

CHIRON

JOURNAL OF THE UNIVERSITY OF MELBOURNE

MEDICAL SOCIETY VOL 5 NO 3 JUNE 2005



UMMS
UNIVERSITY OF MELBOURNE
MEDICAL SOCIETY

As at 1 May 2005

President

Professor Emeritus David Penington AC

Chairperson

Professor James Angus

Deputy Chairperson

Professor James Best

Members

Dr Lorraine Baker

Dr Lean Peng Cheah

Dr Jennifer Conn

Dr Barbara Goss

Dr David Westmore

Mr Michael Wilson

CHIRON

Editors

Ms Liz Brentnall

Professor Janet McCalman

Ms Linda Richardson

Editorial Board

Professor James Angus

Professor James Best

Associate Professor Wilma Beswick

Associate Professor Susan Elliott

Dr Richard Frampton

Ms Meryl Fullerton

Associate Professor Lesleyanne Hawthorne

Ms Robin Orams

Dr John Waller

Design and Typesetting

ArtWords Pty Ltd

Enquiries and Correspondence

University of Melbourne Medical Society

School of Medicine

The University of Melbourne

Victoria 3010

Australia

Telephone (+61 3) 8344 5888

Faxsimile (+61 3) 9347 7084

Email: umms-medicine@unimelb.edu.au

Website:

<http://www.medicine.unimelb.edu.au>
/UMMS.html

Contributions Welcome

ACKNOWLEDGMENT

UMMS thanks the
Medical Defence Association of Victoria for
its continuing sponsorship of *Chiron*

CHIRON

CHIRON THE CENTAUR, TEACHER OF MUSIC,
MEDICINE AND HUNTING

VOL 5 NO 3

CONTENTS

JUNE 2005

1	• Editorial.....	Gordon Clunie and Susan Elliott
DEAN'S LECTURE SERIES		
2	• Seminar	
	What is a Question of Ethics and Who Decides?	
	Introduction	Graham Brown
	Decision making in the absence of evidence	Tony Costello and Alan Coates
	Plain language statements that impair communication	Angela Watt
	A religious perspective on clinical practice and research in a cross-cultural setting	Amjad Hussain
	Analysis of ethical issues	Lynn Gillam
	Should we introduce unified national human research ethics committees?	Richard Fox, Rufus Black, Kerry Breen and Paul Komesaroff
10	• 70 th Beattie Smith Lecture	
	Every Me and Every You.....	Patrick McGorry
SCHOOL OF MEDICINE		
13	• From the Dean	James A Angus
15	• Academic Departures and Appointments	
17	• Eye Research Australia	Hugh R Taylor
19	• Focus on Research at Melbourne	
22	• From the Students and Staff	
	2004 Graduate stories	Cameron Keating, Jodi Cronin, Tze Ping Tan, Matthew Richardson
24	• Teaching the New Medical Course	Neil Strathmore
25	• Peter G Jones Elective Essays	
	The Power of One	Liesl Celliers
	The Gods of Small Things.....	Prassannah Satasivam
	Northern Exposure	Kirsten Scott
28	• The Advanced Medical Science Year.....	Robert Commons
29	• Graduates, Prizes and Awards	
34	• Reunions	
36	• UMMS Congratulates	
37	• Obituaries	
43	• Bequests and Memorial Gifts	Robin Orams
MAGAZINE		
45	• Dermatological Moulages at the Harry Brookes Allen Museum of Anatomy and Pathology.....	Mei Nah Tay
47	• 2004 UMMS Lecture	
	The DNA Revolution	Suzanne Cory
50	• Witnesses to Paediatrics in the History of Australian Medicine.....	
Ann Westmore and Glenn Bowes	
53	• Memories of the Melbourne Medical School	
	James Guest	Liz Brentnall
	June Danks	Ann Westmore
	Geoff Kenny.....	Ann Westmore
56	• Interesting Times—the medical curriculum in its first fifty years	
Ann Brothers and John Waller	
58	• Remembering my Father's Memories	Ron Doig
59	• Reviews	

ACKNOWLEDGMENTS

The board thanks contributing UMMS members, university staff and students and members of the public. The views and opinions expressed in this journal are those of the authors and not of the University of Melbourne medical school or of the University of Melbourne Medical Society.

Chiron is published annually by the University of Melbourne Medical Society and circulated to all UMMS members and MB BS students of the University of Melbourne.

Further copies of *Chiron* may be purchased from the UMMS office at \$10 each plus \$5 postage and handling within Australia.

ISSN 0814-3978 COPYRIGHT© THE UNIVERSITY OF MELBOURNE 2005

EDITORIAL

GRADUATION FROM TRANSITION

Professor Emeritus Gordon JA Clunie (Dean 1995–1997)

Associate Professor Susan Elliott, Associate Dean (Academic)

DECEMBER 2004 MARKED the graduation of the first cohort of medical students from the revised curriculum, introduced in 1999.

The reasons for the revision of the curriculum have been argued extensively in previous issues of *Chiron*, but are worthy of repetition as the first graduates move into the workforce.

An explosive growth of medical knowledge and understanding in the past twenty-five to thirty years had led to a major overload for medical students, fostering a superficial approach to learning related more to passing frequent examinations than gaining a deep understanding of concepts and principles as a basis for future practice.

An appreciation of these problems led to a School of Medicine retreat in 1997, resulting in the development of the 'new' curriculum, with greater emphasis on concepts and principles than detailed factual information, concentrating on the acquisition of the skills of self-directed learning as a basis for life-long continuing education, on vertical and horizontal integration of knowledge and on the early introduction of clinical skills and the relevance of basic science.

There was no claim to originality in these concepts, which are now virtually universally recognised. Many would argue that the University of Melbourne had indeed been slow to move from its traditional approach and that change was more than overdue. What was original was the provision of twin streams and the introduction of a compulsory research year for undergraduates. Students are selected either as undergraduates or as graduates from other university courses. The undergraduates undertake a six year MB BS course with an intercalated biomedical science degree. The graduate students share much of the course leading to an MB BS degree only, after four and a half years.

Selection of graduate students is on the basis of a combination of their 'grade-point' average in their undergraduate course, their performance in the Graduate Australian Medical Schools Admission Test (used by other schools concentrating on graduate entry) and a structured interview. Selection for undergraduate entry (two thirds of the students) involves a psychometric test designed to measure problem-solving skills and personal qualities in addition to the traditional VCE or equivalent results.

The course for the undergraduate stream involves an initial two and a half years followed by an intercalated Advanced Medical Studies (AMS) year, chosen from a range of studies including traditional bench-based research, rural health, Aboriginal health, epidemiology, medical humanities and many other options, which leads to the award of Bachelor of Medical Science. These students then return to the final two and a half years of the course which increases emphasis on the acquisition of clinical skills while maintaining the relevance of basic medical sciences.

Graduate students enter the course one semester later than the undergraduates and undertake a four-and-a-half year program, advancing one cohort when the undergraduates divert to their research year.

The concept was to provide a combination of a flexible intake and a flexible course which would produce a varied, well-educated and well-rounded group of medical practitioners, and build on the great educational and research strengths of the University of Melbourne.

With the graduation of the first cohort of 'new course' students it is timely to review whether the new course is serving the students and their future patients well and, if not, how it might be improved. Systematically gathered student feedback and performance data has been mostly positive with the early

clinical experience, problem-based learning (PBL) and general practice rotations particularly well received. In the words of a recent graduate:

It is perhaps now that I have settled in to the intern life that I can truly look back on the course and give an honest assessment. Was it enjoyable first and foremost? Yes. Did I feel well prepared to begin a career in medicine? Yes. Did it cater to the demands and needs of a student? On the whole, yes.

Feedback from general practitioner supervisors of final year students placed in their practices was highly positive and many positively contrasted the 'new' students' skills with those from the previous course. This comparison is not fair as it is compounded by the move of the GP rotation to the final year from fifth year in the old course, but does indicate that many of the students achieved the knowledge, skill and attitudinal learning objectives.

Differences between graduate students and their school-leaver colleagues were fewer than expected. There were no systematic differences in performance in any of the course components although school-leavers tended to dominate the Dean's honours lists.

Feedback has not, of course, been universally positive and identified deficiencies are addressed. Student concern that 'anatomy [is] too short, not detailed enough, every surgeon has had something to say to us about that!' has led to examination of the problem. Some of the concern appears to arise from inappropriate expectations (surgeons' complaints of students' anatomy knowledge are not new). However, it is clear that students need more guidance with anatomy and changes to the anatomy program have achieved excellent results.

It must be remembered that no medical curriculum can be static but should reflect the changing needs of the student population and wider community. The Melbourne medical curriculum aims to remain dynamic, innovative and informed by best available medical and educational evidence.

COVER STORY

Celebrating a legacy of quality

Our cover features class photographs of the final year University of Melbourne medical students of 1904 and 2004. In celebrating the graduation of the first group of students from the most recent incarnation of the Melbourne medical course, we also celebrate the legacy of excellence handed down by generations of students, graduates and teachers. Stories of student days by current, recent and not-so-recent medical students feature in this issue of *Chiron*. Contributions from readers are very welcome, although we cannot guarantee publication, and should be forwarded by mail to: the editors, *Chiron*, UMMS Office, School of Medicine, The University of Melbourne, Victoria 3010, Australia, or by email to umms-medicine@unimelb.edu.au

Photographs: Danielle Edwards (Austin Hospital clinical school); Alana Tuxen (Royal Melbourne Hospital/Western Hospital clinical school); Yu Sheng Huang (St Vincent's Hospital/Geelong Hospital clinical school); Justine Sywak (rural clinical school); Medical History Museum collection (1904 students).

