the perks of working with drug users is that you can wake up late. They do. Soon afterwards, I'd be at the desk, fumbling through boxes of needles, syringes and other paraphernalia clients requested but I'd never even heard of before. The client would end up helping me find all they needed. By now, there would be a group of people who had come in for breakfast. Some would delve through the pile of discarded clothes, searching for something to wear, for themselves or for their families. A group would sit around a table, reading the dismembered remains of the day's newspaper. The older among them would wax lyrical about the 'good old days' in Melbourne when heroin was cheap and plentiful. The others would silently curse the nostalgic storyteller under their breath for reminding them of the ever simmering withdrawal symptoms they had only just managed to suppress with whatever they could find on the street.

At the same time, Next Door was getting ever more requests to enrol in the pharmacotherapy program as supply dwindled. The hardest of hardcore heroin users were reporting that the rising use of amphetamines, especially 'ice', to substitute for heroin, was causing big trouble. They described some of the local



"Now for something completely different!" - Josh (with the stethoscope) and a young patient during July 2006 on another elective, this time in the Department of Paediatrics at Chris Hani Baragwanath Hospital in Soweto, Johannesburg.

housing commission complexes as virtual war zones, a cruel irony given that so many of the residents are refugees from war-torn countries.

The work at MINE and Next Door is anything but palliative or purposeless. The work is at the coalface of harm reduction: protecting individuals, families and the community. Once you've met the people involved–the users and the workers–and seen the lives that they live, the 'zero tolerance' alternative can't be understood as anything but a philosophy of zero understanding, zero empathy and zero compassion. Amidst all the pain and suffering and under difficult conditions, the staff at MINE and Next Door maintain a sense of generosity and robust optimism. If I've conveyed a sense that this work is humourless, then I'm deeply sorry. The staff are fun and funny, and so are the patients at Next Door and the clients at MINE. I don't know that I'll ever forget the ironic farce of giving a Hepatitis B vaccine to a needle-phobic injecting drug user. We should be thankful that these services exist. I'm certainly thankful that I was able to be a very small part of something so useful.

Joshua Osowicki, MBBS 2006

Melbourne Inner-City Needle Exchange has a website at www.mine.aus.net and North Yarra Community Health at www.nych.org.au

REQUIEM OR RENAISSANCE?

LEARNING ANATOMY FOR CONTEMPORARY MEDICAL PRACTICE

2006 UMMS LECTURE

30 November 2006

Janus, the Roman god of gates and doorways, who looked to the past and the future, is commemorated on this Roman coin with a double-faced head, each looking in opposite directions

The wisdom to look back, in order to visualise and plan the future, has long been enshrined in western heritage, derived as it is from Greek and Roman roots. Anatomy teaching commenced in Melbourne almost 150 years ago and it is timely to look back, to examine the present and to plan the future. It is also opportune because last year the news media focused on the teaching and learning of anatomy, particularly on concerns that medical students no longer graduate with sufficient knowledge of anatomy to undertake clinical practice.

HISTORY

The precise gross details of the structures of the human body were first determined and described in 1543 by the Belgian genius, Andreas Versalius. The founder of descriptive anatomy, he made the human body something that could be understood.

Great teachers of anatomy became established and surgeons, in particular, did much to expand this scholarship. All the great master surgeons between 1550 and 1850–Pare, Gibson, Cheselden, Hunter, Cooper, Bell, Chopart and Dupuytron –were great anatomists. None of these inherited the spirit of Versalius more, however, than the Scotsman John Hunter. Hunter wrote that, 'Structure is only the ultimate expression of function' and it was by adapting physiological principles and adding this study of function to the examination of structure, that anatomists became the focus around which new medical schools were established.

Two centuries after Versalius, Giovani Morgagni (De Sedibus et Causis Morborum, On the Seats and Causes of Disease, 1761), correlated previously recorded symptoms of disease with anatomical lesions uncovered at autopsy. The lesson for physicians and medical educators was clear: progress, in the diagnosis and treatment of disease, hinged on findings disclosed during postmortem dissection. Autopsy became commonplace and those with an extensive knowledge of anatomy and skill in dissection came even more to the fore.

Those with knowledge of anatomy had power and influence, although they had little more to offer patients than the unorthodox practitioners of the day. To the lay public, however, knowledge of anatomy conveyed the status of the expert on university trained medical practitioners and the subject became the dominant component of the curriculum.

ANATOMY TEACHING IN MELBOURNE

The foundation of the medical school in Melbourne was achieved by the dogged determination of Anthony Colling Brownless. One of the great pioneers of medical education in Australia, this surgeon's greatest achievement was to establish one of the world's significant medical schools.

George Britton Halford, one of the most distinguished experimental physiologists of the day and at that time a lecturer in anatomy in London, was duly appointed professor of anatomy, physiology and pathology and arrived with his family in 1862. Armed with books and anatomical preparations–mostly models and osteology specimens he brought with him–Halford began his lectures in outbuildings in his backyard in May 1863.

Halford was followed by Harry Brookes Allen, who graduated from Melbourne in 1876. Brilliant as a teacher and an administrator he eventually became dean of the Faculty of Medicine and was later knighted for his services to medicine.

The third professor of anatomy, Richard James Berry, was appointed in 1905. It was written that Berry, 'Took over the teaching of anatomy in Melbourne in a manner which amounted to a revolution'. He was the dominant force in the teaching of anatomy in Australia for the first three decades of the twentieth century.

The fourth professor of anatomy, Frederic Wood Jones, qualified in London. Appointed in 1930, he remained for seven years during which time he published over 80 articles. In his Syme Oration, at the opening of the Royal Australasian College of Surgeons (RACS) in 1935, he traced the development of surgery as a craft based on a profound knowledge of anatomy. He observed that operating had become less demanding with the introduction of anaesthesia compared to that for earlier surgeons, for whom a detailed knowledge of anatomy was essential as they had to work at high speed to minimise the effects of shock and pain. Wood Jones was a very enthusiastic and vocal public supporter of the RACS in its founding mission for appropriate surgical training, a detailed knowledge of the basic sciences and appropriate standards of surgical care for the people of Australia and New Zealand.

Wood Jones also first drew attention to the negative aspects of formaldehyde.

In 1923 he wrote:

> Formaldehyde hardened tissues led to a wider and more artificial scope of descriptive anatomy. The formalin-hardened cadavers were dissected with fresh zeal and a new descriptive anatomy–the worst yet accomplished–was promulgated. Artificial and geometrical descriptions were given to viscera, artificial accounts were given to planes of fascia and most of the difficulties of the modern student of anatomy are due to the bewildering complexities of the descriptive anatomy of the formalin period. Remember students will one day have to readjust their ideas, since they deal with the living.

Many other great teachers made their mark but it is worth remembering the ongoing dependence of the frequently understaffed anatomy department on its part-time teachers–usually surgeons–to meet its responsibilities.

The dissecting room in 1864 showing Halford (2nd from right) with 1st and 2nd year students

LEARNING, RECALL AND RETRIEVAL OF ANATOMICAL KNOWLEDGE

In his Hunterian Oration in 1879, Humphry made the sobering comment:

> It may be questioned whether the result of correct learning of the facts of anatomy is proportional to the time and labour expended. Certainly there is no subject which men exhibit so much proness to forget and the knowledge, painfully acquired, is strainingly held and cheerfully let go.

Education and cognitive psychology have contributed much to the understanding of learning and memory. Regehr and Norman (1996), point out important principles, two of which are particularly relevant to the learning of anatomy: the organisation of long-term memory, and the influences on storage and retrieval from memory.

In relation to the organisation of long-term memory, they stated: 'The acquisition of expertise in an area is characterised by the development of idiosyncratic memory structures called semantic networks, which are meaningful sets of connections among abstract concepts and/or specific experiences. Information necessary to diagnose and manage cases is retrieved through the activities of these networks.'

Thus, when teaching, new information must be embedded meaningfully in relevant, previously existing knowledge to ensure that it will be retrievable when necessary. There are many variables which affect the capacity to store and retrieve information from memory, including meaning, the context and manner in which information is learned, and relevant practice in retrieval. Educational strategies must, therefore, be designed to enhance meaning and reduce dependence on context, and to provide repeated relevant practice in retrieving information.

There is evidence that the integration of knowledge facilitates the storage and later retrieval of relevant information and better prepares students for clinical practice. This is the theoretical basis of problem-based learning (PBL).

Miller (2002) and her colleagues pointed out that success in learning hinges on concepts rather than memorising facts: 'Students perceive that anatomy is endless memorisation, whereas the ability to manage information and use reasoning to solve problems are the ways that professionals work. Furthermore, the process of learning or using understanding to explain and make connections, is a more useful long-term lesson than is memorisation.' Anatomy should be taught and learned as a dynamic basis for problem solving and for application in the practise and delivery of health care.

Methods available for teaching and learning anatomy include cadaver dissection and the use of prosected and plastinated cadaver tissue, literature, lectures, problem-based learning, radiological images, telescopic views of the internal body, websites, and multimedia packages such as An@tomedia. Peninsula Medical School, one of the newer medical schools in the UK, teaches anatomy without cadavers. A survey of Australian medical schools by Parker (2002) confirmed the decline in the use of human dissection and autopsies for anatomy teaching in Australia. She remarked that 'students' in four of the nine medical schools surveyed could conceivably complete their training without ever seeing a dead body.

Many anatomists, surgeons and others remain adamant that dissection is the best way to learn anatomy and mourn the loss of its major place in the curriculum. However, much of the evidence regarding the benefits of learning on cadavers is based on descriptive papers and professional opinions. Several studies have shown that medical students who learned their anatomy from prosected specimens and audiovisual materials performed just as well in anatomy examinations as those who learned by dissection. A study from Maastricht University (2003) showed a similar level of anatomical knowledge in students from PBL schools compared to other schools in the Netherlands using traditional educational approaches. Despite this reassurance, graduates of Maastricht and McMaster (both PBL schools) considered their curriculum gave insufficient attention given to the basic sciences, particularly anatomy.

Dissection is also said to be important because it acclimatises students to the reality of death. Weeks and colleagues

(1995) have suggested that: 'Dissection can reduce dehumanisation of the doctor-patient relationship, enabling the integration of the "scientific" view of the human body as an object with a more holistic view of the patient as a person'. Lempp (2005) reported that some medical students cited an appreciation of the historical significance of dissection and the development of respect for the physical body as additional reasons to learn anatomy through dissection.

In contrast to these reports, however, others voice concern that levels of desensitisation occur which may result in undesirable detachments from death. Some studies have reported that dissection may cause extreme anxiety and emotional disturbance in some students. In a longitudinal study of Auckland medical graduates, (Collins (1997)) 7% reported cadaver dissection as a major cause of stress during their course, findings later confirmed for London students by Snelling and colleagues.

Terry and Phillips have each demonstrated that learning through the arts and humanities can have a significant impact on students' understanding of the human body. Activities such as life drawing and modelling, accompanied by reflective discussions, have the potential to offer significant advances in their understanding of their perception of the human body.

OTHER WAYS TO LEARN ANATOMY

Endless hours of cadaver dissection accompanied by didactic lectures became established when there was little else in the curriculum. Many new discoveries and advances are all now muscling in for their place in the curriculum. Some of the 800 or more hours previously devoted to anatomy have had to make way for other equally important areas. Whether the current 124 hours allocated by this university are sufficient, however, remains under review. It is important to ensure the pendulum does not swing too far and that anatomy is recognised as vital for the future medical practitioner. These changes have led to a search for more efficient and sustainable methods of teaching and learning anatomy, which take into account the major advances in the understanding and management of medical illness.

An explosion of new imaging and minimally invasive modalities has brought new ways to visualise the structure and function of the living body. Anatomy can be presented as viewed through the latest diagnostic and procedural imaging techniques and telescopic pictures as used by clinicians in their daily practice. These techniques include ultrasonography, computed tomography (CT), positron emission tomography (PET), magnetic resonance imaging (MRI) and various endoscopic procedures.

Radiological imaging permits in-vivo visualisation, offers physiological and anatomical insights and, with endoscopic views, represents the context in which contemporary practising physicians most frequently encounter their patient's otherwise hidden anatomy. It is also the world into which our medical graduates enter.

Teachers and learners alike, marvel at the 'live' images of an arteriogram of the brain put together in a computerised sequence, or of a study of the moving heart valves, of a series of consecutive CT images of the chest and abdomen, or of an MRI of the wonderful details of the musculoskeletal system. Observing a diagnostic ultrasound being performed enables the student to visualise what is beneath their finger tips and further opens their minds to living anatomy.

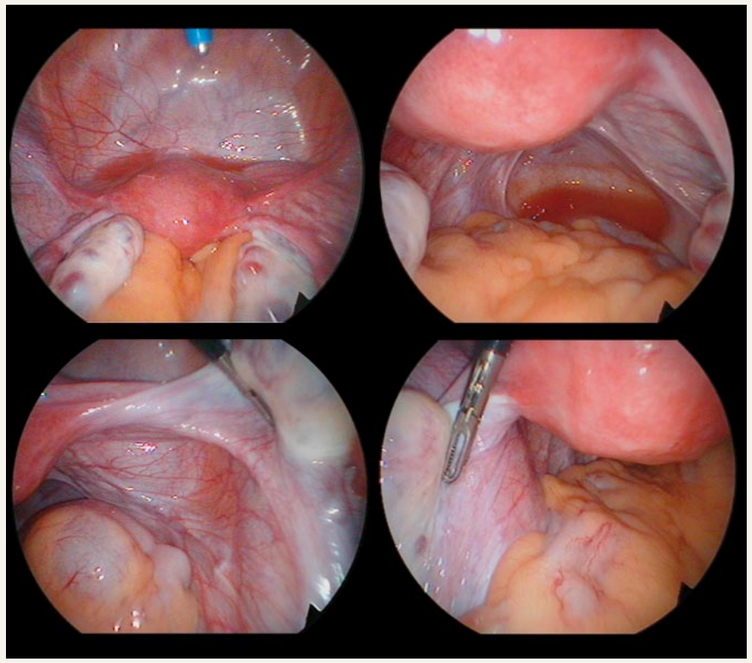
Similarly, viewing the body from within through the use of various telescopic procedures gives amazing video images of live patients, such as those seen during laparoscopy of the abdomen and pelvis, cystoscopy of the urethra and bladder, arthroscope of the knee joint, or endoscopic views of the alimentary canal, all used in daily clinical practice. These views, with all of the organs or structures visible in their normal living state, constitute an enormous learning experience and an ideal vehicle for the teaching and learning of living anatomy.

The world of our students is multi-modal and stimulus dependant, and multi-media packages such as the award winning An@tomedia, which combines all of the above, have revolutionised the learning of anatomy. An@tomedia, produced in the University of Melbourne, combines an interactive photographic atlas, gross anatomy dissection tool radiology overview, coloured overlays and an anatomy textbook in a single multimedia package.

LINKS BETWEEN MEDICO-LEGAL LITIGATION AND SURGICAL ANATOMY

Links between the reduction of anatomy teaching by universities and the reported incidence of damage to anatomical structures during operative and other interventional procedures have been used as reasons to return to traditional practice of extensive anatomical dissection.

Quoting from UK figures for 1990-2000, Ellis restated the most common reason for compensation in general and vascular surgery–and amounting to 32% of the claims–was damage to underlying



From Anatomedia, stills from a laparoscopic film of the abdominopelvic cavity in a premenopausal female

structures. He went on to state: 'What is damage to underlying structures if not, in the majority of cases some anatomical error or even disaster?' and attributes the blame to the universities where these medical graduates were educated.

Those responsible for these unfortunate errors were in fact taught anatomy in universities well before curriculum changes to problem-based learning and the resulting cutback in anatomy teaching time in the early 1990s. Nevertheless, Ellis's comments have been repeated as fact in several subsequent articles.

Although there is no clearly comparable data for Australia, recent figures for the medical defense organisations in Australia do show that allegations of procedure-related issues make up 33% of all claims and include obstetrics, gynaecology, general surgery and orthopaedics and others. Whilst there are no details of what 'procedure-related issues' actually mean, overlapping reasons are thought to include lack of communication and problems of informed consent as well as damage to structures.