SEMINAR

Friday 23 July 2004

What is a Question of Ethics and Who Decides?

Convener, Professor Graham Brown

*James Stewart Professor of Medicine and Head, Department of Medicine,
the Royal Melbourne Hospital and Western Hospital, the University of Melbourne*

Introduction

GRAHAM BROWN

THE FACULTY'S ANNUAL ethics seminar addresses topical issues relevant to medical practice and research in Australia. Our aim is to contribute to the broader debate within society about controversial issues, particularly topics under consideration by national bodies such as the Australian Health Ethics Committee (AHEC).

The goal of this seminar was to identify whether, in the conduct of medical research and clinical practice, particular questions are relevant for ethics committees, scientific committees, legal advisors or all of the above. It was also to explore whether our attempts to address ethical issues have actually increased the problems faced by researchers and the subjects of clinical studies.

Although improvements in communication between practitioner and patient, or between medical researcher and research subjects, may be driven by medico-legal concerns, they are welcomed on all sides. Unfortunately, legal considerations may displace the primary ethical issues in relationships that are critical for good patient care or clinical trials. The problem is magnified when practitioners and members of ethics committees are required to make assessments in the absence of scientific evidence regarding the topics in question. Practitioner, patient, researcher and subject face a dilemma when the evidence is unclear, interpretations are not decisive or, in particular, where opinion is divided among those who have assessed the evidence.

The seminar began with an example of a controversial area of clinical practice—many practitioners believe that there is sufficient, although incomplete, evidence to suggest that a particular form of practice is now the treatment of choice. Others believe we should wait for further data before making national policy. What are the ethical issues in pursuing a course of action, rather than waiting for definitive results? When some believe the case is made, is the decision to proceed with treatment, or with the study, a legal, financial or ethical issue, and who decides?

Participants then considered the increasing complexity of the so-called 'plain language statements'. These documents are often complex, hard to understand and time consuming to complete. As a result, they could have the opposite effect of their intended purpose of informing subjects of the nature of the clinical trial.



GRAHAM BROWN

'The streamlining of ethics review could be possible through the principle of "mutual acceptance" ...'

In considering the treatment and care of patients, or their participation in research trials, it is easy to forget the importance of different cultural and religious backgrounds. It is possible to ensure comprehension of research protocols by only selecting subjects from a background well understood by researchers and ethics committees. This discriminates, however, against subjects from different backgrounds: not only are they prevented from receiving the benefits of the actual trial, but the trial results are then not automatically applied to those populations excluded from the study.

Some believe that the excessive cost and time involved in the preparation and submission of multiple documents impedes the conduct of research without leading to improvements in patient care.

Recognising the ever-increasing complexity of plain language statements and the cost involved in submitting proposals to multiple committees, AHEC, the NHMRC and

Seminar Participants

Professor Tony Costello, *Head of Urology, Royal Melbourne Hospital*

Professor Alan Coates, *Chief Executive Officer, Cancer Council of Australia*

Dr Angela Watt, *Manager, Research Directorate, Melbourne Health*

Dr Amjad Hussain, *General Practitioner*

Dr Lynn Gillam, *Lecturer in Ethics, Centre for the Study of Health and Society; Research Fellow, Centre for Applied Philosophy and Public Ethics, the University of Melbourne*

Professor Richard Fox, *Director, Clinical Haematology and Medical Oncology, Melbourne Health*

Dr Rufus Black, *Ethicist and Theologian*

Professor Kerry Breen, *Chairperson, Australian Health Ethics Committee of the NHMRC*

Professor Paul Komesaroff, *Director, Monash Centre for the Study of Ethics in Medicine and Society*

other groups have been examining the possibility of establishing a uniform ethics committee to oversee multi-centre clinical trials being undertaken in Australia. Such streamlining would increase the efficiency of this expensive process without compromising the care of subjects or patients.

In the second half of the seminar speakers debated a single unifying committee at a federal level. During discussion following the debate, a number of important points were made.

There was general agreement that it would not be possible for all protocols to be reviewed by a national ethics committee as there were likely to be differences at institutional levels. Local expert knowledge is also important in dealing with topic areas with which a particular ethics committee may develop familiarity over several years. It was also recognised that it is a rather onerous task for lay members to gather the scientific background required for thorough assessment of projects in a wide variety of research areas.

The streamlining of ethics review could be possible through the principle of 'mutual acceptance', by which particular ethics committees at certain institutions would accept decisions made by other approved institutions. Any committee would, at all times, have the option of reviewing a particular trial, and would obviously have the authority to prevent it being conducted at its own institution. However, a dilemma arises when a particular protocol is accepted by one, but not another, committee: researchers undertaking studies in the institution where the trial is approved may be concerned that another institution did not approve it. It was recognised that, as currently constructed, AHEC was not in a position to act as a judge of particular projects, but one view was that Australia would be well served by the creation of such a review committee.

A strong case was made that the principle of mutual acceptance could be extended to broaden jurisdictions and, particularly for clinical trials, could even be undertaken at a national level. Some speakers felt that the loss of individual attention to detail at particular institutions would be a negative consequence of such a structure and, furthermore, would diminish the educational role of institutional committees.

Decision making in the absence of evidence: screening for prostate cancer

The case for screening

TONY COSTELLO

THE ETHICAL DILEMMA I face, on a daily basis, is how to tell men about their most prevalent cancer. Australian men don't die from the diseases they used to: we control hypertension, don't smoke as much as we used to and, some of us, don't drink nearly as much as we used to. Three thousand Australian women die from breast cancer annually. Three thousand Australian men die from prostate cancer annually. There are 12 000 new diagnoses annually and at least a hundred million dollars of our drug budget goes to treat men with metastatic prostate cancer.



TONY COSTELLO

'The absence of absolute proof of screening efficacy doesn't preclude the use of common sense.'

We need to inform men that, if they have a first degree relative with prostate cancer, their risk of developing it rises to three times the risk of the ordinary Australian male.

There are three big myths about prostate cancer perpetuated in our community. The first is that everybody has it but no-one dies from it. The second is that the cure is worse than the disease. Our curative treatments are now reasonably good compared to what they used to be. The morbidity from radiation therapy is much less than it used to be. Continence problems stemming from surgery are always mentioned, but at the Royal Melbourne Hospital only two per cent of men suffer from that burdensome outcome and we are trying to improve that. Certainly, sexual dysfunction is the major morbidity from any prostate cancer treatment, but you can't have sex in a coffin. The cure is not worse than the disease.

The third myth is that only old men have it and die from it. If, on average, a man dies ten years later than a woman does from breast cancer, does that mean he should die a painful death because he didn't know a test and curative treatment were available?

The prostatic specific antigens (PSA) test, fortunately still on the health benefits schedule, is sixty per cent more predictive for cancer than a mammogram is for a woman. Digital rectal examination doesn't hurt, takes a very short time and is not a bad test compared to a Pap smear or mammogram.

If we miss early diagnosis, a man with advanced prostate cancer is placed on hormone therapy—chemical castration, which we used to consider innocuous. It diminishes their cognitive ability, they become anaemic, they become fat, their cholesterol goes off the scale and it's a poor quality of life, let alone the sexual dysfunction we cause. An early intervention with the potential to retain potency would be much better.

What about the ethics of screening without proof? We have opportunistic screening for hypertension and for cholesterol. There is no randomised control study that tells us that cancer of the cervix screening works, although common sense tells us that it does. There is still debate that breast screening for women under fifty is effective in reducing mortality, but imagine the reaction if we tried to take away mammographic screening. However, we disenfranchise men from accessing a blood test to screen for prostate cancer.

We need to be able to identify which cancer can be watched and which needs to be treated aggressively. The PSA is good but our current research is directed at developing more sensitive and specific markers. A trial, the pivot trial, is already in place, but the absence of evidence of benefits is not proof that benefits are absent. It is unethical for a practitioner not to inform men that they have a choice to be tested for their most prevalent cancer.

The absence of absolute proof of screening efficacy doesn't preclude the use of common sense. Symptomatic prostate cancer presents too late for cure. If a man has metastatic disease we cannot cure him, we can only offer palliative castration. Cure will never be possible without screening for early detection. The PSA gives us between eight and ten years lead time between early cancer and advanced metastatic prostate cancer. The PSA has been a boon for men who want curative treatment and I would like all Australian men to be fully informed and allowed to make up their own minds on whether to be tested.

The case against screening

ALAN COATES

IWELCOME THIS opportunity to discuss the ethics of behaviour under uncertainty. I agree with almost everything that Tony Costello has said: men do need to be informed. However, I believe they need to be fully informed.

What is implied by the phrase: 'you can't have sex in a coffin'? Firstly, that you are in a coffin because you are dead. Secondly, that the process of testing and subsequent treatment will change your risk of getting into the coffin.

Screening and testing asymptomatic people may differ from the point of view of a government bureaucrat, but for the individual man who undergoes a test that may set in train a series of events, including Tony's ministrations of surgery, it is exactly the same whether the test is part of a national program or not. I use the term screening, then, as shorthand for the testing of somebody with no symptoms.

There is no question that the PSA is a very good test for people who already have prostate cancer. It's as good as any of the markers for most of the cancers we treat and better than most. However, is it a useful test to use for men who have no symptoms? Does it do more good than harm?

What harm could a screening test possibly do? Screening is useless if it identifies in an individual a disease which would never have come to light in the life of that individual. Such 'over-diagnosis' happens with all screening programs but the extent to which it happens varies. For example, we have a new disease in breast cancer called ductal carcinoma *in situ*. When I graduated it was never diagnosed, but now we have mammograms, we find a lot of it. Some of it is dangerous, much of it is not, and treatments can sometimes be more extreme than they are for invasive breast cancer. The best estimates for over diagnosis using the PSA and digital rectal examination for prostate cancer estimate that about half of all the cases diagnosed by this process fall into the category of disease which would never have become evident in that man's lifetime. For those men screening has not done them a favour, and any down-side of the treatment that may follow from their diagnosis is a loss.