A fundamental requirement for those practising in the procedurally base specialties –including surgeons, gynaecologits, radiologists and, increasingly, physicians– is a detailed knowledge of anatomy, particularly that which relates to their everyday practice. No one regards what was learned in medical school as sufficient to practise at this level. Medical schools cannot, however, abrogate their responsibility to provide all medical graduates with a sufficient knowledge of anatomy to enable them to undertake the responsibilities of their early postgraduate employment.

How to learn the greater depth of knowledge of anatomy and the other basic sciences required for specialist practice is a major challenge for all of the specialist medical colleges and their trainees. Very little formal teaching in anatomy is available at postgraduate level and the previously sought after positions of demonstrators in anatomy have almost disappeared. A unique opportunity exists for universities and medical colleges to work together to enable trainees to acquire the many necessary competencies during specialist training, particularly those relating to expert knowledge of the basic sciences.

One such example of this partnership is the successful Diploma in Anatomy, co-badged and jointly run by the university and the RACS. This offers participants opportunities to perform prosections and attendance at master classes with hands-on access to cadaver tissue.

ANATOMY AND THE MEDIA

A final point relates to how issues pertaining to human anatomy teaching and research are communicated to the wider public. The news media have great potential to either help foster trust or engender distrust between professionals and the general public.

It is important to be aware that different groups including journalists, health professionals, technologists, politicians and others may seek to shape how news stories about anatomy are framed. In an excellent study de Bere and Petersen (2006) showed that individuals used as sources on anatomy teaching were generally derived from the more conservative voices of the medical profession. Surgeons and other clinicians working in more traditional establishments with a long history of anatomy dissection were questioned and most made critical comments on the different forms of live and virtual methods to learn anatomy. The views of those who supported the use of newer methods were less evident.

The pedagogic value, or otherwise, of cadaver dissection was never discussed but the alternatives to dissection were reported negatively in some articles including warnings of the 'dumbing down' of scientific medical education as well as cautioning against the social and ethical dangers of technological advancement.

Where does this leave the wider public and their necessary trust in how tomorrow's doctors are educated? It is important to think carefully about how to engage with the media and convey to the public the true essence of our work and advances.

CONCLUSIONS

Anatomy must be taught in a format that is useful and applicable to the clinical setting. It is essential that the time allocated is appropriately used and the correct anatomy is taught. Undergraduate anatomy should be aimed at providing the foundation and knowledge required to undertake undifferentiated clinical practice. Those who may be interested in a career in surgery or radiology should be offered extra opportunities in medical school to expand their knowledge of anatomy. This may involve undertaking research in anatomy and many Melbourne students partake of such opportunities during their advanced medical science year, or their elective period.

We need to agree on the essential core of anatomy required to undertake clinical practice and make every effort to ensure this is appropriately taught, using all of the methods available, acknowledging that cadavers, particularly fresh cadavers, do have a place, albeit a much smaller place than in the past. Support for anatomy teaching–at least partially alongside clinical training–must be supported as its relevance is then so much clearer.

As Frederick Wood Jones pointed out over 80 years ago: 'Anatomy is not for the dissecting room only; the anatomist is not only for the dead-house: he (or she) is for the wards, the operating theatre and the clinic, if they are to serve the community to the full'.

Surgeons, radiologists and others need to hear this call afresh and return to teaching anatomy, using every opportunity to foster students' interest in and learning of this important subject. It is no longer acceptable to blame and shame universities.

Medical graduates must acknowledge that the old didactic way of teaching anatomy in minute detail is dead and that the renaissance of the undergraduate focus lies in integrated teaching using the tools of imaging and telescopic procedures on live patients. All clinicians must take the opportunity to expand students' knowledge of living and functional anatomy, by teaching this subject at the bedside, in the clinic, in theatre, in the emergency department, in the imaging department, during multidisciplinary meetings, indeed, whenever and wherever the opportunity exists. Society expects medical graduates to be proficient in core anatomy and all those who teach medical students must take their place alongside their colleagues in anatomy to ensure this is achieved.

Associate Professor John Collins,
Dean of Education, Royal Australasian College of Surgeons and Associate Professor in Surgery and Medical Education, University of Melbourne

A link to an audio recording of John Collins' full UMMS lecture can be found at:
www.medicine.unimelb.edu.au/umms/events.html

2006 ETHICS SEMINAR

END OF LIFE DECISIONS. DO ADVANCE CARE DIRECTIVES WORK?

Convened by Professor Graham V Brown, James Stewart Professor of Medicine, Head Department of Medicine, RMH/WH, University of Melbourne

In Australian society, individuals are generally the only people empowered to make decisions about their health, provided they have the capacity to do so. Many make known their wishes so that health care providers can determine treatment plans in situations where patients are unable to communicate or make their own decisions. An advance care directive (ACD) provides an instrument for individuals to document what can or should be done in certain circumstances concerning their medical care. At the faculty's 2006 medical ethics seminar, a group of speakers presented their responses to the issue of whether ACDs do in fact work, followed by discussion of a hypothetical case.

Dr Bill Silvester trained as a general physician and intensive care specialist. He is a senior staff specialist at the Austin Hospital and medical director of the Victorian Organ Donation Service, and spoke in his capacity as director of the Respecting Patient Choices Program, which began at the Austin Hospital in 2002 and has been expanded to a number of other public hospitals in Australia.

Advance care planning is a process whereby a patient, in consultation with health care providers, family members and important others makes decisions about their future health care in case they become incapable of participating in medical treatment decisions. This is underscored by the ethical principles of autonomy, particularly around those of informed consent and dignity, focusing on prevention of suffering.

Most of us will die after a chronic illness and about half of us will not be in a position to make our own decisions when we are near death. Without discussion, our families have a significant chance of not knowing our views. As doctors, if we are uncertain about what to do and have to make a decision, we often treat aggressively and, regrettably, many patients are kept alive under circumstances that are not dignified and they frequently suffer.

The Medical Treatment Act 1988 gives us the tools to appoint a Medical Enduring Power of Attorney or to complete a Refusal of Medical Treatment certificate. Yet there is a low awareness in the community about the Medical Treatment Act, even amongst medical practitioners, and there has been a disappointingly low uptake of these tools.

Likewise, in other states and territories, legislation has been passed to help with end-of-life decisions for the people who want it, yet it hardly gets there. These attempts have failed because they have not addressed health professionals' cultural resistance to discussing end-of-life care; they have not dealt with poor communication between patients and doctors about this care; they have not ensured that completed ACDs are easily accessible (not left on the bedside table at home); and they have failed to put systems in place to support advance care planning.

Advance care directives do not work on their own. In many ways it is the process of advance care planning that works. It's the discussion, not the paperwork, which makes the difference.

In the Austin's program we aim to: initiate conversations with adults about their future medical care; assist individuals with their ACDs; and make sure that the directives are clear, available and followed when appropriate.

When the program was evaluated, six months after its implementation, we found that, of the 300 patients admitted to the target areas of aged care, oncology and other such clinical areas, nearly two thirds had some sort of [advance care] discussion documented in their medical records. Importantly, of all the medical records reviewed, 95% of the patients' main wishes were being respected and followed. We found that the patients were being empowered to make informed decisions for their immediate and future care.

We introduced this program to 17 hospitals and nursing homes over two years. More than half of the residents exposed to the program were over the age of 85 and only a third of them were competent. There was an overwhelmingly positive response to the discussion from residents and their relatives. The majority wanted palliative care, not life-prolonging procedures, and, often, to be cared for at the facility at the end of their life. There were also personal requests about having the windows open, music playing, calling the priest or a penny in each hand for the ferryman.

For the patients who had ACDs it was much more likely that they died in a facility surrounded by family, friends and staff who knew them rather than being transferred to a tertiary hospital, to die in the emergency department on a trolley or in a ward surrounded by strangers.

The Public Advocate, Julian Gardner, began by distinguishing between the legal status of a directive, meaning that which must be followed, and a statement of wishes.

The only certain form of directive is the Refusal of Treatment Certificate made under the Medical Treatment Act. These documents are rarely used and are limited in operation to medical conditions that are current when signing the certificate. A medical practitioner who knowingly provides medical treatment contrary to the certificate is guilty of an offence. Conversely, a medical practitioner relying on a certificate is protected from claims of professional misconduct, criminal prosecution and civil liability.

'There are, however, other matters to consider when determining best interests: the wishes of relatives; the consequences of not carrying out treatment; alternative treatments; and the risks associated with treatments.'

It is arguable that an ACD made by a competent person is binding on others, including medical practitioners, once the person becomes incompetent. However, to my knowledge, that has not been tested by the courts in Victoria.

What, then, is the effect of an ACD? In Victoria, if an adult person is incapable of giving consent to medical treatment, the law set out in the Guardianship and Administration Act applies. It provides that consent can be given by someone with the status of 'person responsible' who must act in the best interests of the patient, which includes taking into account the wishes of the patient. Therefore, written evidence in an ACD of a patient's wishes about medical treatment is very important and cannot be ignored.

There are, however, other matters to consider when determining best interests: the wishes of relatives; the consequences of not carrying out treatment; alternative treatments; and the risks associated with treatments. These matters may well override the person's wishes.

There is debate about whether the law in Victoria should be changed to allow a competent person to make a directive about future medical treatment for conditions other than current medical conditions. Proponents argue that a directive promotes autonomy; that if a competent person can refuse treatment it is discriminatory to deny that right to a person who has a disability; that it removes undue burdens from the shoulders of family and friends; and that it can avoid unnecessary, aggressive treatment. On the other hand, it is argued that it may be unsafe to act upon a directive without knowledge of the person's competence at the time they made it; that the person may or may not have had adequate information about potential treatments and chances of recovery; that a person may since have changed their mind; that treatments may have subsequently become available; and that the difficulty in wording directives means that they create uncertainty in how to enforce them.

I referred earlier to the 'person responsible', the list of which is in hierarchical order. At the bottom of the list are those most commonly involved, namely, family members. At the top is a person previously appointed by the now incompetent person under an enduring medical power of attorney. Next in rank is a person appointed by the Victorian Civil Administrative Tribunal, including a guardian. It should be noted that only a guardian or an attorney has the lawful authority to refuse treatment by signing a Refusal of Treatment Certificate.

As the guardian of last resort in Victoria I have been involved in making medical decisions, including end-of-life decisions. I cannot recall a case in which I have been involved where I have been assisted by a written ACD providing evidence of the person's wishes. Such documents, even though they are not strictly directive, do work in providing vital evidence that must be taken into account by a substitute decision maker when determining a person's best interests in relation to medical treatment.

Max Charlesworth AO, is an emeritus professor of philosophy at Deakin University and has written extensively in the area of bioethics.

Advance care directives are based on the assumption that every competent person has the right to determine the kind of treatment given to them, including treatment and care involved in dying. An autonomous death does not mean I cannot take advice from others or entrust myself to their care and compassion. It means that when the chips are down, I make the decisions about my death. This is a decision of conscience that each individual has to make for herself.

The claim that I have a right to determine the manner of my death goes against traditional religious attitudes to suicide that see it as inspired by cowardice and weakness, and also by a kind of hubris that leads people to usurp the role of God as the arbiter of life and death. The idea that because God gives us life, only God can take it away, and that there is a divinely appointed time for each person's death, runs deeply in the Judaic, Christian and Islamic traditions, even though it sits rather inconsistently with the status given, by those religious traditions, to the martyr who deliberately offers up her life and dies for God.

A freely and responsibly chosen death is, of course, ideal and many actual dying situations fall far short of it. But the ideal of an autonomous death, freely and deliberately chosen, should be kept in mind as a kind of paradigm or benchmark by which we can define good caring.

The prevailing political and legal situation about end-of-life issues is extraordinarily confused. We recognise that patients have a right to refuse life-sustaining treatment and that it is a criminal 'assault' if medical carers or others attempt to override the patient's wishes. But we then overrule the wishes of a competent patient when she asks for active help from a medical carer in ending her life. Suicide is no longer a crime in most Australian jurisdictions, but assisting another to commit suicide is a crime–it is a crime to help another to do something that is not a crime.

Another argument is that if assisted suicide is allowed it will inevitably lead to a debasement of the value of human life and encourage the killing of patients by health

carers. This consequentialist argument amounts to a doctor saying to a patient: 'I can't accede to your request to help you to end your life, even though you are suffering from a terminal illness and are in intolerable pain, because this may possibly lead to future patients being illicitly killed, though we have no way of knowing for certain that this will in fact happen'.

In my view, we will eventually have to adopt some kind of compromise solution along the lines of the Netherlands. In that country assisted suicide is a criminal offence but a doctor will not be prosecuted if (a) there is a free and voluntary request from the patient; (b) the request is well-informed with respect to the patient's medical condition; (c) the request is durable and not the expression of a momentary whim; (d) the patient is experiencing unacceptable suffering which cannot be relieved by ordinary medical means; (e) the doctor consults with a senior colleague and a spiritual carer such as a Catholic or Protestant chaplain or a humanist counsellor; (f) the doctor provides a report on the case to the local medical examiner who in turn reports it to the public prosecutor. Unless these conditions are met, a doctor cannot agree to actively assist a patient to die. This regime has been in force since 1973 and there is no conclusive evidence that medically assisted suicide in the Netherlands has resulted in the dire consequences predicted by its critics. The Belgian government also enacted similar legislation in 2002.

In a multicultural society like ours there will be differing ethical views about a number of issues and no group can claim the right to impose its views through legislation on those belonging to other groups. These are issues that can be dealt with only by individuals making decisions of conscience for themselves.

Professor Sanchia Aranda, head of the University of Melbourne's School of Nursing and director of cancer nursing research at Peter MacCallum Cancer Centre, spoke from the point of view of the nurse, sitting in the muddy world of clinical environments where decisions take effect. Her answer to the question 'Do ACDs work?' was, 'It depends', as illustrated in the story of a young man with leukaemia whom she looked after 26 years ago.

In the last few weeks of his life, this young man made a decision to withdraw from medical treatment. A battle had been going on behind closed doors between the doctors and nurses caring for him. The nursing staff felt he was being over-treated whereas the doctors believed he was still 'salvageable', the term used at the time. However, his desire to withdraw from medical treatment was respected and he went home to die. But he returned to hospital, and I have a photo of him, smiling, having platelets and blood, because the next day he was playing golf with Seve Ballesteros. He reversed his decision because of the change in his context and that needed to be respected. One week later he died.

Medical paternalism has resulted in a lot of unwanted, invasive treatment, poor communication of clinical decisions, loss of control over personal health choices and a perception by the public that they need to be protected from health care providers. The result has been an increasing legal framework around the right to self-determination.

'The clinician must set aside personal ethical beliefs and seek to understand the decision in the context of the patient's situation. When people have strong beliefs, it is often very difficult for them to set those aside and consider the views of the other.'

The patient's desire for the right to choose is governed by a number of things that are ultimately about the desire for control and are linked to past experience. In particular, I think people fear their personal response to what might happen: how will I respond if I'm in intractable pain, if I loose control of my bowels and bladder, if I am a burden on my family?

There are limits to choice in ACDs, however. How can you know how you will view a future situation? There are also limits to the control we can have over what is likely to happen, or to our understanding of what could be done when those things happen, and the consequences of our choices. No ACD can be this specific. That much of this advance decision making might occur in an older population, whose health literacy is perhaps even lower than the average person, presents even more difficulties.

Too often, clinicians enter the clinical situation with already formed beliefs about what is right in a given situation, driven by their own personal values. Ethicists also often write about a clinical situation from a perspective that denies the complexity of the human condition.

Clinical pragmatism, or contextual ethics, provides us with a different way of thinking about these situations, in that our ethical decisions always arise from the clinical encounter. The clinician must set aside personal ethical beliefs and seek to understand the decision in the context of the patient's situation. When people have strong beliefs, it is often very difficult for them to set those aside and consider the views of the other.

Successful choice requires a number of things: access to information about the full range of available choices and their consequences, and recognition that these will not always be known; regular dialogue with health professionals who know the patient's situation rather than someone who is not embedded in the context; an opportunity to express individual beliefs about treatment decision preferences; and, perhaps most critically, an ongoing opportunity to revisit these beliefs and preferences on a regular basis in the light of the unfolding clinical picture. This requires much more than the seven-minute medical encounter in the clinic at our hospital.

Advance care directives can only be of benefit to the patient when they are enacted in the context of encounters with health professionals that build from an understanding of the person and family, and adjust to the often rapidly changing and complex human health situations.

Discussion of the hypothetical by panel members (L-R) Bill Silvester, Julian Gardner and Sanchia Aranda.

Sue Sherson, chair of the Melbourne Health Clinical Ethics Committeeand a nurse educator at the Royal Melbourne Hospital (RMH), has worked in a variety of nursing roles and clinical specialties in Australia and overseas. She concurred very strongly with Sanchia Aranda.

When I was a student nurse, on night duty in the early 1960s, the worst sin was not that one of your patients died, but that she was found dead by the night sister on one of her rounds rather than by you. In medical wards of that era, this was not particularly unusual. Mostly between 2am and 4am, elderly, and some not so elderly, patients with chronic diseases, did just die. I always felt sad and guilty that they had died alone without someone to hold their hand or at least provide a human presence. Even in the darkened ward alone, aged 18, these were not frightening deaths. These places were peaceful and the old wisdom that a person's time had come was not difficult to accept.

Very soon after, however, came cardiopulmonary resuscitation and haemodialysis, and other great medical advances. When we did the first kidney transplant at the Royal Melbourne Hospital we were tremendously excited but too inexperienced to realise that most steps forward also have unforseen consequences. Instead of nature relentlessly taking her course, patients, their clinicians and carers were faced with deciding when enough was enough. For some, death seemed to have become an option, or at least a significantly postponable event, rather than the inevitable end of life.

These difficult clinical decisions, and the differing moral views among those involved in making them, led to a special meeting of the Melbourne Health Clinical Ethics Committee. Requests for assistance with end-of-life decision making had been received from two very different clinical areas: North-Western Mental Health, in relation to their residential facilities, and the Department of Neurology at RMH.

Neurology was particularly concerned for its deeply comatose patients, for example, when return to any sort of normal functioning was considered impossible, but death was not imminent. After stabilising and assessing these patients, longer term treatment decisions needed to be made. The previously expressed wishes of these patients concerning their own care may or may not have been known, and family members may or may not have agreed on these wishes. Comparatively few had appointed anyone as their enduring medical attorney.

At the North-West Mental Health nursing homes, nurses involved with residents generally knew their wishes for end-of-life events. However, as there was no clearly written medical order to the contrary and no resident medical officer to call, if an acute event occurred the nurses had no option but to call 000, institute resuscitation procedures and organise ambulance transfer to an acute hospital. This was morally wrong, when the patient's wishes were known to differ, and highly distressing.

The ethics committee's consultations and discussions led to the development of a comprehensive limitation of medical treatment policy, a generic document that covers treatment in all facilities run by Melbourne Heath. Its application must always be individual and responsive to the particular circumstances of the person whose ongoing care is being considered.

Under this policy an order form is completed and placed at the front of the patient's current file. It clearly states which treatments are to be withheld and which are to be continued, and acts as a communication tool to ensure nursing staff and families have been involved in the discussions and informed of the decision.

Medical treatments may be refused or limited if the patient does not want the treatment; if the treatment has nothing to offer the patient or may render them worse off; or the treatment may be temporarily effective but cannot alter the disease process, improve their general condition or quality of long-term life.

As health professionals I believe we should stimulate more community discussion about the possibilities and limitations of advanced medical treatments, rather than allowing the impression that modern medicine can do everything. My experience has been that for most people there is a time when dying is viewed as the least worst option. For many, particularly the elderly and very seriously ill, it is often craved.

Graham Brown, challenged a panel to think beyond the abstract and consider what they would do in a complex, but highly feasible, hypothetical situation. The panel included Bill Sylvester, Julian Gardner and Sanchia Aranda, academic GP registrar Dr Kate Robins-Browne, president of Dying with Dignity Victoria, Dr Rodney Syme, and rector of Newman College, Father Bill Uren.

Sandra Davidson, a PhD candidate at the Department of General Practice was in the audience and wrote this summary.

Most discussions about ACDs are built on statements of principle and firmly anchored in the abstract. But patients, their families and medical staff do not live in the abstract and it is not always easy to apply the principles of ACDs to real life situations.

The opening scenario involves Mrs O'R, an 84-year-old nursing home resident of three years. Her quality of life is poor, she suffers from slight dementia and has been referred to the emergency department following a collapse. She is subsequently admitted to ICU following a diagnosis of moderate to severe stroke. Her respiration rapidly deteriorates and the medical team is about to intubate when her husband says, 'She wouldn't want this'. How should the medical team proceed?

A decision has to be made in minutes. There is no available written documentation of the patient's wishes, nor is there time to seek further information or garner the advice of the public advocate, who has made it clear that his office can only assist when there is sufficient time. Mrs O'R's husband remembers that she signed up as a member of the Voluntary Euthanasia Society on her 80th birthday.

This information would influence Bill Silvester's decision but, for Julian Gardner, verbal report alone is not sufficient evidence of the patient's wishes. He argues that, in the absence of written documentation, the husband's verbal report will be overridden if clinical treatment is indicated. Bill Uren also believes that when the patient's wishes are unclear, medical treatment must be provided.

Family conflict is introduced when Mrs O'R's sister rings from interstate to say that Mrs O'R is desperate to see the arrival of her first great-grandchild later in the year. She is not aware that her sister became a member of the euthanasia society and wonders if this is true.

Sanchia Aranda comments that this does not have to be an 'all or nothing situation'. She suggests that Mrs O'R could be intubated for a few hours while the information is reviewed and argues that, in the absence of clear evidence to guide treatment, the harm of intubating could be considered as 'not too great'.

Bill Uren notes that the patient's autonomy is paramount, but also highlights the importance of considering the wishes of the patient's significant others. He comments that the ethics and values of the hospital should not be contravened.

The importance of establishing communication with the patient before the 'crisis' is emphasised. For Sanchia Aranda, one of the most valuable aspects of ACDs is their role in initiating discussion around end-of-life wishes, rather than the documentation itself.

Kate Robins-Browne has conducted in-depth interviews about ACDs with healthy older people and offers a different perspective from those discussed previously. She has found that many older people are happy to trust existing processes and believe that their significant others will make the 'right' decision, even if that contrasts with what they would do. Indeed, many older people express concern about documenting their wishes. Sue Sherson suggests this reflects the understanding that we don't know how things will change.

A relative phones and reports that Mrs O'R prepared an ACD in which she specified that she did not want intubation. A copy of the ACD is faxed through and a decision is made not to intubate Mrs O'R whose condition now improves, although she is totally dependent. She is transferred to a ward where she develops pneumonia. Graham Brown asks the panel, 'Should she receive antibiotics for this condition?'

'Many older people are happy to trust existing processes and believe that their significant others will make the 'right' decision, even if that contrasts with what they would do.'

Whilst Mrs O'R's wishes regarding intubation are recorded in the ACD, no mention is made of antibiotics. Although Bill Sylvester argues that life prolonging treatment should be treated the same, whether it is antibiotics or surgery, this scenario highlights a major limitation of ACDs in that it is impossible to document all potential conditions and treatments.

Although the panel generally agrees that antibiotics should not be administered, the hypothetical takes another twist when an overnight doctor commences antibiotics while awaiting advice from the care team. Bill Uren comments that the ethics of withholding treatment are the same as the ethics of withdrawing treatment; however, he acknowledges that the latter is, psychologically, a more difficult concept. This is explored when a female nurse strongly objects to ceasing antibiotics. Sanchia Aranda suggests that medical staff need to be aware of the impact of their own values on their clinical decision making and that while the nurse should be encouraged to discuss her own beliefs, she will ultimately need to be removed from the treatment team.

Panel members: Kate Robins-Browne and Rodney Syme

In conclusion, Graham Brown argues that although ACDs are 'part of the package', they alone are unlikely to remove the distress associated with end-of-life decisions. Judging by comments from audience members, this hypothetical reflected the complexities of real life situations. Do advance care directives work? 'It depends!'

A recording of this seminar may be heard or downloaded by logging on to: www.mdhs.unimelb.edu.au/news/deanslecture/21jul06.html

Graham Brown began convening the Dean's Lecture Series medical ethics seminars in 2000. Last year he was appointed director of the Nossal Institute for Global Health and the 2006 seminar was his last as convener. The seminar series has flourished under his stewardship and the faculty is very grateful for his invaluable contributions to the seminar program.

The next Dean's Lecture Series ethics seminar 'Rationing Health Care:priorities, principles and politics', will be convened by Professor Jeffery Zajac, head of the university department of medicine at Austin Hospital, and will be held on Friday 20 July 2007, rom 2pm to 5pm in the Sunderland Lecture Theatre, ground floor, medical building, corner of Grattan St and Royal Pde, Parkville

RETINOPATHY OF PREMATURITY IN A TRANSITIONAL ECONOMY

Susan Carden (MBBS 1987) was awarded the Melville Hughes Scholarship in 1998 when she was about to embark upon her PhD in paediatric ophthalmology. It provided her with valuable support while she studied the emergence of retinopathy of prematurity in Vietnam.

A blinding disease of infancy made a sudden appearance in Vietnam during the early years of the 21st century. The disease, retinopathy of prematurity (ROP), a major cause of childhood blindness in western countries since 1940, has been managed and controlled for the most part in the developed world, but the Vietnamese were caught unexpectedly in the midst of a rapid transfer of medical technology.

Vietnam is a developing country with a transitional economy. Major political developments since the development of its Doi Moi policy in 1986 enabled Vietnam to trade in, amongst other things, medical technology. These shifts in the economic policies of Vietnam had far reaching impacts, even on the tiniest babies.

In 1999 I thought that my thesis would review and explore how a developing neonatal unit and ophthalmology unit learnt to manage a moderate work-load of ROP. However, the remarkable change in the incidence and the severity of the disease was surprising.

Retinopathy of prematurity only occurs in infants born pre-term. Melbourne experienced an epidemic of the disease in the period after the second world war. That epidemic was made possible by a constellation of factors including the development of oxygen delivery systems that allowed previously nonviable infants to survive, and improved plastics enabling infants' cots to be sealed from leakage so that higher oxygen concentrations could be reached. However, some premature infants who survived were found to be blind at a few months of age. In 1951 Kate Campbell, a Melbourne paediatrician, published a report suggesting that oxygen was the causative agent and, in 1952, Melbourne ophthalmologist, Hugh Ryan, [see p. 31] published an article about the cases he had seen in Melbourne nurseries. Technological advances over the next 60 years have meant that oxygen treatment is now carefully managed to minimise the incidence of ROP. The disease still occurs, but it is detected in a timely fashion and treated with laser surgery to help prevent blindness.

In 1999 I conducted the first ward round to screen for ROP in the large neonatal nursery in Hanoi. Mild ROP was present in some of the premature infants but there were no infants with severe ROP. Over the next two years improvements in neonatal care allowed smaller infants to survive and ROP became firmly established in the nursery. Infants who would not have been at risk in Australia were soon developing severe ROP–much more severe than I had ever seen in Australia or the United States.

In 1999 there were not enough mechanical ventilators for all the infants in the neonatal intensive care nursery in Hanoi. Relatives and friends organised shifts between themselves to ventilate their infants by hand. Some infants were 'hand-bagged' for a month.

While complicated technical equipment had been transferred to Hanoi by many nations, it was often the simpler medical skills and equipment that were lacking. By spending time in the outpatient department for periods of weeks over five years, I managed to identify critical elements that could easily be remedied. For example, the hospital did not own an indirect ophthalmoscope and the local paediatric ophthalmologist had never seen ROP before.

Medical care delivery in transitional economies is often chaotic. Visiting medical specialists from various nations wander through offering opinions that may differ from that of the previous 'medical tourist' (a term coined by Dr Fred Hollows). The classification of ROP, its treatment timing, the optimal concentrations of oxygen delivery, and other issues can be highly opinionated and make it difficult for doctors learning about new procedures to work out what is most appropriate for their environment.

The Melville Hughes Scholarship from the University of Melbourne was a great support. Over six years I became involved in the management of retinopathy of prematurity in Vietnam, an experience made possible through Professor Garry Warne, director of Royal Children's Hospital International at the Royal Children's Hospital. I was able to travel to the USA to evaluate the major epidemiology trials on ROP. I learned about a new culture (I had to learn basic Vietnamese to understand the patient histories). I was able to have frequent discussions about the issues with some excellent doctors in three countries: in Australia, Dr Peter Loughnan, Professor John Hutson, and Dr Tess Huynh together with the neonatal nurses Robyn Smith and Robyn Allen; in the United States, Dr William Good; and in Vietnam, Drs Luu Ngoc Lan and Nguyen Xuan Tinh.

My thesis has made me reflect on ROP in a historical context in Australia and examine how our current medical practices have evolved over 60 years. My experiences have also reinforced for me the importance professional relationships between doctors and institutions of different nations.

Susan M Carden, Department of Ophthalmology, Royal Children's Hospital and Royal Victorian Eye and Ear Hospital

Information about making bequests and donations to the University of Melbourne can be found on p. 33 and about the 2007 winner of the Melville Hughes Prize on p. 35

FACULTY NEWS

OPENING OF THE PRIMARY CARE RESEARCH UNIT

The inaugural professor of primary care research, Jane Gunn (MBBS 1987) is director of the Primary Care Research Unit, established last year to consolidate primary care research within the department of general practice.

The Dean, Professor James Angus, Professor Doris Young, head of the Department of General Practice and Professor Jane Gunn at the opening of the Primary Health Care Research Unit last November. Photo Joe Vittorio.

The unit draws together more than 20 researchers in the department from a wide variety of clinical and research backgrounds who are conducting clinical research, primary care systems research, and translational research in the areas of chronic disease, primary care mental health and youth health.

Research has shown that these health problems are encountered mostly in primary care, posing huge problems of overextended resources and an inability to treat patients suffering a range of debilitating and life-threatening diseases. The goal of the research unit is to understand and improve health care delivery in general practice to ensure these conditions are better treated.

An academic and general practitioner, Jane has a longstanding interest in primary care research and has played a major national role in building research capacity in primary care via her contribution to the Commonwealth-funded primary health care research evaluation and development program.

The unit's research is firmly based in general practice and primary care and focuses on the provision of primary, comprehensive, and continuing care. The social model of health, the doctor-patient relationship, and the primary care team are all firmly embedded within its work.

Recent grants to unit researchers, from a variety of competitive granting bodies, have totalled more than $1.5m and will support a growing program of research.

In line with the establishment of the research unit is another initiative at the university, the practice-based research network, which will provide more direct links with community-based health care providers to facilitate clinical and translational research.

NEW CLINICAL SCHOOL FACILITIES AT THE ROYAL MELBOURNE HOSPITAL

New facilities to house the Royal Melbourne Hospital clinical school were opened last August by the Vice-Chancellor, Professor Glyn Davis.

The facilities include seminar rooms, a computer laboratory, administrative offices and a 77-seat lecture theatre, named the Lovell Theatre in honour of Professor Richard Lovell, foundation James Stewart professor of medicine, who died in 2000. The new facilities are to be found on the ground floor of the main ward block of the hospital and are situated near the hospital library and function centre. A new clinical skills laboratory and student common room are nearby.

The opening of the new facilities underpins the partnership between the hospital and the university which began over 140 years ago when the hospital first began providing basic clinical training to medical students.

Professor James Angus and Dr Colin Laing at the opening of the Colin Laing undergraduate radiology film library.

UNDERGRADUATE RADIOLOGY FILM LIBRARY NAMED FOR COLIN LAING

Upon his retirement from a successful career as a Melbourne radiologist, Colin Laing was recruited to the university radiology department by Professor Emeritus WSC (Bill) Hare. He has contributed to the undergraduate radiology teaching program over a period of 21 years by tutoring, providing students with observational exposure to all radiology procedures and, most importantly, creating a collection of teaching films aimed specifically at the needs of undergraduate students.