Screening is also useless if it identifies disease in an individual where that disease has already spread and where the date of death isn't altered by the screening or by intervention that can only deal with the local disease.

How do we know whether screening is doing some good set against these obvious harms? It is not enough to show that men live longer after diagnosis if they are detected by screening. Even if the date of death were not to change you would measure a longer time—that's lead-time bias. It is not enough to show that the cases you find by screening are, on average, smaller and perhaps less aggressive than other cases that come to light clinically. That is called length-biased sampling and will happen in any screening process, for any disease. It is not enough to show that the mortality of the disease is falling in the community. It is and we welcome that. It's falling in many western communities, but there are other explanations. All the studies that have tried to demonstrate whether testing is correlated with the fall in mortality show no such correlation—by geography, by age group or by time of onset.

What else could cause a fall in mortality? This is where we come to the evidence. There are a few trials which look



ALAN COATES

'There is no uncertainty about side effects, only about their frequency.'

at early hormonal treatment of newly diagnosed prostate cancer. Most of them have been small and inconclusive but they were brought together in a meta-analysis by the Oxford group who showed, beyond doubt, that early treatment as opposed to waiting and treating later, whatever it does to quality of life, prolongs survival. Early endocrine treatment prolongs survival. The implication here is that, if you delay death even slightly in an old population, the mortality is never recorded as prostate cancer because an intercurrent event occurs.

We need to understand that there is uncertainty about benefit. However, there is no uncertainty about side effects, only about their frequency. Low incontinence rate figures come from urologists and high ones from independent observers, but the median rate is around twenty per cent. Once we establish uncertainty, the ethical dimensions of the 'you can't have sex in a coffin' slogan become clearer. The question begged by that slogan is crucial and is not resolved, and the advice it gives fails the professional and ethical requirement that Australian men deserve.

Plain language statements that impair communication

ANGELA WATT

HOW CAN A plain language statement (PLS) impair, rather than clarify, communication? Over the last ten or so years, the PLS has evolved from a simple and brief information sheet to a lengthy and complex legalistic encyclopaedia that few people can comprehend or recall.

The most obvious type of 'bad' PLS is poorly worded, full of complex terms or jargon, and often coupled with poor grammar and English. They have often been translated through two or three languages beyond their original! Another major source of communication impairment is well-meaning, nervous and overprotective pharmaceutical company lawyers wanting to make sure their client can never be sued, or the well-meaning pharmaceutical company clinical research associate trying to impress their superiors.

The number of pages in a PLS is increasing and the type size and the spacing between lines and paragraphs is shrinking. The average PLS for a clinical trial has gone from around four or five pages in 1994, to fourteen or fifteen pages in 2004. But are patients in 2004 better informed? Do they understand the research any better? Do the extra ten pages really assist their decision making? Are we more likely to run into problems because a patient was bamboozled by so much information that what was really important to them was buried, or because we didn't tell someone every exhaustive possibility about every aspect of every procedure in a clinical trial?

I compared two statements, one from 1994 and one from today. Both were for clinical trials of a new medication for the treatment of postmenopausal osteoporosis. Both studies were approved by the same human research ethics committee (HREC) (with some, but not complete, membership differences). The new statement had grown. The 'procedures' section had gone from one to three pages; the 'risks' section from half a page to three pages; the section about 'voluntary participation' from two sentences to half a page and the 'privacy and confidentiality'



ANGELA WATT

section from four lines to more than a page. The 1994 statement also included a number of additional sections and an additional four-page 'pharmacogenomic sub-study PLS'. The sections that expanded the most are, I think, more about protecting the trial sponsor from being sued than about making things clearer for the patient.

I also looked at two statements for clinical trials of new treatments for breast cancer, from 1997 and 2004, and found a similar story.

The document had gone from six pages to twelve and the 2004 statement included an additional statement for an optional sub-study involving a tumor biopsy for future research. The statement contained twelve sections in 1997 and twenty sections in 2004. The size of the type decreased and the length of the statement increased.

The NHMRC *National Statement on Ethical Conduct in Research Involving Humans* states that a research project must have integrity, be designed to minimise harm and be fair. The risks must be balanced by the likely benefit to be gained and the proposal must have scientific merit. Participants must also be given information about the research at their level of comprehension. Does a fourteen page PLS full of legalistic wording really constitute providing information *at the patient's level of comprehension?* The *National Statement* encourages HRECs to confer with one another and share assessment of multi-centre projects, although it says they *may* give further consideration to the ethical and administrative aspects of a project which are specific to its own institution.

If the *National Statement* encourages HRECs to confer and share reviews, why do committees insist on stamping a PLS with their own personal idiosyncratic trademark? Committees often differ about where they want certain information to appear in a PLS. Some insist on long and detailed descriptions of the risks, others insist on briefer and simpler descriptions. Some prefer information to be presented in tables, others in text. Committees also differ in their interpretation of a given statement—there have been instances where one committee thought a phrase presented a study in too promising a light and another thought the same phrase was too negative! Many changes committees make to these statements are based on what are really subjective opinions, for example, changing the words 'AML patients' to 'people with AML'. Some committees insist that procedures and the associated risks are described in detail even when the procedures or tests are part of standard care, and some insist, just as strongly, that procedures that are a part of standard care *not* be included.

I would like to conclude with some really precious, and I think quite funny, quotes that were presented to our HREC, worded exactly as they appear below:

- Data will be de-identified so as to achieve a sufficient level of patient ignominy.
- Disease X also affects men and some people.
- You must not be pregnant...or breastfed within the last twelve months.
- It will be possible for you to at any time ask for blocking of the data in respect of and within the limitations related to your right to privacy.
- You are being asked to take part because you are either male or female.

I would like to thank all the researchers, sponsors, lawyers and HREC members who provided the material and inspiration for this presentation.

A religious perspective on clinical practice and research in a cross-cultural setting

AMJAD HUSSAIN

I HAVE A wealth of experience in family general practice, acquired over more than twenty-five years in inner-west Melbourne, serving a culturally diverse population. I am also a practising Muslim, with a sound knowledge of Islam, and an active member of Melbourne's Islamic community.

To understand Muslims as patients and participants in medical trials, some basic knowledge and understanding of Islam is helpful.

Muslims form the second largest population in the world, after Christians, and are the second largest religious group in Australia. They belong to different nationalities and speak different languages, however, they all pray in Arabic.

Islam is an Arabic word meaning submission, surrender and obedience. By surrendering to the will of Allah (God), one achieves peace with oneself and the universe. It is a strict monotheistic religion, with belief in one unique and incomparable God.

The Quran, the sacred scripture of Islam, provides guidance and a code of life for Muslims. The Kaabah, in the city of Mecca, is the structure all Muslims face towards when praying. In Victoria this direction is west-north-west.

In Islam, the marriage contract is a sacred bond between a man and a woman involving definite responsibilities and mutual respect. According to the Quran, men and women have equal rights but their roles are different—men are responsible for leadership and protecting their wife and children; women care for their house, husband and children.

Muslim men are permitted to have up to four wives under certain circumstances, for example, if a wife is disabled and cannot care for her family or if a wife is unable to bear children.

A mother has more respect in Islam than a father and children have equal rights to opportunities in life: discrimination between children, male or female, is not permitted. Care of children and their right to family life is important. If a couple is together temporarily, and subsequently produce a child, the child will not have a proper family life. For the same reason, children can be fostered but adoption, as practised in the West, is not allowed. Children must know their biological origin, have contact with their parents if they are alive, and keep their family names.



AMJAD HUSSAIN

'Every Australian, irrespective of their religious or cultural background, is entitled to appropriate, evidence-based health care.'

Parents must be respected and cared for and extended family systems are encouraged to provide extra care for the young and the elderly.

Islam encourages the prevention of disease, and seeks solutions and cures. Suffering and misery are considered tests for the sufferer, the carer and the healer. Islam considers that disease and its cure are complementary and encourages Muslims to believe in Allah as the omniscient creator and healer—the physician or healer might provide the medicine or cure, but the real healing and cure comes from Allah.

There is no demarcation between matter and spirit, and the patient's spiritual well-being needs to be considered, as do social factors in the cause and treatment of the disease.

Research and advancing the application of medical knowledge to alleviate human suffering are encouraged within the Islamic legal and moral framework. Each community is obliged to have sufficient medical practitioners and allied health workers.

Important features of Islam

- Cleanliness is next to Iman (Godliness). A Muslim must wash before prayers and reading the Quran and must shower after intercourse, at the end of menstrual periods and after cessation of bleeding after childbirth.
- Pig's meat and other products derived from pigs are forbidden. Other animals consumed for food must be slaughtered appropriately, called *halal* meat. Alcohol and other intoxicating products are prohibited.
- Only the reversible methods of contraception are recommended, such as the rhythm method and coitus interruptus. If pregnancy is contraindicated on medical grounds, any method of contraception is permissible. Induced abortion is not permitted unless there is a strong medical reason to save the mother.
- Homosexuality and transvestism are considered major sins.
- In-vitro fertilisation and artificial insemination are permitted, provided the husband's sperm is used. Embryo experiments are forbidden.
- Organ transplants and donation are acceptable to preserve life, provided the donor is not at risk. Organ donation should not be the outcome of compulsion, exploitation or financial inducement.
- Plastic surgery for medical reasons is recommended but not to change natural looks or identity.
- Death and dying are considered as transformations of life, from one stage to another, returning back to Allah.
- Terminally ill patients need good palliative care for their body and soul to bolster their faith and enable peace of mind. Spiritual support needs to be provided by relatives and friends, or by people of their faith.
- Grief and pain due to loss and separation are to be tolerated with patience. The mourning period is three days only, but a widow's grief is considered severe and, if she is pregnant, can last until the child is born. If she is not pregnant, her mourning period lasts for four menstrual cycles plus ten days. She is not allowed to marry in this period, which is considered enough to reveal pregnancy and lineage of the child.
- Resuscitation and life support are important, but if life cannot be restored it is considered futile to prolong the patient's vegetative state. The process of life needs to be maintained, not the process of dying.