This collection of films is now housed in the Colin Laing undergraduate radiology film library in the university department of radiology (RMH) which was opened last December. It is a key teaching resource used by medical students based at the RMH and forms part of the undergraduate radiology curriculum, widely regarded the best in Australia.

APPOINTMENTS

Professor Julie Bines is the inaugural Victor and Loti Smorgon professor of paediatrics in the university department of paediatrics at the Royal Children's Hospital (RCH).

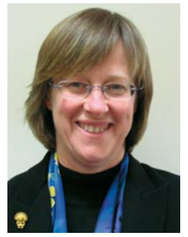
Julie is a paediatric gastroenterologist and head of clinical nutrition in the department of gastroenterology and clinical nutrition at the RCH. Her major research interests are in developing a rotavirus vaccine for children in Australia and the developing world, and studying other conditions that affect the intestines and bowel.

Professor John Hutson AO is the inaugural chair of paediatric surgery in the university department of paediatrics at the RCH.

His research focuses on improving the health and well–being of children. In particular, his seminal research on mechanisms related to the understanding of the male gonadal system has the potential to remove the need for invasive surgery for the commonly occurring condition of undescended testis. He has written a number of books on paediatric surgery and has been awarded patents for treatments of undescended testes and male infertility. His influence as a teacher of medical students extends beyond Melbourne, through the worldwide distribution of the highly regarded paediatric surgical text books he edits. John is also a leading figure in postgraduate teaching and learning.

Professor Ingrid Winship is the inaugural chair of adult clinical genetics in the university department of medicine at the Royal Melbourne Hospital (RMH).

A clinical geneticist with an interest in clinical services and research into late onset genetic disorders and the inherited predisposition to cancer, Ingrid also heads the Adult Genetic Service at RMH and is research director for Melbourne Health. She is deputy chair of the Victorian Co-operative Oncology Group (VCOG) and chair of the Cancer Council of Victoria's VCOG Cancer Genetics Advisory Group.



Julie Bines

John Hutson

Ingrid Winship

John Wiseman

Professor John Wiseman is inaugural director of the McCaughey Centre, the VicHealth Centre for the Promotion of Mental Health and Community Wellbeing.

John has an academic background in social sciences and has worked as a policy maker, researcher, community development worker and teacher. His research areas of interest include the development and use of community well-being indicators, and the impact of globalisation trends on communities. John's expertise in his field is reflected in his extensive involvement in community development boards and working groups including Oxfam, the RCH and the Victorian government.

NOSSAL INSTITUTE FOR GLOBAL HEALTH

The Nossal Institute for Global Health hosted its second annual forum in September 2006. Presentations given at the forum focused on two key areas in global health: how technological developments can be applied to health care systems; and how to prepare, enhance and maintain a global health workforce. Professor Graham Brown (James Stewart professor of medicine and head of the department of medicine at RMH) is foundation director of the institute. A highly respected international health expert, Graham has held leading advisory positions in international health organisations and is best known for his work on immunology and malaria. He envisions the institute will be a major academic centre combining the best of science with the best of public health. A major aim of the institute is to develop partnerships across disciplines, institutions, sectors and cultures across Australia, the Asia-Pacific region and the world. Graham welcomed three key appointees to the institute at the start of this year, see overleaf.

L-R: Professor Graham Brown, Professor Sir Gus Nossal, Mr Ashok Alexander, and Professor Peter Deutschmann. Ashok Alexander, Executive Director, India AIDS Initiative, Bill and Melinda Gates Foundation, presented the 2006 Nossal Global Health Oration 'Scaling up HIV in India' prior to the 2nd annual Nossal Institute global health forum in September 2006. Photo Mark Wilson.

Rob Moodie

Jim Black

Tilman Ruff

Professor Rob Moodie is chair of global health at the faculty's Nossal Institute for Global Health.

Rob is an internationally renowned public health expert with almost 30 years experience in planning and evaluating health programs in Australia, Africa, Asia and the Pacific. He has an interest in the control of AIDS globally and was the inaugural director of country support for the UN program on AIDS in Geneva. He is currently on the technical advisory panel to the Bill and Melinda Gates Foundation's HIV prevention program in India. Rob will combine his new role with his many other commitments, including his position as chair of the Victorian Premier's Drug Prevention Council.

Associate Professor Jim Black is a public health physician and epidemiologist, with broad interests including disease surveillance and outbreak preparedness, public health informatics and research ethics.

He spent ten years in and around Africa, including four years as a 'general duties doctor' in Mozambique, a year as project epidemiologist in the adult morbidity and mortality project in Tanzania, and another four years in Mozambique as a provincial level epidemiologist. He later took six months out of his PhD in infectious disease epidemiology to work in disease surveillance and epidemic preparedness for WHO in newly-independent East Timor. Jim comes to the institute from RMH where he has headed epidemiology in the Victorian Infectious Diseases Service since 2002.

Associate Professor Tilman Ruff is an infectious diseases and public health physician with particular interests in vaccines and immunisation, and in the urgent public health imperative to abolish nuclear weapons.

In addition to his work at the Nossal Institute, he serves as medical advisor to the international department of the Australian Red Cross and as technical advisor to the Australian Agency for International Development (AusAID) and UNICEF on immunisation programs in Pacific island countries. Tilman has played a leading role in the development of travel medicine, worked extensively on control of hepatitis B, immunisation, and maternal and child health in Indonesia and Pacific island countries, and was previously regional medical director for vaccines for a major vaccine manufacturer. He has been active in the Medical Association for Prevention of War (Australia) for 24 years and is now its national president.

DEPARTURES

When Brendan Crotty was first appointed clinical dean of the ARMC/NH clinical school in 1998, the medical school was well into planning the new problem-based learning curriculum.

Brendan immediately became involved. Committed to the new teaching philosophy, he worked hard to encourage similar enthusiasm from colleagues and, thanks to his dedication and hard work, the new curriculum rolled out relatively smoothly with strong support from Austin and Northern hospitals staff.

Brendan was also present at a critical time in the redevelopment of the Austin Hospital, his tireless efforts ensuring a full floor dedicated to education and training, an impressive student common room and a clinical skills laboratory. These facilities, for students, clinicians and teachers across all health science disciplines, are testimony to his vision and commitment.

Brendan also maintained a strong association with the Bendigo Hospital, continuing the rotation of Austin medical students there despite the establishment of the Monash rural clinical school,

Brendan Crotty

and nurtured productive links with the Northern Hospital, allowing an expansion in student rotations and enhancing the breadth of clinical experience available to our medical students.

Brendan held senior consultant positions in general medicine and gastroenterology and made an outstanding contribution to patient care at the Austin. He has strived tirelessly and passionately to improve postgraduate medical training and support for junior doctors, and to improve the quality of junior medical staff in regional and rural areas.

Throughout his time as clinical dean, Brendan showed enormous passion for teaching and concern for the welfare of his students. He was always available to provide advice, support and, when needed, perspective and a sense of humour. Not surprisingly, there have been very few changes amongst the staff who have worked with him over the past eight years. Somehow he also managed to fit in time for his love of jazz and the Bombers, and to enjoy life outside medicine with his family.

Brendan is an excellent educator, clinician and administrator, greatly respected by all who have worked with him. Although he left the university before the end of the last academic year he remained involved in the training of the students until they graduated. He will be missed for his warmth, kindness, compassion and unfailing good humour but he is to be congratulated on being an outstanding appointment as head of the new Deakin medical school. Our loss is most certainly their gain.

Barbara Goss, ARMC/NH Clinical School

Colin Masters

Laureate Professor Colin Masters is leaving the university to take up the directorship of the Mental Health Research Institute Victoria (MHRIV).

He commenced his studies in 1964 at the University of Western Australia. During these years he spent time working with Mother Theresa in India and co-founded the Aboriginal medical service in Perth. He developed an interest in neuropathology and travelled abroad to train in this field, returning to the University of Western Australia in 1981 as a principal NHMRC fellow in the department of pathology.

Colin commenced at the University of Melbourne as professor in the department of pathology in 1989. Since then he has served as head of the pathology department and associate dean of research in the Faculty of Medicine. His other roles include consultant chief of the neuropathology laboratory at MHRIV, consultant in pathology to RMH and chief scientific advisor to Neuroscience Australia.

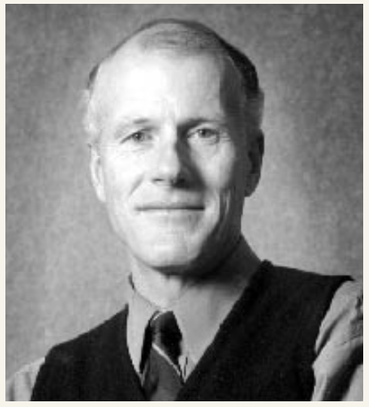
Colin has made an outstanding contribution to research in the fields of neurodegenerative brain disorders, particularly Alzheimer's and prion related diseases. He has approximately 600 publications in peer reviewed journal papers alone. His work on purification and definition of the Aß plaques of Alzheimer's disease, the impact of oxidative stress in Alzheimer's, and the genetics, metabolism and interactions of the amyloid precursor protein remains seminal. He is the recipient of countless prestigious international prizes and awards for his work.

In addition to his outstanding research career, Colin has served on 16 journal editorial boards, consulted to numerous agencies, and contributed to national and international policy development related to prion disease. During 2000-03 Colin was a key member of the UK government's spongiform encephalopathy advisory committee. He has been active in national and international Alzheimer's associations and is a strong advocate for improving conditions for patients and their carers.

Colin will remain an honorary appointment to the university and we wish him every success in this challenging endeavour.

Paul Monagle, Head, Department of Pathology

In September 2006, Brian Tress retired as Edgar Rouse professor and head of the department of radiology, having held that position since 1989, during which time he was also director of the department of radiology at RMH.



Brian Tress

An MBBS graduate of Melbourne, he moved from the Austin Hospital in 1971 to train in radiology at RMH under Bill Hare. He then undertook neuroradiology training at the National Hospital for Nervous Diseases in London and returned to the RMH in 1976 as first assistant in the university department.

Brian was in charge of the first CT head scanner in Victoria, which began a long and productive involvement in collaborative research with clinical colleagues in neurosciences. His clinical and research activities have spanned both diagnostic and interventional domains of neuroradiology. He performed some of the earliest interventional procedures and developed one of the leading neurointerventional radiological services in the region.

Brian's principal research interests have centred on diagnosis and treatment of ischaemic stroke. He has published almost 150 peer reviewed papers and chapters and has been invited speaker at many international meetings. His standing is reflected in his election to president of the Australian and New Zealand Society of Neuroradiology, as well serving on several international neuroradiological bodies.

He has served on the council and many committees of the RANZCR, was foundation president of its interventional radiology section, and is a recipient of its prestigious Röntgen medal.

His informed and balanced views have been widely sought by government committees and he has chaired the Victorian radiation advisory committee since 1993.

Undergraduate students and radiology trainees alike have benefited from Brian's skill and patience. He has brought a reasoned and balanced perspective to all his roles while continuing to embody the traditional caring values of a good doctor. Simultaneously steering the development of a small university department and heading a large, world-class radiological service, he has been highly regarded and well liked by his staff, colleagues and students. His patience and a willingness to engage with individuals stood out throughout his leadership, as he deftly and gently managed, and mentored, a whole generation of radiologists and associated colleagues. He leaves a legacy of admirable human, professional and academic values. We wish him and Marijke good health, good hiking and good golf.

Rob Gibson, Department of Radiology, University of Melbourne

RESEARCH

NHMRC FUNDING SUPPORT FOR FACULTY RESEARCH

The ongoing research support of the NHMRC is of great importance to both the reputation and the finances of the Faculty of Medicine, Dentistry and Health Sciences. Funds are awarded to support people, for specific projects and programs and to provide research infrastructure. From 2003-2006 national NHMRC funding increased by 40% under the Backing Australia's Ability program. In 2006, 70% of all funds awarded were supporting university-based health and medical research. The University of Melbourne has maintained its position as the institution claiming the greatest share of the national 'cake' (14% in 2006), partly through our strong links with our affiliated research institutes.

The following vignettes come from three faculty researchers at different stages of their research careers, each granted funding in the latest round of nationally competitive NHMRC project prants. Professor John Mathews has obtained funding to model the effects of immunity on influenza transmission. Drs Vicki Lawson and Linda Denehy are at the early stages of their research careers: Vicky* is part of the faculty's strong focus in neurodegeneration and Linda** is engaged in physiotherapy-based clinical research in critically ill patients. Researchers gaining funding from the NHMRC project grant scheme enjoy a sense of real achievement in a highly competitive setting. In 2006 success rates for researchers applying for NHMRC project grants were just 21% nationally and 26% for our faculty.

Meryl Fullerton, Head Faculty Research Development Unit

* *Molecular mechanism and therapeutic implications of prion disease strain types in sporadic Creutzfeldt Jakob Disease.*

** *Evaluation of exercise rehabilitation for survivors of intensive care.*

JOHN MATHEWS

John Mathews was foundation director of the Menzies School of Health Research in Darwin and is now professorial fellow with the School of Population Health. He draws on his experience as a researcher and adviser to government to argue that global health is still threatened by unpredictable consequences of natural selection and by the unintended consequences of human behaviour, cultural difference and vested interest.

John Mathews

As medical students in 1960, most of us believed that the catalogue of diseases in our textbooks would never change. How wrong we all were!

By the early 1980s our most dramatic lesson was the spread of HIV, which evolved rapidly to adapt to the new ecological niche provided by expanding sexual networks and globalisation.

However, my textbook driven view of disease had been shattered earlier when, in 1961, I heard Macfarlane Burnet, director of the Hall Institute, talk about kuru, a new neurological disease devastating the Fore tribe in the Eastern Highlands of New Guinea. Carleton Gajdusek and colleagues at the National Institutes of Health had recently shown that the disease was transmissible by injecting kuru brain into chimpanzees, while Shirley Glasse, an Australian anthropologist, had suggested that kuru was transmitted from person to person by the ritual cannibalism of people who had died from the disease. I met Shirley, worked with her kuru genealogies, and later spent my 1964 summer vacation in the Fore with Dick Hornabrook, the neurologist leading kuru research at Okapa. After graduation and residency, I returned to Okapa full time (1966-68), and was able to show that the cannibalism theory was consistent with all anthropological and epidemiological evidence. As predicted, the kuru epidemic has virtually disappeared since cannibalism was abandoned; only an occasional case has had an incubation period of more than 40 years.

By 1967 Gajdusek, Michael Alpers and colleagues had also shown that Creutzfeldt-Jakob disease (CJD), a rare and sporadic 'kuru-like' disease seen in other parts of the world, could be transmitted to primates. In 1976 the Nobel prize was awarded to Gajdusek for his work on kuru and CJD. A later Nobel went to Stan Prusiner for showing that the causal agent was an infectious protein (prion), which replicated by catalysing conformational change in the normal (non-infectious) variant of the same membrane molecule.

By the early 1980s it was realised that the (heat-resistant) prion could transmit iatrogenic CJD via neurosurgical instruments previously used on CJD patients and by pituitary hormones or dura mater grafts prepared from infected cadavers. However, an even bigger impact came in the late 1980s when it was suggested that the burgeoning epidemic of 'mad-cow disease' in the UK was driven by the use of meat and bone meal, prepared from bovine offal, as a feed supplement for calves. This feeding practice, analogous to cannibalism in the Fore, eventually led to bovine spongiform encephalopathy (BSE) infections in hundreds of thousands of cattle, and decimated the UK cattle industry. The final blow came in 1996 when it was realised, despite earlier reassurances from politicians and many scientists, that the BSE prion could occasionally spread to people eating BSE-infected matter, and trigger a variant form of CJD. Diagnoses of vCJD have subsequently been made in some 160 patients in the UK, including at least three persons infected by contaminated blood transfusions. With other experts, Michael Alpers still advises the NHMRC and government on measures to reduce the risk of vCJD being introduced into Australia by persons exposed to contaminated food or blood transfusions while living overseas.