LYNN GILLAM

'...medicine and health research...almost invariably involve potential threats, as well as potential gains, to people's well-being.'

Every Australian, irrespective of their religious or cultural background, is entitled to appropriate, evidence-based health care. Medical research is important for the development of evidence-based health care. Sensitive and pertinent processes and tools, in different languages, need to be developed to allow meaningful research across diverse religious and cultural groups. It would be desirable for ethics committees to consult with and to include professional and lay members from diverse religious and cultural groups, and for the committees to remain relevant to the local population under study.

Analysis of ethical issues

LYNN GILLAM

ACH YEAR WE spend a full day at a dean's lecture seminar discussing ethical issues in medicine and biotechnology. The issues are fascinating, we get caught up in the details: should there be a prostate screening program? which matters more—fair and cost-effective

use of resources or individual patient choice? But, just for a moment, it is worthwhile standing back and pondering some more general and fundamental questions. What makes these issues *ethical* issues? And who should make decisions about ethical issues?

I suggest that an issue is an ethical one if it has the following two characteristics:

- It involves a potential threat to the well-being, autonomy, privacy, or just (fair) treatment of an individual person, groups of people, or other morally important entities.
- The potential threat is due to the voluntary actions or omissions (including the decisions) of a person or group of people.

This is a very broad definition, as I believe it should be, and shows that medicine and health research are such ethically fraught undertakings because they almost invariably involve potential threats, as well as potential gains, to people's well-being.

Who should make decisions about ethical issues? I suggest that there are different answers to this question, depending on the type of ethical issue.

'Private' ethical issues, such as the decision a couple might face about terminating a pregnancy when pre-natal diagnosis has shown a serious genetic condition in the unborn child, should be made by individuals themselves, using whatever assistance they want.

'Professional' ethical issues, such as whether or not to perform a requested termination of pregnancy for foetal anomaly, should be made by individual professionals, in conjunction with their professional bodies, and with input from the wider society. They are not purely individual decisions, since the profession has a public trust which is established by social agreement on the basis of certain understandings about how it will operate. Doctors should have an individual conscience and the right to follow this, but it must be informed by and accountable to the profession and the wider community. In this sense doctors are not lone moral agents.

'Public' ethical issues, such as whether or not it would be right to have a prostate screening program, should be made by publicly constituted and publicly accountable bodies. Decision making on public ethical issues must take account of ethical



L-R: RICHARD FOX AND KERRY BREEN DURING DISCUSSION

and religious pluralism, and cannot rely on the judgment of any single authority figure. It must be done by transparent processes. Most importantly, it will not necessarily look the same as an individual's private ethical decision.

I suggest that research ethics is a paradigm case of a public ethical issue. Members of HRECs are not there to promote their own private ethical decisions about the applications they have read, but rather to engage in a public ethical decision-making process. This process is guided, though not fully determined, by the *National Statement on Ethical Conduct in Research Involving Humans*. To do this properly, members must be aware of their own private ethical views, in order to step aside from them to engage in the public process, not in order to better represent them.

Doing the job of an HREC member is not easy—we all know it is hard work simply in terms of getting through all the paperwork and getting a grasp on unfamiliar, complex material—but it is also hard intellectual work to step outside one's private moral world and engage in public ethical decision making.

Should we introduce unified national human research ethics committees?

The case for—first speaker

RICHARD FOX

UNLESS WE CREATE some form of centralised or mutual acceptance for multi-centre studies, this system is going to collapse around our ears. Institutional research ethics committees will still be needed to assess local institutional initiated studies but, whether national, state or city-wide, or discipline oriented, we need to change the system.

Francesco Caraccioli is credited with observing that England had sixty different religious sects but only one sauce! I'm not sure about Victoria, but we've certainly gone into ethics committees in a big way, related perhaps to our English roots.

Clinical research today revolves predominantly around multi-centre studies, at either a national or an international level. To get the information to solve the problem of whether we should be screening for prostate cancer we may need a randomised trial of 150 000 men, at many different institutions. Multi-centred studies are either run by non-sponsored study groups such as the National Heart Foundation or the National Breast Cancer Study Group (voluntary groups involving some of the most expert doctors in their fields), or are industry sponsored phase two or phase three studies. Industry invests a lot of expertise, a lot of time and a lot of money into getting things right because they may be spending fifty to 100 million dollars on one trial.

An enormous burden is created by multi-centre studies going to multiple institutional ethics committees. A phase three randomised clinical trial comparing standard treatment with some slight variation has relatively few ethical issues which have not been answered. The issues which are pushing out these fourteen-page informed consent forms revolve largely around privacy and administration. As Angela Watt pointed out, ethics committees have very idiosyncratic interpretations of administration.

The Melbourne Health Ethics Committee has three full-time staff who do nothing but organise paperwork. We assessed 234 new projects in 2002, 267 new projects in 2003, and expect almost 300 in 2004. This enormous workload is being repeated in every other hospital. Of the new projects in 2003, 100 were clinical trial notification, multi-centre studies, all of which went to other ethics committees as well. Similarly, within my own department there are two full-time staff preparing paperwork to submit to the ethics committee. If you start multiplying this around the country you can see that we are doing wonders for employment and spending an enormous amount of money.

With this in mind we participated in the mutual acceptance pilot program conducted by Clinical Trials Australia. Four ethics committees participated around Melbourne: the Alfred, Melbourne Health, Austin Health and the Peter MacCallum. We all looked at eighteen multi-centre trial studies then each committee evaluated the work of the other committees. Forty-one committee members then completed questionnaires. Twenty-three of those felt they could trust other committees to get it right, fourteen weren't sure and four members said outright they did not trust other committees. Perhaps, if we were to leave these committees long enough, they would evolve into separate religions like England. When we look at the changes actually made, of 554 changes there were only four fundamental changes to the research plan. The remaining changes were all to the wording of the plain language statement and organisation of the administrative aspects.

The issues raised by multi-centre clinical trials are related largely to problems of privacy and administration and could well be addressed by a system of centralised, professionally organised committees, leaving local institutional ethics committees to get on with the business of significant ethical issues raised by single centre research studies.

The case against—first speaker

RUFUS BLACK

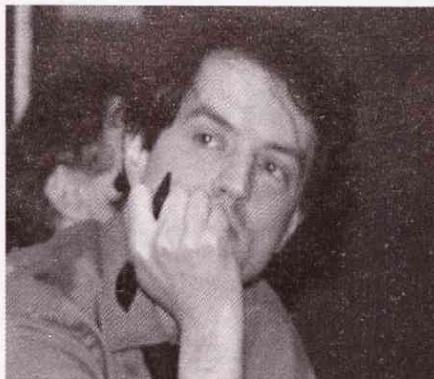
IN A WELL orchestrated episode, the 'Yes Minister' case against human research ethics committees (HRECs) has been made by Professor Fox, with the wily addition of having it prepared for him by Angela Watt. As someone who manages that amount of work, I can understand why she is looking for some relief. However, you must not be hoodwinked by this comical assault on bureaucracy, not because bureaucracy doesn't often deserve comical assault, but because there is a deeper agenda here which goes to undermine the foundations of a healthy ethics system—plurality.

Richard Fox thought it humorous to suggest that HRECs would evolve into religions and most people laughed. But plurality is an essential part of a healthy health care system, not least because it reflects different traditions of health care. There is legitimate religious plurality, for example, the Catholic tradition of health care, which is likely to stop some kinds of stem cell research (not a bad thing in a society divided on this topic). There are also ethics committees uncomfortable about the use of various animal products and xeno-transplants to humans which, not surprisingly, will involve multi-centre trials. If we eliminate a plurality of ethics committees from multi-centre work we risk an Orwellian picture of the vibrant plurality that exists today being lost as single committees pass judgment on the ethics of a diverse community.

The delight of Victoria is that we have sixty religions and sixty sauces: that is what we need to preserve. Not all differences have some kind of religious foundation, some are broader. For example, there is a huge difference between the terms 'AML patients' and 'people with AML'. The first defines the person in the health care system essentially in terms of their relationship with the doctor and their ill health. The second defines the person as an individual, separate from their disease, who happens to be in the health care system. They represent radically different conceptions of health care. I would like people I know and care about to participate in trials where they are viewed as a person first.

As we have allowed the language around health care to be vulgarised, jargonised and commercialised, some of the subtleties that preserve differences in the way we deal with patients are being lost. Consolidating towards a single ethics committee will ensure their further loss.

It is possible to have legitimate and major disputes around these topics. On the question of screening for prostate cancer two extremely well qualified, eminent people have come to quite interesting disagreements. The system has to allow that kind of disagreement. In fact, I think Australia is one of the places where ethics is done best precisely because ethics committees have made different decisions and public debate is generated as a result. Models that say we need to go to unified, centralised systems for multi-centre trials, which after all constitute about half of all trials, threaten the foundation of what is actually healthy about our current system.



RUFUS BLACK

'...there is a deeper agenda here which goes to undermine the foundations of a healthy ethics system...'