The lessons from HIV, and from the exotic story of kuru, BSE and vCJD are very clear. Despite good intentions, and the best available science, we cannot predict in detail the outcomes of complex evolutionary systems, particularly when events are driven by human forces that are far from the world of science.

The emergence of SARS has again sensitised the world to the risk of new diseases coming from animals, and alerted WHO to the risk of a new pandemic of influenza. Again, the risk is driven by changing ecology and the increasing size of animal and human populations. Indeed, the world now has many more domestic poultry than ever before; in developing countries many birds are held in overcrowded or unsanitary conditions that allow cross-infection, with little selection against viral virulence. Such conditions have already favoured the emergence and spread of highly virulent mutants of H5N1 avian influenza. The large biomass of birds and avian virus in many countries makes it inevitable that large numbers of people are exposed; of those few hundreds of people becoming ill from avian influenza, many have died. Fortunately, current strains of H5N1 virus spread poorly from person to person, so the predicted human pandemic has not emerged. Yet, with so many opportunities for viral mutation and selection, it may be only a matter of time.

Even when science can make clear predictions about what should be done to protect health, there is often a long delay in achieving the necessary action. For example, although Richard Doll and Bradford Hill linked smoking to lung cancer in the early 1950s, it took many years to reduce smoking rates, even in Australia. Sadly, smoking is still increasing in many developing countries because of the unconscionable behaviour of tobacco companies. Action to limit the health impacts of asbestos was likewise delayed, despite the knowledge from the 1950s provided by Doll and other researchers. The responsibility for solving these problems was deferred for far too long by both government and industry.

The health problems of Aboriginal Australians loom even larger in our collective national conscience. The health transition enjoyed by most Australians over the last 150 years was driven initially by improvements in education, housing, sanitation and nutrition, and later by vaccination, antibiotics and improved medical care. As with dispossessed Indigenous peoples in other parts of the globe, our Aboriginal people have not experienced the same health transition. Indeed, as they abandoned their traditional hunter-gatherer lifestyle, their health deteriorated, and their very survival has been threatened by the existential crisis of having to try and adopt a culture and way of life they were ill-equipped to understand. For example, generations of Aboriginal people have grown up without the kind of understanding of money and society that most other Australians learn in the family home, often before they go to school. Without such understanding, and without education, skills and resources to survive in such a rapidly changing world, Aboriginal people have been caught between two cultures. Their traditional values and social constraints have been weakened or lost, and they have been plagued by poor housing, poor nutrition and infectious diseases. Furthermore, poor communication across the cultural divide has contributed to mutual lack of trust between Indigenous and non-indigenous Australians. Aboriginal unemployment has exacerbated the social anomie, while the dole has supported alcohol use, violent videos and other unsavoury aspects of western culture. With such social trauma, it is no wonder many have taken refuge in petrol sniffing, alcohol and other forms of substance abuse.

Remedial medical programs are clearly important, but Aboriginal education programs to provide survival skills, and to support self-respect, responsibility and a lifeline to employment are even more so. Australian governments now realise that the education system has failed Indigenous children of this generation, many of whom are less literate than their parents and grandparents. The solution lies not only in giving Aboriginal people more influence in education planning, but in also educating responsible bureaucrats about the issues that Aboriginal people face, so that educators can understand problems from an Indigenous perspective, and develop culturally acceptable curricula that deliver the knowledge and practical skills so desperately needed. Without frank and determined communication and learning in both directions, Aboriginal education and health outcomes will be very slow to improve. Even as the deckchairs move in the right direction, it will take several generations to heal the cultural divide and completely undo the harm caused by historical neglect and by the misguided good intentions of past social and educational policies.

If Australia is to hold its head high in the world, it must act with expedition to solve the twin crises of Aboriginal health and education.

VICKI LAWSON

Vicki Lawson is a senior research officer in the department of pathology and has recently returned from maternity leave after the birth of her second daughter.

Vicki Lawson

After completing my BSc, majoring in pathology and immunology, I determined upon a career researching human diseases involving the immune system and undertook an honours year at the Burnet Institute, studying HIV-1.

After several years as a research assistant, I began a PhD, supported by an NHMRC biomedical scholarship, and completed my study of the role of the envelope glycoprotein in HIV-1 transmission and pathogenesis in 1999. In 1999, after nine years studying HIV, (vCJD) was a relatively new disease and I was fascinated by the simplicity of a single protein that could be responsible for the transmission and pathogenesis of such a devastating disease (HIV-1 has six regulatory and accessory proteins). To further understand the disease I undertook a three-year postdoctoral fellowship in the Laboratory of Persistent Viral Diseases, Rocky Mountain Laboratories, part of the National Institute of Allergy and Infectious Disease based in Montana, USA. There I used biochemical, animal and cell-based models to investigate the role of the N-terminal portion of the prion protein in disease.

I returned to Australia in 2002 and, supported by an NHMRC Howard Florey fellowship, continued prion disease research in Colin Masters' neurodegeneration group in the university's department of pathology. My research has since been supported by research grants from the university's research office (2005, 2006) and currently by two NHMRC project grants to investigate the role of

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glycoaminoglycans in the propagation of prions and the molecular basis and therapeutic implications of human prion disease strains.

Prion diseases are transmissible, neurodegenerative disorders associated with the misfolding of the normal host encoded prion protein. In the absence of a conventional infectious agent, this misfolding is believed to be responsible for the transmission and pathogenesis of the disease and to also encode different prion disease strains. However, it is apparent that other host contributed factors, such as glycosaminoglycans and the prion protein itself, also affect the disease process. In collaboration with Andrew Hill and Steven Collins, my research group uses in vivo and in vitro models of prion disease and an integrated system of biochemical, molecular, cellular and structural biology methods to investigate the contribution of the host in the transmission, pathogenesis and therapeutic impact of prion diseases. It is hoped that this research will contribute to our understanding of the molecular basis of prion disease pathogenesis and the development of effective therapeutic interventions for a disease that currently has no cure.

In the CAA (A) an homogenate of uninfected tissue (PrPC) is mixed with a homogenate prepared from prion infected tissue (PrPSc). After incubation the reaction is treated with proteases which digest non-disease associated PrP and leave the disease associated form (PrPres), which can be detected by SDS-PAGE and Western blot analysis. Uninfected mouse brain homogenates (B) derived from Prnp0/0 (KO), wildtype (WT) and PrP overexpressing transgenic mice (Tg) demonstrate the importance of the PrPC substrate in the generation of PrPres in the CAA (C) and also highlight the requirement of other host derived factors in the efficient generation of PrPres.

LINDA DENEHY

Linda Denehy is a senior lecturer in the School of Physiotherapy where she completed her PhD in 2002. She leads the school's cardiorespiratory research team, which has close collaborative links with the university's clinical schools. Susan Berney is deputy director of physiotherapy at Austin Health where she has been senior physiotherapist in the intensive care unit since 1994. She is currently undertaking her PhD part time.

Linda Denehy

My research interests and expertise involve the physiotherapy management of acutely sick patients having surgery and critically ill patients in intensive care. I am particularly interested in the postoperative management of upper abdominal and cardiothoracic surgical patients, which includes the type of physiotherapy treatment they receive and the impact this has on their morbidity, length of hospital stay and function. Susan Berney and I have been involved in several research projects involving critically ill patients at Austin Health and have jointly published seven papers related to physiotherapy in critical care. I currently have nine higher degree students studying topics in both surgical populations and critical care.

My collaborator, Susan Berney's research interests relate to the efficacy and safety of physiotherapy in the critical care environment. She has examined the metabolic and cardiovascular demands of physiotherapy treatment; has developed the technique of lung hyperinflation via the ventilator; and examined specific aspects of patient positioning associated with treatment. She also has a particular interest in the management of spinal cord injured patients during their intensive care stay.

We recently received NHMRC funding for a project which aims to measure the health-related quality of life and physical function of Australian critical care survivors. This research also aims to establish the efficacy of an intensive hospital and outpatient exercise intervention, compared with current standard care and evaluate the cost effectiveness of the exercise intervention in survivors of critical care.

TEACHING

HONORARY TEACHERS

To consider dear to me as my parents him who taught me this art; to live in common with him and if necessary to share my goods with him; to look upon his children as my own brothers, to teach them this art if they so desire without fee or written promise; to impart to my sons and the sons of the master who taught me and the disciples who have enrolled themselves and have agreed to the rules of the profession, but to these alone the precepts and the instruction.

Thus begins the Oath of Hippocrates, which although now used infrequently in graduation ceremonies for new doctors, still codifies the underlying necessity for one medical generation to teach the next. This oath began a tradition which continues to this day in our clinical teachers. Whether in a large teaching hospital or small general practice in a rural town, the value of the clinical teacher in developing the knowledge, skills and attitudes of medical students should never be underestimated.

Medical education has changed significantly over the past 20 years with the acknowledgement of adult learning theory and the widespread application of problem-based learning. It must be acknowledged, however, that the clinical teacher has applied these pedagogical principles at the bedside and elsewhere for more than a century (albeit intuitively). As we move forward in medical education the central role of the clinical teacher is again being emphasised.

The attributes of being a doctor have been often discussed. At the core of these attributes are always the skills of communication and logical clinical reasoning (diagnostic and therapeutic thinking). Our clinical teachers are, by their example and direct teaching, the key individuals who develop these skills in our medical students. Whether in the emergency department, outpatients or in a general practice the power of the student observing their teachers and practising these core skills in their presence is still a powerful influence on their future practice

So in this edition of Chiron I would take the opportunity to thank our clinical teachers for their efforts in the past and future and congratulate them on their central role in fashioning the next generation of doctors and in so doing fulfilling (in part) the Oath of Hippocrates.

Geoff McColl, Clinical Dean, RMH clinical school

MEDICAL EDUCATION FELLOWSHIP PROGRAM

The medical education unit has initiated a part-time fellowship program to promote the discipline of medical education within the faculty and across clinical teaching sites. The new medical education fellows will contribute to the revision and further development of the undergraduate medical course, as well as help with the production of written and performance-based assessment for the clinical years. In addition, they will receive training in core aspects of medical education.

Four medical education fellows have been appointed for 2007. They are Claire Dendle, advanced trainee in infectious diseases at Austin Health; Alex Thompson, hepatology fellow from the department of gastroenterology at St Vincent's Hospital; David Smallwood, respiratory medicine specialist from Royal Melbourne Hospital; and Catherine Seymour, consultant endocrinologist, also from RMH.

For further information about the fellowship program, contact Rachel Wilson on T: 8344 0186 or E: wilsonra@unimelb.edu.au

ALUMNI STAYING INVOLVED

LEAN-PENG CHEAH, MBBS 1997

Lean Peng sightseeing with his children at the Grand Palace in Bangkok while representing the RACS at the Joint Meeting of the Royal College of Surgeons of Thailand and the International Surgical Society in July 2006.

Since completing my surgical training in 2005, I have worked as a staff specialist in Ballarat and been a locum general surgeon in Broken Hill. I am currently lecturing in surgery at the university and a VMO general surgeon at Eastern Health, Western Private and John Fawkner Private hospitals and Echuca.

As a mentor for medical students at the university I try to provide encouragement to the junior doctors and medical students I meet. Sometimes it is just by doing what I have done–going to England and back, finishing surgical training and now working as a consultant and teaching students–which is an example for the medical students to follow, especially for overseas students who have started working here and also to the students in the rural clinical school. It is good to give back what I myself received as a student from all the dedicated clinicians and academic staff.

Outside medicine, my interests include my family, church, travel and tennis. I am the proud father of two young children aged six and three and am grateful to my wife Mildred for her support and understanding.

I would like to be able to reach more students in future via my website (www.melbournesurgery.com) which aims to provide useful information for patients, medical students and doctors taking the AMC exams.

BILL LEADSTON, MBBS 1966

I have been a principal partner in a general practice in East Preston since 1971. An examiner and clinical teacher with the university since 1980, over 130 students have been through my practice. I also teach in the GP training program (since 1994) and am currently supervising my 102nd registrar in the basic GP training term. Teaching final year medical students and postgraduate registrars after 3-5 years of hospital training is sometimes very complex and sometimes 'money-for-jam', but it is always interesting and stimulating. It keeps up my professional interest in medicine and general practice as well as continuing my enthusiasm for teaching and learning with a wide variety of young people.

DAVID SMALLWOOD, MBBS 1991, PHD 2002

I finished school at the end of 1984 and undertook a 'gap year' which took me to the UK where I spent ten months working at Clifton College. My medical studies were completed at the end of 1991. I undertook training in internal medicine, specialising in respiratory medicine then I undertook a PhD, studying the long-term physiological and structural changes that occur in patients with long standing asthma. In 2002 I travelled to London to undertake a 12 month post at the Brompton Hospital.

Since returning to the RMH in 2003, teaching has also been a major part of my work at both graduate and undergraduate

David Smallwood

level. It is a great thrill for me to see eager, 'fresh' medical students learn the skills needed to become well-rounded clinicians. I am fortunate to be in the position of perhaps providing some of the direction and guidance they need to achieve their goals.

EPPIE YIU, MBBS (HONS) 2000

Eppie Yiu

It's been great fun being a mentor for University of Melbourne medical students over the past three years, although it does make me feel like I went through medical school a long time ago! As a second year trainee in paediatric neurology at the Royal Children's Hospital, I really enjoy sharing my enthusiasm for paediatric medicine with my mentees, who have also expressed an interest in looking after children. Whilst I do not directly help with exams or semester topics, it has been rewarding to listen and offer advice about anything from studying to picking a hospital and fellow group members for clinical rotations. It is also good to help students to look at the 'bigger picture' with regards to things such as what being a doctor is really like, and finding time for other important aspects of life such as leisure, travelling, family and friends!

REUNIONS

MBBS 1941

On 14 September 2006 the MBBS graduates of 1941 held a reunion to celebrate 65 years since graduation.

Pictured are: Back–Doug Atkinson, Mary Wheeler, Clarice Hetherington, Peter Bird, Brian Costello, Frank de Crespigny. Front–James Guest, Alexe Gale, Michael Benson, Ida Seward.

James Guest

MBBS 1945

The 1945 graduates held their 60 years reunion at the Melbourne Club on 1 April 2005. Twenty attended, with wives and partners; another 13 were unable to be present (including our usual convener Donald Cordner) because of distance, illness or other reasons. Ian Mackay gave us some reminiscences and we all enjoyed meeting again.

Pictured are: Standing–Chan Piercy, Keith Torode, Michael Shoobridge, Jim de Crespigny (now dec.), Jim Keipert, Gordon Trinca, Don Hewson, Ross Hayes, Jack Critchley, Walter Lowen, Des Prentice. Sitting–Eric Taft, Iris Leber (Solomon), Dorothy Hurley (Menzies), Joan Mowlam (Hosking), Ian Mackay, Tom Antonie.

James Gardiner

MBBS 1946

On 13 April 2006 the medical graduates of 1946 celebrated 60 years since graduation with lunch at the Royal South Yarra Lawn Tennis Club. Sixteen attended, some with wives and husbands. Most are wearing well and the reminiscing was much enjoyed.

Pictured are: Back–Alec Venables, Keith Henderson, Nick Hamilton, Pat Nell, Kevin Hinrichsen, Bill Doig, John Snell. Middle–Ian McDonald, Maurice Slonim, Neville Rothfield John Lane. Front–Geoffrey Serpell, Cecily Statham, Jean Sloss (Proud), Edith Apted (Hewitt), Mary Lane (Long).

John Snell

MBBS 1949

The 1949 medical graduates celebrated their 57th year of graduation at the Kooyong Lawn Tennis Club with a luncheon on 8 November 2006. Twenty-eight members attended, and there were 17 apologies. It was an informal occasion, allowing attendees to move between courses. Five are still doing medical work of some sort, while others have retired into gardening, farming, conservation and artistic pursuits of various kinds. The Mornington Peninsula has attracted a large group of retirees who enthused on its advantages.

As might be expected, there were many apologies due to health problems, both in members and spouses, but the gathering looked pretty fit despite the years and resolved to meet again in two years time. Much of the conversation was about the changes in medicine and practice over 57 years, and included expressions of regret that much of the satisfaction has been lost in consequence.