The case for—second speaker

KERRY BREEN

THE 1996 REPORT to the federal health minister on a review of institutional ethics committees (IECs) called for 'the acceptance by IECs of a single assessment of the scientific and safety/privacy aspects of a proposal'. In 1999 the NHMRC responded with the new *National Statement on Ethical Conduct in Research Involving Humans*, providing a clear framework for HRECs and researchers to achieve more efficient review through a process of 'mutual acceptance'. However, the opportunities provided for by the *National Statement* have not been taken up and efforts made in at least three states to pilot centralised review, or mutual acceptance of ethical review between HRECs, have been problematic. The primary explanation for this failure is seen to be the long tradition of ethics committees being responsible for full review of all research proposed for their institutions.

There is a critical need to achieve better mechanisms for the review of multi-centre research and this can be achieved without weakening the role of individual HRECs. Increasingly, research is conducted via collaboration across centres and with larger numbers of human participants. Small, locally based studies are seen to be ethically problematic if the numbers of persons studied fail to produce scientifically valid findings. Larger studies, involving participants from several centres, are able to provide more valuable findings more quickly. The waste of time, effort and paper on the part of researchers, the duplication of work by already overburdened HRECs and delays to potentially valuable research also raise ethical issues. The primary purpose of ethical review is to protect the interests and welfare of research participants. Some HRECs focus instead on their own needs or hubristically conclude that their committee

is the only one capable of the task. This is not to deny any HREC the role of advising their institution of local reasons why a particular study should not be undertaken at that site, nor a role in monitoring research which was approved centrally.

The situation in Australia now contrasts markedly with changes introduced across Europe where, since April 2004, the ethical review of any clinical trial proposal has been restricted to one ethics committee in any country. The UK has built upon previous work to establish several regional ethics committees for multi-centre research. These committees were drawn from members of existing local research ethics committees. Clinical trial proposals are allocated by a central coordinating office to one of eight committees such that reviews are completed promptly, by well qualified committees already respected for their previous work.

For public health and epidemiological research, AHEC plans to offer centralised ethical review, on an 'opt in' basis, via an established HREC with experience in this area. With no power to enforce such a process, this system will only succeed if researchers encourage their institution to participate and if the quality of the review by the central committee is seen to be high.

In the other area of concern, multi-centre trials, the Therapeutic Goods Branch of the Department of Health and Ageing, working with the NHMRC, is conducting a broad review of the clinical trials regulations, including an examination of issues around multi-centre trials. AHEC anticipates that this will lead to recommendations and measures to improve how the ethical and scientific review of multi-centre clinical trial proposals are handled. AHEC recognises that the NHMRC legislation does not give either AHEC or the NHMRC the authority to impose changes in this area. In the absence of new legislation, any short-term improvements will only come via researchers and sponsors working with institutions and their HRECs to ensure the mutual acceptance of ethical and scientific review by one lead agency.

The case against—second speaker

PAUL KOMESAROFF

ONE OF THE key features of the ethics committee system in Australia is its democratic, decentralised and devolved nature. It would be a grave mistake to shift to an undemocratic centralised system, remote from the communities it serves. The current system developed in response to community disquiet about the increasing power of medicine and the pharmaceutical industry, and the perceived need for greater protection of research subjects. Australia now has one of the most sophisticated and successful ethics committee systems in the world.

Of course the system is not perfect. The process is time consuming and sometimes overly bureaucratic, especially in relation to multi-centre trials. This can be frustrating for researchers and for pharmaceutical companies and their shareholders. However, it is part of the price that has to be paid for democracy. To paraphrase Winston Churchill, democracy is the worst form of government except for all the others that have been tried.

The current system works: individual projects receive meticulous and detailed consideration and, in a time of public cynicism about, and hostility towards, government, big business, drug companies and doctors, confidence in the medical research process and levels of public participation have been maintained. The involvement of ordinary citizens provides an important





PAUL KOMESAROFF

check to the exercise of power by major social institutions. The system is also flexible enough to attend to the needs of specific individuals based on knowledge of local community.

The most spectacular accomplishment of the ethics committee system, however, is the example it sets. A group of citizens from varying backgrounds come together for purely altruistic reasons, they suspend their personal interests and engage in a free-flowing and open conversation about ethical issues concerning the welfare of the whole of society.

Is there another setting in modern society in which anything comparable occurs?

If you believe ethics committees exist to increase research investment, speed up the approval process of new projects, save money for pharmaceutical companies and reduce inconvenience to researchers, then a centralised system is the one for you. If, however, you prefer a process which values community participation and control, detailed attention to the needs of individual participants and support for public confidence in the research process, then you will favour our current system.

Faculty of Medicine, Dentistry & Health Sciences 2005 DEAN'S LECTURE SERIES—SEMINAR

Designer Babies: are we going too far?

Convener: Professor Graham Brown
*James Stewart Professor of Medicine,
 University of Melbourne Department of Medicine,
 Royal Melbourne Hospital and Western Health*

Friday 22 July 2005
 2.00–5.00pm
 Sunderland Lecture Theatre
 Ground Floor, Medical Building
 The University of Melbourne
 RSVP 8344 5888
 Email: gael@unimelb.edu.au

Seminar Participants

Ms Rita Alesi
Senior Counsellor, Monash IVF

Dr Lisa Bridle
Bioethics Advocacy Worker, Queensland Advocacy Inc

Professor Jock Findlay
*Deputy Director and Head of the Female
 Reproductive Endocrinology Group, Prince Henry's
 Institute of Medical Research*

Dr Lynn Gillam
*Lecturer in Health Ethics, Centre for the Study of
 Health and Society; Research Fellow, Centre for
 Applied Philosophy & Public Ethics*

Dr Fay Marles AM
Former Chancellor, The University of Melbourne

Professor Loane Skene
*Professor and Associate Dean (Undergraduate), Faculty of
 Law and Faculty of Medicine, Dentistry and Health Sciences*

Professor Alan Trounson
*Professor of Stem Cell Sciences and Director of Monash
 Immunology & Stem Cell Laboratories*

Father Bill Uren
Rector, Jesuit Theological College

Ethics is about processes as well as outcomes. It's about the quality of communication between individuals in face-to-face relationships, about negotiating pathways in relation to local needs and infinitely variable conditions. It's not about issuing peremptory judgments that apply to all people as if they're merely manifestations of some universal principle. Nor is it about accelerated decision-making, increasing profits for drug companies or the convenience of researchers.

Centralising ethics committee functions may seem an attractive way to overcome the frustrating complexity of the research review process, but the goal of increased efficiency is itself likely to prove an illusion, as anyone with experience of large scale federal bureaucracies will readily attest. It's more likely that the losses—loss of public confidence, reduced community support for and participation in research, and increased dissatisfaction due to diminished responsiveness and availability of ethics committee services—will far exceed the gains.

Research is a fragile partnership involving researchers, industry and the community. The loss of the goodwill and trust of the latter could significantly damage the delicate balance on which this partnership depends. Democracy is messy and untidy. Making the ethics committee train run on time may seem an attractive goal, however, the cost of doing so may be irretrievable damage to one of the most fecund and successful accomplishments of our society.

2005 MELVILLE HUGHES SCHOLARSHIP

Nathan Lawrentschuk (MB BS 1996) is the recipient of the Melville Hughes Scholarship for 2005. Nathan commenced his MD in 2003, converting earlier this year to a PhD in the Department of Surgery at Austin Hospital, in conjunction with the Ludwig Institute for Cancer Research. Under the supervision of Associate Professors Damien Bolton, Andrew Scott and Ian Davis, Nathan's PhD investigation involves research into kidney cancer. He is focusing on the fact that kidney cancer is resistant to radiotherapy and chemotherapy and the hypothesis that part of the reason for this resistance is that tumour cells can adapt to low oxygen environments.

In 2004 Nathan was awarded the Surgeon Scientist Scholarship, the Registrar Research Fellowship, the Villis Marshall Award for the best research paper, the DR Leslie Medal for best clinical research, the Austin Health Surgical Research Award and a travelling fellowship for registrars.

The scholarship, valued at \$55 000, is offered to medical graduates undertaking further research training in surgery and was bequeathed to the university in honour of Melville Rule Hughes, (MB BS 1915), who was killed in action in France in 1916.



L-R: JAMES ANGUS, NATHAN LAWRENTSCHUK AND LANCE DIMSEY (TRUSTEE)
 AT THE PRESENTATION OF THE 2005 MELVILLE HUGHES SCHOLARSHIP

70TH BEATTIE SMITH LECTURE

9 March 2004

EVERY ME AND EVERY YOU

Responding to the hidden challenge of mental illness in Australia

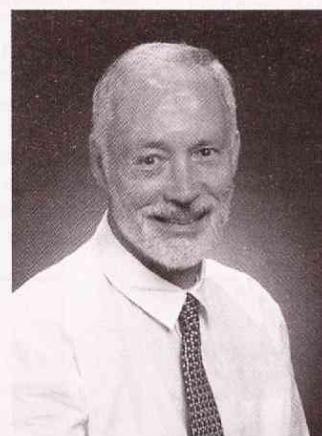
by Professor Patrick McGorry

Department of Psychiatry, University of Melbourne

Executive Director, ORYGEN Youth Health and ORYGEN Research Centre

MENTAL ILLNESS IS a major public health issue in Australia affecting almost everyone, directly and indirectly. Have you ever been depressed? Have you ever needed help with a relationship breakdown, bereavement or some other crisis in your life? Have you ever had a period of drinking too much? What about a psychotic episode? What about your children, your parents, your siblings and friends? Just as we do not expect to live through even a year without the need to visit the doctor for some kind of physical health problem, it is completely unrealistic to expect to remain mentally healthy for long periods. Yet we do. So we don't recognise our mental health problems when they surface, and if we do, we don't tell anyone, and we usually don't seek help until we are forced to do so. When we do seek help, we don't know where to go, who to trust, or whether to take their advice. Often we don't.