It was noted with sadness that 53 of the 49ers have passed on.

Pictured are: Back–B Egan, B Loughnan, D McLean, D McLaren, K Millar M Robinson, G Way, N Smith, I Wood, D Gunter, J Goldberg, PGill, John Cranswick (partly obscured), J Pawsey (fully obscured), G Doery, J Kelly, K Francis. Front–D McCredie, K Benn, Collins, M Sicklemore (O'Brien), R Williams (Lee), M-G Asche (Whyte), P Scrivenor (Long, partly obscured), Joy Cranswick, A Fullard (Booth) N Cass, L Rouch

Noel Cass

MBBS 1955

The MBBS graduates of 1955 reunited in October 2005 in celebration of 50 years since graduation.

MBBS 1956

As our MBBS results were announced the day before the 1956 Olympic Games began, when graduates of 1956 met for our 50 years reunion, we met at the MCG, as close as possible to 22 November. Ninety-three attended–51 graduates and 42 partners. Fourteen of the 51 are still in practice–in general practice, surgery, psychiatry, consultant endocrinology and endocrine research.

Jim Watts, retired professor of surgery at the old Prince Henry's Hospital, who now owns Fox Creek Wines, donated two cases of white wine and supplied the remaining wines at very favourable rates. George Tippett spoke briefly about the operations of the Medical Benevolent Fund.

There were many favourable comments about the general atmosphere of the evening which we found most enjoyable.

Henry Burger

MBBS 1966

The MBBS graduates of 1966 held a 40th year reunion over the weekend of 24-25 November 2006. The weekend began with an evening cocktail party at Hilton on the Park attended by some 80 graduates plus partners, and was a marvellous ice breaker. Graduates were able to recognise each other by the larger than normal name badges, and, in some cases, to remember names for the remainder of the reunion. Graduates met at the hotel again on Saturday morning where some presented papers on topics of a medical and non-medical nature. They met again that evening with partners for dinner at the Long Room at the MCG.

Stanley O'Loughlin

MBBS 1939

On 23 March 2006 the MBBS graduates of 1939 held a reunion luncheon at Graduate House to celebrate 67 years since their graduation. In attendance were Andrew Fraser, Blair Widmer, Colin Copland and Frank Kenny. There was much discussion of the present time and much more of the times when we were in practice. The Graduate House staff were very friendly and helpful. Apologies had been received from six of our co-graduates prior to the luncheon.

Frank Kenny

MBBS 1976

The thought of turning up to a reunion can be somewhat threatening. Will my colleagues recognise me, will I recognise them? Do we have anything in common? How will I compare to my peers?

But the attraction of thirty-something year reunions is that most have had our ups and downs professionally and personally, and we have all aged– fortunately it's pretty much at the same pace as everyone else. And, of course, most of us need help to remember who everyone else is, and glasses to read the name badges.

The repeated feedback from the reunion of the class of '76 was how nice it was to catch up with old friends, how we'll make more efforts to keep in contact and let's do this again in five years. As the lawyer in the great Australian fable The Castle said, it had the 'vibe'.

Despite the relatively late organisation of the event (it nearly became a 31st year reunion) there was a remarkably good turn up of 150, including partners. An impressive contingent came from Perth, and Neil Johnson jetted in from Ballarat in Cincinnati, USA, for the night. Unfortunately Dave Vivian, Sue Carey, John Urie and Will Twycross couldn't make it because of the bushfires.

Troupe de Jour, a seriously expert group of actors in the 'Thank God You're Here' tradition, thought they were in for a tough night at the beginning of their gig. However, with support from Graeme Wood as the conductor and Chris Holland as the subject for their impromptu musical, they greatly enhanced the 'vibe'.

Perhaps the essence of a good reunion is that it gives us the opportunity to reaffirm and even vicariously relive a very important and formative time in our lives.

If you missed it but want to get the booklet (the video and musical will come later!) please contact r.moodie@unimelb.edu.au

Rob Moodie

Frieda Law (MBBS 1983, MD 1992) returned to her alma mater when she visited Melbourne to celebrate Chinese New Year. Frieda is the Executive Director (medical) of the Li Ka Shing Shantou University Foundation in Shantou, a city in Guangdong province in southern China. The Li Ka Shing Foundation, funded by Hong Kong philanthropist Dr Li Ka Shing, is a transformative investor in major medical, education and welfare projects in China and around the world. Recently funded projects include a significant donation towards the Cancer Research UK Cambridge Research Institute and the establishment of the Li Ka Shing Knowledge Institute at St Michael's Hospital/University of Toronto.

Prior to working with the Li Ka Shing Foundation, Frieda was a medical educator and program director with Project HOPE (USA) based at Shanghai Second Medical University. During this period she established a first class paediatric and neonatal facility at the Shanghai Children's Medical Centre. During her time on campus, Frieda was reunited with her former colleagues in the paediatrics department at the Royal Children's Hospital and met with Graham Brown, Director of the Nossal Institute for Global Health, and his colleagues to discuss their interdisciplinary research and overseas linkages.

This photo was taken at a luncheon held in Frieda's honour at University House during her visit. Pictured are: (seated) the Vice-Chancellor, Glyn Davis and Frieda Law; (standing, from left) Richard Frampton (MDHS General Manager), Graham Brown, Warren Bebbington (Pro Vice-Chancellor, University Relations), James Angus, (Dean, MDHS) and Glenn Bowes (Stevenson Professor and Head of the Department of Paediatrics and Deputy Head, School of Medicine).

OBITUARIES

RECORDED WITH REGRET, THE PASSING OF:

Filippo Amato, MBBS 1972
Michael Andre, MBBS 1956
Dian E Ashton, MBBS 1949
Victor Brand MC, MBBS 1937 (p.29)
Percy M Brett, MBBS 1934
Neville C Brito-Babapulle, MBBS 1957
James V Champion de Crespigny, MBBS 1945 (p.29)
Claire Crittle, MBBS 1948
John R England, MBBS 1940
Arnold Finks, MBBS 1947
Bernard S Gilligan OAM, MBBS 1957
Myer Goldenberg, MBBS 1933 (p.30)
Warwick L Greville, MBBS 1961
Garry Groves, MBBS 1949
Rex G Guymer, MBBS 1953
John Ernest Hammond, MBBS 1965
Howard Hoban, MBBS 1941
Roxie Inder, MBBS 1941
Neil Johnson, MBBS 1949
John D Kiffer, MBBS 1978
Leslie Koadlow AM, MBBS 1944
Brian E Mackay, MBBS 1950
Joel Margolis, MBBS 1948
Ian R McDonald, MBBS 1947
John M McMahon, MBBS 1958
John W Middleton, MBBS 1951 (p.30)
Stewart Moroney, MBBS 1941
Peter C Nelson, MBBS 1963
Harry Pannifex, MBBS 1952
Gerald R Prendiville, MBBS 1951
Alan W Riseborough, MBBS 1951
Alexander J Rollo, MBBS 1952
M Hugh M Ryan AM, MBBS 1936 (p.31)
Hadyn P Smith, MBBS 1953
Manuel Starke, MBBS 1933
Thomas M Stokoe, MBBS 1949
John L Stubbe, MBBS 1949
Ian A Swain, MBBS 1952 (p.31)
Aubrey Sweet, MBBS 1953
The Hon Reginald JD 'Spot' Turnbull, MBBS 1933 (p.32)
Karl N Uhd, MBBS 1936
Neville York, MBBS 1952

VICTOR BRAND
1914—2006

Victor Brand

Victor Brand died a month short of his 92nd birthday, not long after he had proudly led the 8th Division AIF in the 2006 Anzac march as one of the last surviving decorated officers.

A child of Polish emigrants, Victor graduated in medicine from the University of Melbourne in 1937. After a residency at the Alfred Hospital, he worked as a locum around Victoria and the Riverina, performing a tonsillectomy on the patient's kitchen table in his first locum!

Victor married Emilie (Fifi) in 1941, before sailing for Singapore as the medial officer of the 2/29th infantry battalion. He received the Military Cross for heroic deeds during the Battle of Muar, in Malaya, in January 1942. A prisoner for three and a half years, Victor spent nearly a year operating a primitive hospital in a rainforest clearing 240km up the line from Bampong in Thailand. His only supplies at first were a wok, a machete, bamboo and quinine tablets. Most of the men suffered from malaria, dysentery and cholera. To treat patients with cholera he would cut down on a vein in the ankle and insert a length of bamboo attached to stethoscope tubing fixed to the bottom of a pint-sized container, the aim was to pour about six pints of boiled and strained river water with added rock salts into the patient's blood stream in 24 hours.

Victor was always at pains to point out that his own experience in Changi and Thailand was nothing compared to the suffering endured by the men building the railway. Years later he visited the memorial at Changi and wept uncontrollably on seeing the hundreds of white crosses.

Back in Melbourne, Victor practised as a GP and later as an anaesthetist, serving as an honorary at the Alfred Hospital from 1951 to 1971. Although very much against Australia's involvement in Vietnam, he volunteered in 1966 to serve in a civilian hospital near Saigon and, a passionate supporter of Israel, volunteered for a short time in a military hospital following the Six-Day War.

Victor loved scuba diving or spear-fishing around Aireys Inlet. He was a lively and, at times, confronting conversationalist, had a wonderful memory, a powerful intellect, a sharp sense of humour and rapidly devoured books of all kinds.

He is survived by his children Melanie and Andrew, (Michele having died in June 2005), and grandchildren, Josephine, Isabelle, and Emma.

Andrew Brand, Andrew Kennon and Melanie Brand, based on an obituary first published in The Age.

JAMES DE CRESPIGNY
1920—2006

James de Crespigny

Australian Medical Association fellow and community medicine advocate James V Champion de Crespigny has died aged 85. Highly respected by his patients, he made a major contribution to his profession and the community during his lifetime of commitment to the health and wellbeing of others.

Jim was a general practitioner who worked from his home in Bentleigh for 50 years, supported by his wife Joan. Passionate about obstetrics, he treated up to five generations of some families and was much loved by his patients and staff, many of whom stayed with him for life. This reflected his commitment to his work and the compassion and skill he showed for his patients.

His belief in hard work and in contributing to society and his profession beyond his patient commitments were combined with humility, respect for his patients and a love of family.

Elected to the Victorian AMA branch council in 1963, Jim served as honorary secretary, vice-president, president-elect, president and honorary treasurer. He had a special interest in the future of community medicine and worked on the AMA study group on medical planning and chaired the working party that produced the report 'General Practice and its Future in Australia' which, controversially at the time, proposed the introduction of health centres into Australia.

The first medical director of Moorabbin Hospital, Jim was very influential in its early development. He served on the Medical Practitioners Board of Victoria, as an RACGP examiner and was vice-president of Red Cross Australia.

Jim had a keen sense of humor and a raucous laugh. His many interests outside medicine included tennis, golf, photography, gardening and bowls. He retired aged 80, just five years before his death. Having feared retirement, Jim was proud to develop a full retirement life and he loved every day of it–packed with activities, family and friends.

His great drive was particularly visible after the devastating news that he had a rapidly progressive leukemia. As the disease progressively sucked all energy out of him he would say, 'I am getting lazy, I need to try harder'. He felt cheated of what he had expected to be a further 10 to 15 years of a happy life. During his illness Jim was fortunate to have the attentive care of his son Paul and colleagues at the Royal Melbourne Hospital, and received wonderful terminal care at Cabrini Hospice.

Jim de Crespigny is survived by his wife of 60 years, Joan, with whom he made a strong and close team, his children Vivien (Beer), Lachlan, Robert, Prudence (Gray), Paul and 18 grandchildren.

Lachlan de Crespigny

MYER GOLDENBERG
1910—2003

Myer Goldenberg

Myer Goldenberg was the first son of Jewish immigrants from Ottoman-ruled Palestine. His father arrived in Australia as a stowaway on a ship at the tender age of 12, knowing no-one, uneducated and speaking only Arabic and Yiddish. He left an indelible mark upon Myer of courage, modesty, compassion and his strong Jewish heritage.

Myer graduated in medicine in 1933. As an unsupervised graduate, he diagnosed and removed his first appendix alone, from which time he loved surgery. Following residency at the Alfred Hospital and three years of rural locums, he commenced surgical training in the UK, returning to Melbourne in 1941 to marry Yvonne Coleman. They moved to the Riverina where Myer became a very popular solo GP.

In obstetrics Myer was gentle and exquisitely skilled, blessed with sweet timing and judgment. Babies born to heavily sedated mothers were slow to breathe and Myer, inspired by the Bible story of Elisha, resuscitated them by mouth-to-mouth, anticipating modern resuscitation by decades but not publishing his method…'I thought it obvious', he said.

After 14 years Myer and Yvonne returned to Melbourne to give their children Jewish schooling. Myer set up practice in Oakleigh and plunged into community service. Over three decades he performed thousands of ritual circumcisions, refusing all payment, regarding the procedure as sacred. As founding honorary medical officer of Mount Scopus College, he introduced periodic, comprehensive and free medical examinations for every student. He also served on the executive of Mount Scopus and of Melbourne Hebrew Congregation.

Myer also took over from his father a 32 foot timber cruiser, quickly learning the arts of the sea and how and where to catch fish. He built a Mirror sailing dingy, taught his nautical skills to his children, and helped found the Queenscliff Cruising Yacht Club.

Despite 'retiring' in 1988, Myer continued medical practice as a locum, finally and regretfully retiring in 2002 to care for Yvonne, whose health had declined. His own health deteriorated markedly, a reality he resisted to his cost, ultimately falling as he tended to Yvonne. He sustained injuries and died peacefully in the Alfred Hospital, where his career had begun 70 years earlier.

Myer was a man of many parts: a man of principle, a man of medicine, supremely compassionate, self-effacing, but most of all a humanitarian, always on the lookout to help those less fortunate. He richly fulfilled his personal mandate to honour his parents' example, becoming in turn, both patriarch and inspiration to his own large family.

Myer Goldenberg was one who 'does justly, loves mercy and walks humbly with his God'. (Micah)

Dennis and Howard Goldenberg

JOHN MIDDLETON
1924—2006

John Middleton

In 1951 the final exams of the Melbourne University medical school were keenly contested, as a mixture of ex-service personnel and students straight from school reached the critical stage which would set the scene for their futures.

Prizes went to Bill Hare, Hal Stanistreet, Ken Fairley and, in obstetrics and gynaecology, with a first class honour, John Middleton scooped the pool, taking the Fulton Scholarship and the Wyeth Prize. As one of six to achieve honours in all three subjects, John seemed destined for specialisation. Certainly the others were.

He had already spent over three years in the RAAF as a meterologist and met and married Marli Russell, an arts student. Their first child arrived before graduation and two years' residency at the Royal Melbourne Hospital did not pass quickly. In 1953, now with two children, the prospect of further time as a hospital resident was unappealing and John joined his friend Peter MacMahon in Peter's father's busy general practice at Lilydale in the Yarra Valley.

The four-man practice offered excellent care laced with appropriate practical common-sense. John was appointed Shire Medical Officer for Health in 1954 and, following his interests and abilities outside medicine, became commodore of the Eildon boat club, a skilled marksman at clay-bird competitions and played the piano when relaxing at home.

From 1838 Swiss emigrant families had planted vines in the Yarra Valley and produced admirable wines. The two young doctors pondered the death of the industry in the 1920s, planted trial plots of grapes and began making wine in plastic rubbish bins. With increasing confidence and much mutual competition they moved toward further involvement in winemaking.

John read extensively about wine, trained his palate, travelled here and overseas, visited vineyards, made friends, asked questions and tasted wines. After help from Colin Preece from Great Western, he sought a property to simulate the environment of those Grand Cru vineyards. A magnificent farm site was for auction, its broad north-eastern slope, historically frost-free, overlooked the Yarra Valley; its soil, rainfall and microclimate offered potential to restore this cool climate region to the forefront of Australian wine making. Marli's confidence and inherited wealth enabled the purchase of Mount Mary in 1971 where they built a glorious home and established vines and a winery to complete John's extraordinary vision.