A decade after the Burdekin inquiry and the *First National Mental Health Strategy*, we have made little progress. Why? Because we haven't tackled the fundamental barriers successfully and, particularly, because we haven't got through to the community in a way it can understand. Altruism, logic, sound evidence and even potent economic arguments have failed to produce growth, investment and sustained reform. Perhaps the missing ingredient has been self-interest. Like the major physical illnesses, notably cancers and cardiovascular disease, a substantial proportion of the death and damage caused by mental disorders is already preventable with existing knowledge. However, such help isn't available to most people who need it. Even individual wealth cannot buy it. What is available is something akin to the classic placebo response. We can do a lot better than that.



PATRICK McGORRY

to the physical illness. The extent of avoidable death from suicide is similar to the road toll in most developed countries. In Australia it is not taken anywhere near as seriously in terms of preventive strategies and the close link with mental disorders is usually minimised.

Work impairment is a major consequence of mental disorder. In addition to 'days out of role', when depressed people are at work their performance is reduced. Productivity gains following effective depression treatment far exceed direct treatment costs. Similarly, there is a massive indirect effect on productivity from unpaid caring, when family members take days off to care for family members who are unwell.

The final standout finding from the burden of disease data is the pattern of disease across the lifespan. Mental disorders are the most important single group of disorders in early adulthood. This period is the weakest link in our whole health system for detection and treatment of mental disorders.

Glazing over the burden of disease

These facts have been served up to policy makers *ad nauseum* over the past decade, with little impact on patterns of care and resource levels. I suspect there are two reasons for this. Firstly, the public and decision makers alike have a very weak knowledge base concerning mental disorders and their evidence-based treatment. Secondly, as a result, policy makers and the public have little confidence that these illnesses can be effectively treated with current knowledge. Trivial breakthroughs in mainstream health care often demand financial and policy support, but we need to show just how preventable so much disability and so many tragic deaths are, even without a single new breakthrough. This is not hard to do.

The global burden of disease

When the landmark publication by Murray and Lopez appeared in 1996, the contribution of mental disorders as a group to this burden, particularly to the non-fatal burden, surprised many. The *Victorian Burden of Disease Study*, conducted by Dr Theo Vos and colleagues, shows cancer, cardiovascular disease and mental disorders as the top three contributors. Cancer and cardiovascular disease produce most of the mortality, mostly in older people, while mental disorders produce most of the non-fatal disability, beginning mostly in younger people. Forty per cent of the non-fatal burden of disease in Victoria in males, and nearly fifty per cent in females, is caused by mental disorders. Nine of the top twenty causes of disability are mental disorders. When mortality is included the contribution of mental disorders goes down to about fourteen per cent. This is partly because suicide, in ninety per cent of cases a consequence of mental disorder, seems to be counted under 'injuries', and because the excess of premature deaths from cardiovascular disease and cancer in people with mental disorders is attributed completely

The prevalence of mental disorders: every me and every you?

The best Australian data we have is the *Australian National Survey of Mental Health and Well-being*. This shows that within a twelve month period about one in five people will meet criteria for a mental or substance use disorder. Cumulative study designs show much higher prevalence rates, more like one in two.

Conscious of the practical and economic problems in providing care to over half the population at some point and up to a quarter within a twelve month period, some have argued that a diagnosis should be associated with substantial functional disability before treatment should be funded and accessed. However, this means that people must become disabled by their symptoms before they can be offered help. Such disability is usually hard to reverse even when treatment is effective. Unfortunately, in Australia, the requirement for entrenched disability or life-threatening risk operates at the entry points

to specialist care. Access to treatment for milder disorders and earlier phases of disorder is little better than a lottery system in which affluence and local factors are key influences. Why not acknowledge that ready access to mental health care of some kind, much of it relatively simple, even informal and self-care, is as necessary as access to general medical care?

What are we doing about it?

The *Out of Hospital Out of Mind* report, produced by the Mental Health Council of Australia in 2003, demonstrated that the failure of mental health in this country is primarily due to a lack of political will and totally inadequate funding. Only the bipartisan neglect of mental health by both sides of politics and the lack of effective mobilisation of the population enables this to persist. The report documents five key aspects:

- grossly unmet need for mental health services
- grossly inadequate growth in expenditure on basic services
- restricted access to existing services
- ongoing human rights abuses and neglect
- increasing demand for mental health care.

Have we done anything right?

This sounds like a chronicle of gloom and doom. Many of us may feel it isn't that bad. We can point to the positive effects of the reforms, especially in Victoria. The pattern of care has improved greatly and the model is essentially sound. We do have mobile CATT teams and new inpatient facilities, the Dickensian 'bins' have gone and should not be missed for a moment. The Government has endeavoured, especially since its re-election, to tackle some of the fundamental issues such as extending specialised early psychosis services into new areas, tackling comorbid mental and substance use disorders, and attempting to enhance the interface between primary care and specialist mental health. There is a dedicated workforce, public sector leadership and mental health bureaucracy that strive valiantly to hold things together and address the issues. But it is all too little, too late and frequently in the wrong places.

The previous model of care was essentially a state hospital model, which treated acute episodes of severe illnesses and provided institutionalised rehabilitation services, and a general hospital and private psychiatry system which focused on people with high prevalence disorders. Reforms broke up the stand-alone psychiatric hospitals and created a blend of state-funded, community-based services and new general hospital inpatient units with a different clientele, the former users of the asylum system. State-funded public sector resources for non-psychotic disorders shrank dramatically. The new system still concentrated on acute care but in a different way, with less reliance on long inpatient stays and more home-based care. At first this model worked much better. However, major problems have emerged.

The new inpatient units are under severe pressure. They have to manage acute patients who cannot be treated intensively in the community and such patients need more intensive care. The clinical leadership, morale, nursing numbers and skill levels and the specific environmental conditions required for this challenge have fallen well short. Smaller units of eight to twelve beds, hitherto seen as uneconomic, are necessary together with much greater capacity for one-to-one nursing. Inpatient teams displaying confidence, special personal qualities and inspired leadership are crucial, but remain in short supply. For a variety of reasons the CATT teams have become increasingly embattled and reluctant to assess and treat people comprehensively in their home and community environments. With the establishment of the eCATT model, there has been an increasing tendency to direct new assessments into these stressed environments even during normal hours. The opposite is required—a diversionary strategy.

Due to the lack of continuing reform momentum, the new model has become steadily institutionalised, with poor leadership and morale and non-consumer focused work practices. The capacity for state-funded continuing care and rehabilitation is woefully

inadequate. Only a fraction of the most seriously mentally ill can gain a secure place in this system. The rest are referred back to unsupported GPs after the latest patch-up job. In many services the feet of most early psychosis and non-psychotic cases do not even touch the ground. The adult system remains predominantly an acute care model for people with chronic psychotic illness. A hidden expectation of mainstreaming is that, outside of acute care, the same arrangements as for other medical disorders should apply; namely GP follow up. This simply will not work for psychiatry.

The funding split between hospital and community care is essentially a state/federal one and it has proved difficult to grow the state-funded community care sector outside of acute phase care. Hence the repeated call for more beds rather than more community care, which is the main deficiency. Attempts to shore up the interfaces between GPs and specialist care are appropriate, however, most of their work is with so-called high prevalence or non-psychotic disorders and sadly there is no longer expertise in the specialist system to help them manage the more challenging of these disorders. A team approach is needed for many of these cases. Substance use and mental disorders overlap more than ever before yet we have two separate systems of care intended to respond to them: two underfunded parallel systems. Preliminary models have been developed to bridge this gap, but the solution requires much more radical surgery.

What could we do about it?

In an earlier Beattie Smith lecture, Professor Sidney Bloch chose the title 'Psychiatry—An Impossible Profession' (*Chiron* Vol 3, No 5, 1997, p.19). I think he concluded it wasn't impossible (at least not for him) but one of the barriers we face is the notion that it is all too hard and that our interventions don't work. It is clear, however, that psychiatric treatment has never had greater efficacy and that it compares favourably to the spectrum of medical treatments. However, the gaps between efficacy and effectiveness and the low coverage of those affected are huge obstacles. If evidence-based treatments were made available and coverage was increased, we could avert nearly thirty per cent of the burden in contrast to the present thirteen per cent.

Barriers and the inherent degree of difficulty Stigma, mental health literacy, help-seeking and access

Whether people with mental disorders get appropriate help is the end result of a series of processes. These start in the mind of the affected person. Firstly there is the issue of awareness of the problem and whether it is recognised as illness, or even as a problem. The person with emerging subjective or behavioural change and distress and/or disability may or may not recognise that they have a problem. If they do, what is their response? It is common to feel shame, weakness, helplessness and an urge to withdraw from others, not only due to stigma, but also through the distorting effects of the change in mental state on self-esteem, cognition, energy, judgment and, crucially, on social relationships. What is difficult in this process is how to share distress and personal problems with strangers, such as the local GP. It requires a high level of trust, a leap of faith. This leap is frequently not taken without encouragement and 'brokerage'. Shame mixed with desperation is what I have perceived in the frequent furtive telephone calls I have received from the relatives and friends of successful and affluent people from all over this city, trying to obtain help for someone they know is unwell. This brokerage and advocacy is a crucial element, especially when the illness itself has impaired awareness of the need for care or immobilised the person involved. What is lacking is the next step where such people will later talk openly among their friends and colleagues about the illnesses they have encountered, just as

they do when someone has had an asthma attack or developed diabetes. While an unknown number fall by the wayside, it is incredible that so many people get over these obstacles and seek help. They usually get lost along the way or take the long way round. This is because the next barrier surfaces, namely the failure of the person they have sought to recognise the problem or to respond effectively. Depending on the nature, severity and urgency of the problem, other barriers may then come into play, such as waiting lists, reluctance of specialist services to get involved or the frightening and uninviting nature of such environments. This means that people typically present late in their illness course and are much less accessible and responsive to treatment. Treatment often gets off on the wrong foot and there is much collateral damage to repair.