In early years his medical friends were invited to act as pickers on a suitable Sunday morning. They arrived en famille and with friends! Chatter filled the time until Marli's magnificent alfresco lunch materialised to be washed down with John's best wines. The economics of the situation must have been disastrous!

John continued in practice, with a large personal following, gradually reducing his medical workload until, by the mid-1980s, he was a full-time winemaker. Aiming for a high-quality boutique enterprise, he quickly appreciated the need to control the entire process with meticulous personal care. John aimed for perfection in every aspect of the winemaking and the winery simulated the operating theatre in organisation and sterility. He managed each year's vicissitudes: his wines attracted general acclaim, demand exceeded supply.

John kept in touch with many of his medical contemporaries and his fellow 1951 graduates were delighted when he provided the wines for their 50 year reunion dinner.

John's devotion to Marli was total, her charm and their knowledge of the arts and literature made them enthralling company but her life-threatening mountainside fall in New Zealand in 1997 cruelly burdened the close family. John died in June last year from complications following a late leak after earlier successful aortic aneurysm surgery. Marli, their son David, daughters Jill and Claire and eight grandchildren survive him.

Readers unfamiliar with his wines should dine at a leading restaurant, select a bottle of Mount Mary and join with wine lovers and John's friends all over the world in a toast to the passing of a great Australian.

Geoffrey WG Sinclair

HUGH RYAN AM
1912—2006

The University of Melbourne medical school pays tribute to Hugh Ryan AM, an MBBS graduate of 1936, who died on 14 December 2006.

He was a leader in the development of ophthalmic organisations within Australia, having been intimately involved in the creation of the Royal Australian and New Zealand College of Ophthalmologists and serving for many years on its various committees and boards. He was also among the group of ophthalmologists who instituted the Ophthalmic Research Institute of Australia.

Hugh Ryan was for many years head of the department of ophthalmology at St Vincent's Hospital and served the ophthalmology profession with countless hours of teaching over some 60 years. He was closely involved in recounting the history and evolution of ophthalmic practice, publishing a number of articles on the subject.

His contributions to the community included lifelong service to the Geelong Football Club, where he served for half a century as their consultant ophthalmologist. A long term member of the AMA Arts Group, he also supported a variety of other institutions, including University College and the Villa Maria Society and was a Knight of the Church.

From information supplied by Hugh Taylor

IAN SWAIN
1929—2006

Ian Swain

Ian Alexander Swain was born on Christmas day 1929 in Gippsland. His childhood began in Trafalgar with the freedom and happiness that only a country boy knows and, after thoroughly enjoying his years at Scotch College and medical school he took on the responsibilities of his father's general practice in Preston. He was highly respected by his peers and patients, and clearly believed in maintaining his professional and academic standards. He gained his FRACGP in 1975, and his DipObs earlier in his career. His wife, Joan, and his five children miss him enormously.

Alex Swain

REGINALD 'SPOT' TURNBULL
1908—2006

RJD 'Spot' Turnbull died peacefully in a Melbourne hospital on 17 July 2006 with his family at his bedside. The manner of Spot's passing was in great contrast with most of his life, which was characterised by flamboyance, controversy, flair and turbulent political activity. His legend and legacy will survive long after those of us who knew him personally are no longer alive.

He was born on 21 February 1908 in Shanghai, China, with a large, very dark pigmented mark almost in the middle of his forehead. This mark earned him the nickname 'Spot' at school, which he was happy to carry with him for the rest of his life.

His father died when he was young and his mother remarried. His stepfather was prepared to see him well educated and sent him to Wesley College, Melbourne, and then to Queens College and Melbourne University, where he graduated MBBS in 1933. After a residency at the Brisbane General Hospital he registered as a general practitioner in Tasmania. His reputation for going out at any time, night or day, to visit patients often incurred the wrath of colleagues who were less available for their patients. As did many generalists of his day, Spot performed operations and delivered babies and used to boast that he delivered more babies than most of the obstetricians in Launceston.

Spot Turnbull is probably remembered more for his political than his medical career. He was elected to the Tasmanian Parliament in 1946 for the Labor Party in Bass and served until 1961. He became minister for health (1948-59) and, remarkably, was also treasurer for some of that time (1956-59). As minister for health he developed a contempt for aspects of the medical profession, and was often quoted as saying, 'I could never get along with those doctors!' As reported at his 90th birthday, 'He made life hell for parliamentary and medical people, friends and foes alike'.

In 1959 he was accused of accepting a bribe regarding the operation of the lottery in Tasmania. Although the case against him failed in court, he was suspended from the parliamentary Labor party. At the time Spot denied that he had been sacked, but in his reminiscences said, 'They should have sacked me on the first day I was elected. After a while they did kick me out.'

It is not hard to see why Spot's political career was stormy. He accused the premier of the day of being involved in the lottery scandal; he contradicted a government statement that Tasmania had the best education system in the country; he threatened to resign if he didn't get the health portfolio, and again over a nurses pay dispute; and publicly criticised the hydro-electric commission (a political holy cow), the police department and the public service commission.

Despite all, Spot's political achievements in the area of public health were remarkable. He introduced compulsory x-rays for TB; brought forward a bill to recognise the registration of overseas doctors; was instrumental in establishing the Royal Flying Doctor service in Tasmania; and helped introduce Tasmania's first Papanicolaou smear clinic and the first anaesthetic department at the Royal Hobart Hospital.

He resigned from the Labor Party and the Tasmanian Parliament in 1961 and put his name forward as a Senate candidate. He was the first Independent senator elected to the Australian Parliament and served from 1962 to 1974. He spent most of his time as an Independent except for a period in 1969 when he helped to form, then represent, the Australia Party. He soon after resigned from the Australia Party–whom he described to me as 'a rag-tailed lot that liked to chain themselves to fences'–and continued as an Independent senator from 1970 until 1974.

Spot was also an alderman of the city of Launceston from 1959 until 1967. He said that he stood for council after a conversation with the mayor about how it was unfair that, as an alderman, the mayor got free car parking but that Spot, an important doctor in the town, had to pay parking fees. 'Well, if you want a free car park you'd better stand and become an alderman', he was told. Spot did, and the headlines for the local paper said: 'Turnbull to stand for alderman for free car park'. Motorists thought he was standing for free car parking and they voted him in!

He was mayor of the City of Launceston in 1965 and 1966. He detested protocol and opened the town hall to people who had never previously been invited to official functions. He was instrumental in finalising sister city arrangements with Ikeda in Japan, initiated the first city art purchases and, against considerable opposition, introduced fluoridation of Launceston's water.

Reginald JD Turnbull will long be fondly remembered for his colourful medical and political life and the many significant contributions he made to his community and his state. He is survived by his second wife, Nell, his sons Shann and Hamish and daughter Marcia.

Frank Madill

Spot Turnbull had been holding his own wakes since he turned 90. Photo courtesy 'Launceston Examiner'.

THANK YOU FOR YOUR SUPPORT

Thank you to alumni and friends who have generously donated to the programs in the university and the Faculty of Medicine, Dentistry and Health Sciences over the last year. In 2006 a total of $103,533 was donated to support faculty initiatives, including $59,225 donated through UMMS membership and a further $44,308 through the University Fund. Your donations are making an important contribution to the following programs.

Semester 9 medical students Riteesh Bookum and Wai May Loh, practice taking blood from plastic arms during a tutorial earlier this year. As clinical skills educator, Meredith Heily, said, 'this is the place to make mistakes'. Plenty of practice on simulated arms during tutorials, ensures technique mistakes are corrected before medical students conduct any procedures on real patients.

The Dean's Fund for Excellence—$58,283
These funds are enabling us to develop our teaching and learning resources for undergraduate and postgraduate students. Funds will help renew our training equipment for medical students in both pre-clinical and clinical settings. New equipment will include pelvises for digital rectal examination and urinary catheterisation; lumbar puncture models; plastic arms for intravenous cannulation and taking blood gases; head and neck models to practise airway management; and plastic skin for the development of suturing skills. This equipment allows students learn the relevant theoretical aspects and to make mistakes in a supportive environment without causing harm or distress to patients. In addition, this income will help us to transfer some of our irreplaceable teaching resources to digital technology, and develop our teaching and learning media such as videos and online learning materials.

Helping medical students in financial need—$27,960
This income is providing support for medical students who are suffering a disadvantage or who encounter unexpected financial difficulties during their studies.

Supporting medical research—$11,955
These funds are supporting critical areas of research such as research on the development of vaccines to combat influenza (including bird flu), HIV, malaria, hepatitis, meningitis, rotavirus and contraceptive vaccines.

Student prizes to encourage outstanding achievement—$1495
These donations support student prizes, which acknowledge and inspire some of our most talented students, for example the Advanced Medical Science Prize and the Peter G Jones Elective Essay Prize.

Specified by donors—$3840
These funds will support particular areas and programs in the Faculty of Medicine, Dentistry and Health Sciences that have been specified by donors.

GIVING TO THE UNIVERSITY OF MELBOURNE

Your gift to the University of Melbourne is a gift to education, research and the future health and well-being of our communities. Bequests and donations to the Faculty of Medicine, Dentistry and Health Sciences help us to provide high quality health and medical education, research and student support.

If you would like to find out more about giving to the university and areas or programs you may wish to support in the Faculty of Medicine, Dentistry and Health Sciences, please contact:
Robin Orams, Manager,
Communications & Alumni, Faculty of Medicine, Dentistry & Health Sciences,
University of Melbourne
VIC 3010, Australia,
Tel: +63 3 8344 5889,
Fax: +63 3 9347 7084
Email: robinjo @unimelb.edu.au

You can also explore our website for information on how to make a gift to the university at:
www.unimelb.edu.au/alumni/giving
or contact our Advancement Office,
Level 3, 45 Barry Street,
The University of Melbourne,
Victoria 3010 Australia
Tel: +613 8344 1751.

ALUMNI AND FRIENDS IN THE USA, MEXICO, THE UK AND CANADA
Information for alumni and friends who are residents or have assets and tax obligations in the in the USA, Mexico, the UK or Canada, and are considering a gift or bequest to the University of Melbourne

USA and Mexico: the USA Foundation can assist with making such a gift tax effective. The foundation is an incorporated not-for-profit body in the USA and has made a number of grants to the University of Melbourne.
Contact: The Administrator,
The University of Melbourne USA Foundation, 630 Mt Pleasant Road,
Freeville, New York 13068 USA.
Telephone (+6 07) 277 8860
Email: usa-foundation@unimelb.edu.au

United Kingdom: the Friends of the University of Melbourne Charitable Trust is a registered charity and has made a number of grants to the University of Melbourne.
Contact: The Trustee, The Friends of the University of Melbourne Charitable Trust, Swire House, 59 Buckingham Gate, London SW1E 6AJ United Kingdom.
Telephone (+0 20) 7630 1075
Email: uk-trust@unimelb.edu.au

Canada: the Income Tax Act of Canada allows tax-deductible donations and gifts to prescribed universities overseas including the University of Melbourne. If you are interested in directing a tax-deductible gift or bequest to the university, you or your tax adviser can find the latest information in Section 3503 and Schedule VIII of the Income Tax Act.

IN BRIEF

From Left - Right: Brian Fry; Rony Duncan and Andy Hill; Sandra Uren

CONGRATULATIONS TO ALUMNI, STAFFS AND STUDENTS

Sam Berkovic (MBBS 1977, Medicine AH/NH, Epilepsy Research Centre)–2006 Royal Society of Victoria Research Medal for Scientific Research in Human Health or Medical Sciences; 2006 Clive & Vera Ramaciotti Medal for Excellence in Biomedical Science. *Sidney Bloch (GradDip Psych 1970, PhD 1972, CSHS)*–citation of the RANZCP.

Mary A Brooksbank (MBBS 1968)–AM for service to medicine in the field of palliative care as a clinician, researcher and educator, and through contributions to professional organisations.

Peter D Brukner (MBBS 1977, CHESM)–OAM for service to sports medicine, particularly through the Australasian College of Sports Physicians, and as a medical adviser for sporting organisations.

Charles W Butcher (MBBS 1969)–OAM for service to rural and remote medicine in the Northern Territory, and to the community.

Graeme Clark (Laureate Professor)–Ian Wark Medal. *David M De Kretser (MBBS 1977)*–AC for distinguished contributions to public life as a medical researcher of international reputation in the field of reproductive biology, to the development of the biotechnology industry and to bioethics. *Derek Denton (MBBS 1947, HFI)*–Honorary Doctor of Laws at the University of Melbourne, 2006. *Geoffrey Donnan (MBBS 1972, MD 1981; Director NSRI)*–William Feinberg Award for Excellence in Clinical Stroke.

Rony Duncan (PhD 2006; MCRI)–2006 Young Tall Poppy Award. *Murray D Esler (MBBS 1967, BMedSc 1967)*–AM for service to medical science through research in the area of human cardiovascular neuroscience, and to the development of health policy and treatment therapies.

Marius Fahrer (Anatomy & Cell Biology)–RACS 2006 ESR Hughes Award.

Bryan Fry (Biochemistry, Bio21)–Victoria fellowship; ARC QEII fellowship. *Alan Hampson (BSc 1961, MSc 1970)*–University of Melbourne Honorary Doctor of Medicine, 2006. *Andy Hill (Bio21)*–2006 Young Tall Poppy Award.

Donald W Hossack (MBBS 1954) University of Melbourne Honorary Doctor of Medicine, 2006. *John M Hutson (MD 1986, DSc 2006, Paediatrics, RCH)*–AO for service to medicine, particularly in the field of paediatric surgery as a clinician, teacher and researcher, and to the community through the scouting movement. *Andrew Kaye (MBBS 1973, Surgery RMH/WH)*–2006 Paul Bucy Award from the University of Chicago and the American Association of Neurosurgeons, *Robert J Kearney (MBBS 1975)*–OAM for service to the community, particularly through the provision of specialist medical services in Australia, the Pacific region and East Timor, and to medicine as an ophthalmologist.

Robert Kemm (Physiology)–2006 Carrick Citation. *Robert Marshall (MBBS 1948, MS 1955)*–at the age of 80, became the oldest person to graduate MD from the University of Melbourne, in December 2006. *Colin Masters (Laureate Professor)*–Lifetime Achievement Award in Alzheimer's disease; Grand Hamdan International Award for Medical Sciences in the field of Molecular & Cellular Pathology of Neurological Disorders.

Gustau Nossal (Professor Emeritus)–B'nai B'rith's Raoul Wallenberg Humanitarian Award 2006. *Ryan Mills (PhD student, Biochemistry, Bio21)*–an inaugural winner, Dowd Foundation Scholarship for 2006.

Robert H Moffitt (MBBS 1969)–OAM for service to medicine as a general practitioner, particularly to veterans and their families. *Warner Mooney (MBBS 1962)*–OAM for service to medicine in the field of otolaryngology, particularly paediatric otolaryngology, as a surgeon and hospital administrator. *Leon Piterman (MBBS 1971, MMed 1986)*–AM for service to family medicine through distance education for doctors in remote areas, to research and student training and to international medical education.

John Reddish (MBBS 1956)–OAM for service to the community through Rotary International, particularly in the development and provision of humanitarian aid programs.

David C Rivett (MBBS 1972)–OAM for service to medicine through professional organisations in the area of rural and remote medicine, and as a general practitioner in the Batemans Bay area.

Maxwell Shavitsky (MBBS 1952)–OAM for service to the community as an advocate for reform in the areas of child health and child protection, and to medicine as a general practitioner.

Bruce S Singh (Deputy Dean, MDHS)–AM for service to psychiatry through medical education and training,

contributions to mental health research and reform, and the development of clinical services. *Hugh Taylor (Ophthalmology; CERA)*–2006 Mectizan Award.

Stephen Turner (Microbiology & Immunology)–Pfizer Australia Fellowship. *Sandra Uren (Microbiology & Immunology)*–2006 Carrick Citation.

Ivo D Vellar (MBBS 1957, MS 1998)–OAM for service to medicine as a surgeon, and to the Italian community, particularly through a range of organisations providing aged care services. *Tien Wong (Ophthalmology; CERA)*–Commonwealth Health Minister's Award for Excellence in Health & Medical Research for 2006; Novartis Prize in Diabetes for young investigators.

MELVILLE HUGHES SCHOLARSHIP 2007

Tanya Yuan

Tanya Yuen (BDSc 1991, MBBS Hons 1999) has been awarded the Melville Hughes Scholarship for 2007. Tanya is in her 3rd year of neurosurgical training and will be undertaking her MS under the supervision of Professor Andrew Kaye and Associate Professor Terry O'Brien from the departments of surgery and medicine at RMH. Tanya is pictured here with Andrew Kaye (L) and the Dean, James Angus (R) at the presentation of her scholarship. Tanya's MS involves research into factors predisposing to seizures in patients who have had surgery for tumours arising from the brain. Such seizures can be very debilitating and medically uncontrollable. It is hypothesised that various factors, such as the use of anti-seizure medication before and after surgery; having a larger amount of tissue removed at the time of surgery; and the presence of special electrical channels in brain cells around the tumour, all influence the likelihood of seizures after surgery. Information obtained from patients treated for such tumours at RMH in the last 5 years and over the next 12 months will be analysed, with the aim of discovering which factors are important in determining whether patients will have seizures after surgery. Hopefully, observations from this work will enable physicians to more effectively prevent such seizures for these patients.

The Melville Hughes Scholarship was bequeathed to the University of Melbourne in honour of Melville Rule Hughes, an alumnus of the School of Medicine (MBBS 1915) who was killed in action in France in 1917. The scholarship is offered to medical graduates undergoing further research training in the discipline of surgery.

2006 STUDENT PRIZES AND AWARDS

Australian Medical Association Prize–*Robert Commons*; The Carl de Gruchy Award–*Victoria Gershenzon*; The Clara Myers Prize in Surgical Paediatrics–*Marie Sinclair*; Dr Kate Campbell Prize–*Jordan Kamel*; Dwight's Prize in Integrated Clinical Studies 2004–*David Deelen*; The Edgar and Mabel Coles Prize–*Robert Commons*; The Edgar Rouse Prize–*Sandra Li-Sen Neoh*; ESJ King Prize–*Angela Wilson*; GA Syme Exhibition–*Helen Chan & Ru Min Lee*; Geoffrey Royal Prize in Clinical Surgery–*Rana Dhillon*; The GlaxoSmithKline Semester 5 Prize–*Angela Wilson*; The Harold Attwood Prize in Pathology–*David Deelen*; Hedley F Summons Prize (for Otolaryngology)–*Andrew Gogos*; Herbert Bower Memorial Prize–*Sandra Li-Sen Neoh*; Herman Lawrence Prize in Clinical Dermatology–*Andrew Gogos*; Howard E Williams Prize–*Katherine Wilson*; Ian Johnston Prize in Reproductive Medicine/Biology–*Corina Behrenbruch*; The James Stewart Bequest–*Kanae Jennifer Nagao, Piraveen Pirakalathanan & Nathan Jun Yew Wong*; The Jamieson Prize– *Rominder Grover*; John Adey Prize in Psychiatry–*Samantha Culvenor*; John Cade Memorial Medal in Clinical Psychiatry–*Lavinia Spain*; The John Fulton Prize–*Robert Commons*; Katharine Woodruff Memorial Prize–palliative medicine–*Joanne Carrington*; The Keith Levi Prize–*Rominder Grover*; The Max Kohane Prize–*Eric Soon Yi Ee*; The Neil Johnson Prize–*Wen Xu*; Prize in Clinical Gynaecology–*Sandra Li-Sen Neoh*; RACGP Victoria Faculty Prize–*Lavinia Spain*; RANZCOG Women's Health Award–*Anne Trinh*; RAPP (The Rehabilitation, Aged Care, Palliative Care and Psychiatry of Old Age Prize)–*Sandra Li-Sen Neoh*; The Robert Gartly Healy Prize in Medicine–*Rominder Grover*; The Robert Gartly Healy Prize in Obstetrics–*Ashwini Arumugaswamy*; The Robert Gartly Healy Prize in Surgery–*David Deelen*; Robert Yee Prize in Medicine–*Rana Dhillon*; The Royal Australian and New Zealand College of Ophthalmologists' Prize–*Andrew Gogos*; Royal Children's Hospital Paediatric Handbook Award–*Shuang Chan, Sandra Neoh & Marissa Daniels*; Sir Albert Coates Prize–*Angela Wilson*; Smith and Nephew Prize–*Linsey Gani*; The Vernon Collins Prize in Paediatrics–*Sandra Li-Sen Neoh*; Victorian Metropolitan Alliance Prize in General Practice–*Briony Norris*; Walter & Eliza Hall Exhibition–*Angela Wilson*.

2006 DEAN'S HONOURS LIST

Semesters 1 & 2 *Leah Brown, Nicholas Cheng, Daniel Forster, Christina Guo, Zina Hijazi, Henry Jasin, Julia Lai Kwon, Emma Leitinger, Vivien Li, Jo-Lyn McKenzie, Justin Potts, Andres Del Rio, Kenneth Jun-Wen Sim, Shu-lin Teo, Aaron Wong, Jessica Wong*

Semesters 3 & 4 *Sandeep Arunothayaraj, Clare Bajraszewski, Kenneth Buxey, Cengiz Cimenkaya, Harry Georgiou, Ramzi Hijazi, Brendan Jones, Angela Keen, Jie Li, Shueh Wen Lim, John Ozcan, Stavroula Papapostolou, Heather Pascoe, Rifly Rafiudeen, Li Yuan Nicole Tham, Elizabeth Walker, Darren Webb, Henry Han-I Yao*

Semester 5 *Jessica Day, Vivien Gu, George Heriot, Suraya Kamsani, Kai En Leong, Hui Yin Lim, Vincent Mok, Kanae Nagao, Candice Simpson, Dalveer Singh, Shreerang Sirdesai, Nilmini Wijemunige, Angela Wilson, Nathan Wong*

Semesters 8 & 9 *David Deelen, Rana Dhillon, Nicole Gao, Arnab Ghosh, Haoling Hu, Mervyn Kyi, Caitlin Murphy, Ramona Muttucumaru, Catherine Porter, Hao-Wen Sim, Fairlie Wayne, Bo Xu, Wen Xu*

Semesters 10 & 11 *Robert Commons, Caroline Czarnecki, Nathan Donovan, Eric Ee, Nina Fisher, Andrew Gogos, Rominder Grover, Jordan Kamel, Emily Littlejohn, Sarah McGuinness, Lucy Modra, Li-Sen Sandra Neoh, Vivian Nguyen, Rebecca Scambler, Anne Trinh, Grace Walpole.*

2006 TOP STUDENT

Rob Commons was the top student for the 2006 graduating MBBS/BMedSc cohort. He has begun his intern year in the infectious diseases unit at RMH, continuing his interest in this area which began during his AMS year. He is still to decide on his career path and hopes to gain a variety of experiences in the next few years, intending to work in developing countries or Antarctica for a period of time. Rob also hopes to find some free time to pursue his interest in athletics and relearn the guitar.

2006 RL SIMPSON ELECTIVE AWARDS

Three RL Simpson Elective Awards were made in 2006 to: Mary Fonti, to assist her to undertake an elective to the Northern District Hospital, Luganville, Espiritu Santo, Vanuatu; Stephanie Muller, to assist her to undertake an elective to Derby Hospital in the Kimberley Health Region in Western Australia; and to Daniel Golshevsky to assist him to undertake an elective to Addis Abiba in Ethiopia.

2006 UMMS AMS PRIZES

Jack Pang, for his project 'The Arterial Supply of Tendons of the Knee: An Anatomical Study' done at the Jack Brockhoff Reconstructive Plastic Surgery Research Unit, Department of Anatomy and Cell Biology, with Sarah Shen, Wei-Ren Pan, Ian R Jones, and G Ian Taylor AO.
Matthew Lee for his project 'Developing cardioprotective drugs from natural antioxidants' under the tutelage of Associate Professor Owen Woodman of the Department of Pharmacology and Drs Clive May and Colleen Thomas of the Howard Florey Institute.

2006 UMMS PETER G JONES ELECTIVE ESSAY PRIZES

Prizes for 2006 were awarded to Joshua Osowicki for his essay 'Hot town, summer in the city', to Maithri Goonetilleke for his essay 'Tales of an aspiring bridge builder–Swaziland 2006', and to Simon Liubinas for his essay 'Palliative care and the wheel of Samsara'. Joshua and Simon's essays are published on p 6-7.

Other essays submitted for the prize can be found at www.medicine.unimelb.edu.au/umms/publications/chiron/pjonesessays.html

WHAT'S ON

2006 Dean's Lecture Series

Lectures are held on Tuesday evenings from 6.00-7.00pm in the Sunderland Lecture Theatre, ground floor, medical building, corner of Grattan St & Royal Pde, University of Melbourne, Parkville.

The series is free, but RSVPs are requested on T: (+61 3) 8344 9800 or E: mdhs-rsvp@unimelb.edu.au Further information www.mdhs.unimelb.edu.au/news/deanslecture/

Festschrift for Professor Lorraine Dennerstein AO

Hormones, Mood and Sexuality across the Lifespan. Saturday 4 August 2007, Copland Lecture Theatre, University of Melbourne.

Further information www.hms2007.com.au

ANNIVERSARIES IN 2007

In September 2006 the Royal Women's Hospital began a year of activities in celebration of its 150th anniversary. Information about celebrations planned for the hospital's 150th anniversary can be found on www.thewomens.org.au. The departments of medicine and surgery at the Royal Melbourne Hospital and the department of medicine at St Vincent's Hospital celebrate their 50th anniversaries in 2007.

Information about celebrations at the RMH is available from: Kate Hannah, T: (+61 3) 8344 3277 or E: khannah@unimelb.edu.au

ALUMNI EMAIL AND ONLINE COMMUNITY

As part of the University of Melbourne's new alumni web community, a free, permanent university email address is now available to all alumni. This will mean you can find friends, maintain your profile in an online directory, update your contact details and stay informed about news and events. The alumni web community will be your essential resource for reconnecting with former classmates and university life and accessing career networks and contacts across the world.

For more information please contact the advancement office on T: (+61 3) 8344 1751; E: info@alumni.unimelb.edu.au

BOOKS

If you Faint, Fall Backwards

Medicine: warts and all

It All Comes Back to Sheep

Farming: warts and all
by Frank Madill, 2005, illustrated.
Frank Madill graduated MBBS from Melbourne University in 1965. These first two volumes of his memoirs tell the story of his medical student days, his time practising as a GP in Launceston and how he combined medical practice with sheep farming in rural Tasmania. They are available for $29.95 plus postage and can be ordered directly from the author at: PO Box 565, Mowbray, Tasmania, 7248 or from his website: www.frankmadill.com

A Question of Duty

Dr Alan King AM BSc, MBBS, FCCP, FRACMA, FAFRM A biography as told to Cyril Ayris,
Alan King, 2004, illustrated.
Alan King's (MBBS 1935) life's story covers his time spent working in the Kimberley, in a German POW camp where he learnt how to treat and control TB, and his subsequent work controlling the post-war TB epidemic in Australia.

Verbal Medicine

21 Contemporary Clinician-Poets of Australia and New Zealand
By Tim Metcalf, Ginninderra Press, Canberra, 148 pp.
Available for $27.50 plus postage from Ginninderra Press, PO Box 6753 Charnwood ACT 2615 Australia, T: (+61 2) 6258 9060 F: (+61 2) 6258 9069.
Verbal Medicine is a quick-acting, long-lasting literary elixir ideal for those suffering from a deficiency of the art of medicine. Twenty-one poets, one hundred poems, a historical sketch and select bibliography record a blossoming of poetry concerned to locate the human firmly at the centre of a clinical world that often has other priorities.

More information about Tim Metcalf (MBBS 1984) and his poetry can be found on his website: www.timmetcalf.com.au

THOSE WERE THE DAYS...

The Australian Medical Students Association (AMSA) is approaching its 50th birthday! In celebration the association is launching the AMSA history project, to document the people, events, campaigns, and memorable moments of over four decades of Australian medical students. They are interested in recollections, memorabilia, photos, and AMSA publications.

If you wish to contribute, please contact: AMA House, 293 Royal Parade, (PO Box 917), Parkville 3052, E: vicepresident@amsa.org.au

2007 MBBS REUNIONS

Please contact the UMMS office for details of reunions listed below.
If you are planning a reunion, you can contact the UMMS office for a list of graduates for your year.

66th year of 1941 20 September (tbc), venue (tbc)
60th year of 1947 Mid October 2007, Melbourne Club
55th year of 1952 10–11 November 2007, Melbourne Savage Club
50th year of 1957 27 October 2007, Kooyong Lawn Tennis Club
46th year of 1961 2 March 2007
45th year of 1962 21–22 April 2007, University House
40th year of 1967 19-21 October 2007, Heritage Country Club
30th year of 1977 Date & venue (tbc)
25th year of 1982 Date & venue (tbc)
20th year of 1987 Date & venue (tbc)

PLANNING A REUNION?

Planning a Reunion? University House is a beautiful Victorian home dating from 1885, the sole survivor of a number of Victorian professorial houses that once lined Professors Walk. Situated within the grounds of the university, University House is five minutes from the city centre and features function rooms catering for six to 300 guests.

T: (+61 3) 8344 5254 or www.uniclub.com.au

UMMS MEMBERSHIP

UMMS promotes excellence in medical education and research, and raises funds to support a range of initiatives within the school. The society provides medical graduates with an opportunity for active, continuing links with the School of Medicine and the university. It is also a means for graduates to stay in touch with former classmates. Membership is free.

UMMS Office, School of Medicine, University of Melbourne VIC 3010. T: (+61 3) 8344 5888, F: (+61 3) 9347 7084, E: umms-medicine@unimelb.edu.au www.medicine.unimelb.edu.au/umms/index.html

FROM OUR COLLECTION

In the collection held by the Harry Brookes Allen Museum of Anatomy and Pathology, every item of human tissue is issued with a barcode as a record-keeping and identification aide. A barcode denotes that the specimen is a human remain.

One category of specimen in the collection is special because of its absence of human tissue. What is left on display in this group of collection objects is a cast of the internal structure of an organ in the form of its blood supply.

Called corrosion casts, they are able to demonstrate the way in which vessels course through organs. The shape of the original organ is immediately recognisable by its intricate network of blood vessels. Body cavities can also be represented by corrosion casts.

The first recorded example of a cast of a body cavity was one of the cerebral ventricles by Leonardo Da Vinci, who used molten wax as a medium. Unfortunately, due to the lack of a fixative for the brain tissue, the ventricle's true shape was not retained in the cast, as the brain tissue was too soft to maintain the shape it held in life.

To the untrained and unfamiliar eye, corrosion casts of an organ's blood vessels look like coral sculptures: intricate networks of brightly coloured branchlets. As a student, I used to marvel at these sculptures, naively thinking that after the vessels had been filled with some sort of hard-setting plastic, a poor soul would have to sit by the specimen for hours, manually removing the soft tissue covering the plastic network.

Liver Corrosion Cast, H Nye and KJ Hardy, 1968

During my later time as an anatomical scientist, I discovered the actual method of constructing a 'corrosion cast'. The specimen used is of great importance, particularly its freshness. Older specimens that have been stored tend to have less patent vessels, which cause blockages through which the liquid casting medium cannot pass.

In the case of liver corrosion casts (like the one pictured) cold-setting resin is injected into the preserved liver first into the bile duct, then the hepatic artery and finally the portal vein and hepatic veins. By casting both the veins and arteries in the same specimen, the resin structure supports itself once the biological material has been removed.

After the resin has set inside the organ, the whole specimen is bathed in fresh, concentrated hydrochloric acid for eight days. The finished specimen can then be cleaned with a water spray and any remaining un-macerated tissue can be removed with a further acid bath.

The Harry Brookes Allen Museum of Anatomy and Pathology has several corrosion casts in its collection, including livers, kidneys, and a brain. Most of these were produced in the 1960s.

Rita Hardiman, Curator, Harry Brookes Allen Museum of Anatomy and Pathology

CHIRON

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