There is another key issue that is rarely highlighted when mental health care is discussed. This is the fact that many of the people we want and need to treat do not want our help or struggle to accept it. This may be due to some of the reasons described above, but it is a major challenge for clinical staff in both mental and substance use disorders. The latter have solved the problem by requiring that people with the substance use disorder decide they want help and are 'motivated' to change. They also believe, on the basis of 'evidence', that these severe, persistent and life-threatening illnesses will respond to brief interventions as well as longer-term ones. I experienced the failures of this model first hand seven years ago through the illness and death at thirty-seven from severe alcohol dependence of my younger brother. In mental health there is a different attitude, supported by mental health acts, which at least tries to overcome treatment reluctance and requires a duty of care, including assertive outreach and, where necessary as a last resort, involuntary admission. The types of skills and the resilience required on the part of clinicians in mental health are above and beyond those needed in many other areas. This is bandied around in other arenas, such as teaching and general nursing, and associated with high levels of respect and affection and even support for industrial campaigns. Not so in mental health. We are more likely to be tarred with the same stigma-dipped brush used for our patients. We have to change that.

Inequalities in mental health care

In Australian psychiatry we have never acknowledged the effects of a very nasty trifecta. First, the incidence and prevalence of all forms of mental disorder are substantially higher in disadvantaged areas. Second, in Australia, and notably in Melbourne, the distribution of public mental health services, private psychiatrists and high levels of quality primary care is almost the direct inverse of the need for care. The affluent inner city areas have high levels of services of all kinds, while several deprived suburban regions have minimal resources with inevitable results. Third, while this may be true to an extent in general health care, it is even more discriminatory in psychiatry. This is because services are tightly catchmented. So you cannot 'shop around', neither for acute care nor for aftercare, in the public sector for low prevalence or psychotic disorders. You are marooned in your own under-resourced sector. It is possible for people to move beyond these catchments for private psychiatric care, for example by visiting a private psychiatrist on the other side of the city. However, apart from the travel time, there are large cost barriers for disadvantaged people, since most private psychiatrists now charge well above the scheduled fee and rarely bulk bill. So rates of treatment for high prevalence disorders are much lower in disadvantaged areas. These issues have never been honestly acknowledged by health planners.

PACE

Another set of obstacles that undermine our best efforts are somewhat endemic, but maybe we can minimise them by identifying them. 'P' is for powerlessness. Typically we think of

the patients and their families as the powerless ones, but almost everyone in mental health feels this way. The other endemic forces were named by David Goldberg under the acronym ACE. 'A' is for austerity, meaning that reform needs money and budget cuts, such as we have seen in inpatient settings over the past few years, are unlikely to be associated with improvements for patients, especially given the massive new challenges faced by such units. 'C' is for criticism and refers to the culture of blame, usually devolved downwards, which persecutes those at the sharp end of the problem for inevitable errors or for whistle blowing. 'E' is for enmity, which is a problem here and this involves the lack of collegial support which has sometimes been seen across services and academic units, between disciplines and between the components of our so-called integrated services. This was augmented by the disaggregation of the public mental health system when mainstreaming occurred. We are now supposed to have more in common with our general medical colleagues in the general hospital system. That's a nice idea, but probably not true. We need to find ways to come back together.

Some immediate targets

Victoria

- Make the framework live! This needs total commitment: the premier and the treasurer as well as the minister for health and parliamentarians; DHS and the mental health branch; public mental health leadership; RANZCP; Psychiatry Victoria; consumers and families; RACGP etc. Fund it! Increase the real funding level by ten per cent per annum each year for a five-year period.
- Continue, refocus and enhance beyondblue as the flagship and engine for attitudinal change.
- Blend and strengthen MH and D&A services under single clinical leadership in several key locations as prototypes.
- Create a youth precinct and linked network.
- Fund a new system of vocational recovery programs in conjunction with the Commonwealth.

Australia

- Produce a serious national mental health plan (3.1) with specific programs and significant new funding allocations to drive a new wave of reform. These need to be direct grants tied to specific reform and growth schemes that enhance and blend MH and D&A services within the state service systems.
- Directly fund allied health resources in primary care.
- Create serious incentives for psychiatrists to work more closely with primary care.
- Disseminate beyondblue to all states and territories with increased federal funding.
- Develop national projects to support evidence-based medicine in mental health.

We must mobilise the general community. We have tried for a decade or more to appeal to sympathy and altruism. We have tried the shroud waving of our colleagues in general health. We have tried the hit and miss approach of influencing individual politicians and bureaucrats. Perhaps a more effective sustainable approach will be to blend the principles of evidence-based medicine and evidence-based health care, projecting a solid confidence in our interventions and models, but overtly targeting the inherent self-interest of the average person. If we can convince them that they and their families are in the firing line, but that there are effective counter measures, we may make more rapid progress. This will require teamwork, a full-bore advocacy approach, and, ideally, a consensus within the field. This is truly a battle for the hearts and minds of Australia.

This is an abridged and edited version of Professor McGorry's Beattie Smith lecture. The complete lecture is published in Australasian Psychiatry Vol 13, No 1 March 2005, pp3-15

FROM THE DEAN

James A Angus FAA

Dean, Faculty of Medicine, Dentistry and Health Sciences, Head, School of Medicine

What is your currency?

Is it your time, or your talents as doctor, teacher, researcher, mentor or listener? Whatever your currency, it is the privilege of a graduate from our school to give generously to our community. But first, the report card...

THE NEW(ISH) MEDICAL curriculum continues to be reshaped and enriched as our academic staff assess feedback from students, graduates and our valued clinical teachers. Many experiences were shared recently at the national medical education forum in Canberra under the dual sponsorship of the Australian Medical Council and the Committee of Deans of Australian Medical Schools. All medical schools were represented and attendees included students, specialist college representatives and government departments keen to learn how workforce skills and graduate attributes might be better integrated from undergraduate, postgraduate and specialist training and continuing medical education. Recommendations that follow will impact on quality of training, better use of the whole public/private sector in medical education and integration of specialist college accreditation with university courses.

I am pleased to acknowledge the constructive advice from alumni in raising issues with state and federal governments regarding specific Victorian needs on general practitioner shortages and specialist training places. We are working closely with Monash University to encourage the federal minister for health to increase our undergraduate places rather than establish a new medical school in a regional centre. As you will know, together with the Monash University clinical school, we have developed an excellent rural and outer metropolitan network for clinical placements. Our idea is to develop a four year graduate entry course, based in an outer metropolitan or rural community medical school, with different selection criteria and some change in curriculum emphasis from our current course. The approach would offer a more efficient use of resources and speed the delivery of graduates without upsetting significant, longstanding arrangements with our regional centres, clinical schools and staff. The limited number of qualified medical educators in Australia must also be addressed to meet the needs of expanding medical schools.

Back at Melbourne, I am delighted with the number of new chair appointments we are making: in health promotion and well-being (Vic Health); in neurological research; in anaesthesia; in old age psychiatry; in alcohol research; a second chair in pathology (Professor Paul Monagle), an inaugural chair in adolescent health (Professor Susan Sawyer), and two chairs in psychiatry (St Vincent's Hospital and Melbourne Health).

The triradiate medical school building, planned by Sir Sydney Sunderland over forty years ago, has provided many alumni with first class teaching and research facilities. Unfortunately, the triradiate and microbiology buildings are now at maximum capacity and much of the faculty is scattered in sub-standard buildings across the campus, jeopardising our world class medical teaching and research capacity. There are major expensive refurbishments required and it is critical that we plan to move to a new facility within ten years. Our new Vice-Chancellor, Professor Glyn Davis, supports this need and planning has already begun.



JAMES ANGUS
Photo Michael Silver

The unique density and cooperation of hospitals (including the Royal Children's, Royal Women's, Royal Melbourne and the former dental hospital) with research institutes and the university in Parkville, has prompted the State Government to develop a ten year plan for the strategic development of this precinct. Our very important affiliated medical research institutes are also under intense planning pressure as they seek to expand, while smaller institutes are being asked to co-locate with larger institutes. We play an important role supporting their interests to maximise our mutual benefits when over thirty per cent of our PhD students are engaged with these research institutes in research projects.

I am delighted to inform you that our medical research performance is still ranked first in Australia and, in the category 'biomedicine', *The Times Higher Education Supplement* (London) ranked the University of Melbourne fourteenth in

the world and the leader in Australia. This performance is built on the legacy of the School of Medicine and its cooperation with our affiliated hospitals and research institutes.

One immediate opportunity to enhance our research is the opening of the university's \$100m Bio21 Institute for Biomedical Science: a world-class facility of structural biology and genomics, with incubator company space and platform technology in NMR, nanotechnology, chemistry and microscopy.

The University of Melbourne is poised to differentiate itself in the higher education sector in Australia. Perhaps smaller in student and staff numbers (certainly not much larger) in the medium term, with quality programs that attract premier students with or without capacity to pay, an extensive bursary program, and with clear choices on areas of research concentration and excellence. The differentiation will be a luxury for our staff and students that we will need to earn with our reputation and pay for with revenue made outside traditional government funding.

To begin this journey, the faculty has proposed the Nossal Institute for Global Health. Sir Gustav Nossal has made extraordinary contributions to medical research as director of the Walter and Eliza Hall Institute of Medical Research and professor of medical biology, and to global health through his advocacy of vaccine programs and the Bill and Melinda Gates Foundation. This institute, named in his honour, will bring together our wide range of expertise in child health, mental health, women's health, vaccines and international service programs currently undertaken by the Australian International Health Institute. The Nossal Institute Foundation will soon begin raising funds for the institute. Our goal is to develop an institute to rival the best for the benefit of our Asia-Pacific region.

To date we have already developed two major relief and training programs in tsunami-affected Banda Aceh and Galle, in Sri Lanka, that will have long-term effects on the health of children and adolescents in these regions. I am sure that every alumnus, staff and student member of the School of Medicine has reflected on how they might give their talents to this devastating international public health crisis. Doctors and teachers have a special currency that is exchangeable with those in need.

Our mission is to further develop this truly first-class school, as measured by the quality of its medical graduates, fundamental research excellence in major diseases, and translation into communities and regional areas most in need.

THANK YOU FOR YOUR SUPPORT

THANK YOU TO alumni who have generously supported our teaching and research programs over the last year. This financial support is greatly valued as it helps the School of Medicine to continue to develop and maintain the highest quality medical education and research programs in a very constrained funding environment. In 2004 alumni donated a total of \$57 596 to the School of Medicine through UMMS membership and through the University Annual Appeal. The funds have contributed to the following programs:

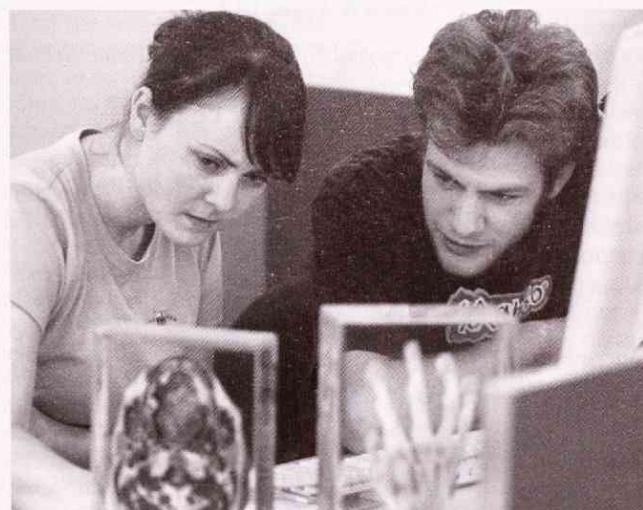
Priority needs—\$29 358 This income is providing new facilities in the Harry Brookes Allen Museum of Anatomy and Pathology which was opened in 2004. The new museum combines the historic collections from the anatomy and pathology departments with the modern learning framework of group work, computers, simulation and online self-assessment. The funds will also contribute to facilities for research overseen by Professor Joe Proietto, in the Department of Medicine, Austin Health and Northern Health, which focuses on metabolic disorders including obesity, diabetes and metabolic syndrome, and research undertaken by Professor Judy Savage, in the Department of Medicine at the Northern Hospital, on the genetics of human kidney disease.

Helping medical students in financial need—\$18 830 These funds assist medical students who are suffering a disadvantage or who encounter unexpected difficulties, for example students who are suddenly homeless or who encounter a family or medical problem that affects their capacity to continue in part-time employment.

Medical research—\$6595 Alumni donations help to support important new medical research which is contributing to our understanding and ability to treat some of the world's major health problems. Recent research highlights from our departments include major discoveries in treatments for HIV and for inflammatory arthritis, and groundbreaking research to enhance the regrowth of spinal cord nerves after they are damaged.

Student prizes to encourage outstanding achievement—\$713 This income helps the school to provide student prizes to award and inspire some of our most talented students. Prizes include the Advanced Medical Science Prize and the Peter G Jones Elective Essay Prize.

Other areas specified by donors—\$2100 This includes support specified for various activities and departments in the School of Medicine.



STUDENTS DEVELOP THEIR UNDERSTANDING OF ANATOMY AND PATHOLOGY USING ONLINE LEARNING TOOLS IN CONJUNCTION WITH REAL SPECIMENS IN THE HARRY BROOKES ALLEN MUSEUM. Photo Michael Silver

Paul Adrian, Adrienne I Anderson, James A Angus, Tom Antonie, Noel R Atkinson, Rosie Ayton, Geoff Baker, Dick Ball, Mandy Baric, John Bartlett, Sam Battaglia, Richard C Bennett, Jennifer M Brown, Peter D Brukner, Greg Buist, David C Burke, Peter F Burke, James M Butler, David J Butterfield, Elizabeth A Carew-Reid, Bernard J Carroll, Anne D Cass, Simon Ceber, Peter L Champness, Robert Chan, Min L Chong, Arthur Clark, Merrole F Cole-Sinclair, John P Collins, Kay Coltman, John Cox, John E Critchley, Keith S Crowley, Noel E Cranswick, Marie E Dalziel, David Dammery, June Danks, Stevens Dimant, Brendan J Dooley, John T Dowling, Barry J Dowty, Douglas M Druitt, Roslyn M Drummond, Gwynne E Duigan,

Howard H Eddey (deceased), James E Elder, Joseph Epstein, Hamish Ewing, Harold Fabrikant, David N Fearon, Donald W Fleming, Joanna M Flynn, David P Fong, Joc R Forsyth, Derm Foster, Pamela J Fradkin, George Freed, James M Gardiner, Douglas M Gee, Rob Gibson, Aleck Goldman, Barbara D Goss, Tony Gray, Leeanne E Grigg, James S Guest, Ian D Gust, Danielle Haller, John E Hammond, William T Han, William S Hare, Suzanne M Harrison, David N Hawkins (deceased), Bill Heath, Margaret M Henderson, Robert Herrmann, John T Herrin, David B Hipgrave, Fred Hocking, Cleve Hodge, William J Hoffmann, Boon H Hong, Bill Huffam, Howard D Irish, Kate Jackson, Rodney Jacobs, Paul E Jeffery, Frank C Jones, Fiona K Judd, Allan M Kalus, Emmanouela Karpathakis, Thomas W Kay, Warren A Kemp, David J Kerr, Geoff Kerr, Alan J King, Zoltan S Kiss, Jonathan C Knott, Henryk Kranz, Gabriel A Kune, Sze W Kwong, Tim Landy, Richard G Larkins, Hok C Lau, Victor Lee, Roland CC Leung, John Levin, David A Lindsay, Gail E Littlejohn, Margaret D Lush, Lynda M McBride, Alan E McCleary, Peter N McDougall, Brian E Mackay, Heather McKenzie, Don Maclean, Hal McMahon, Richard I McMullin, Ruth P McNair, Karen Martens, Allan Mawdsley, Gabriele Medley, Les Mendel, John W Middleton, Vicki L Miezis, Anna C Miller, Spiro Moraitis, Gary J Morgan, Christopher J Moss, John G Mullett, Judith B Nash, Nick Niteckis, Elaine L Ogilvie, Di Palmer, John W Parry, John Pawsey, Geoff Patience, David G Penington, Peter D Phelan, Pauline Pitt, Jock Plenderleith, Shirley Prager, Desmond A Prentice, Jenny Proimos, Dulcie G Rayment, William Refshauge, Penny Roberts-Thomson, John P Royle, Paul Rosenberg, Michael S Rozen, Mr Craig Rubinstein, Rowena M Ryan, Margaret J Sanders (deceased), Barbara P Sawyer, John J Scally, Mary E Schramm, Warren R Seager, Michael A Shembrey, Michael P Shoobridge, Kenneth A Sikaris, John H Silver, Graeme Sloman, David M Smallwood, Edward D Smith, Bryan R Speed, Robert L Spokes, Don Stewart, Michael J Stewart, Neil Strathmore, Jonathan A Streeton, Greg Taggart, James Tatoulis, Rebecca K Telford, Lean H Teoh, Paul A Tesar, Karin Tiedemann, George H Tippett, Stephen A Tobin, David Torii, Spot Turnbull, Tony Tymms, Janette M Vincent, Ben M Wadham, David J Warburton, John B Webb, David O White (deceased), Blair Widmer, Peter F Williams, Simon J Williams, Charles W Wilson, Katherine C Yu.

We warmly acknowledge and thank all UMMS members who contributed to School of Medicine initiatives in 2004. We list here those members who donated \$100 or more to teaching, research and student programs in the School of Medicine in 2004, and who gave their permission for this acknowledgment. These donations were made through UMMS memberships and the university's annual appeal.

ACADEMIC DEPARTURES AND APPOINTMENTS

Neville Yeomans

NEVILLE YEOMANS GRADUATED MB BS from the University of Melbourne in 1965. He completed his physician's training in Melbourne and took out an MD from Monash University in 1977. He was appointed to the university Department of Medicine at the Austin Hospital and was an active participant in clinical service, teaching and research until 1988 when he was appointed as the inaugural professor of medicine at the Western hospitals.



NEVILLE YEOMANS (RIGHT) AT HIS FAREWELL WITH L-R: GEOFF McCOLL, SUSAN ELLIOTT AND MARGOT YEOMANS

Neville's distinguished career in academic medicine has focused on gastroenterology and his work epitomises the role of clinician researcher. He took his basic science work examining the role of aspirin and anti-inflammatory drugs in gastric injury (mainly ulceration) and expanded this 'from bench to bedside' with clinical trials, testing medications that protect the stomach from such damage. As a recognised world expert on peptic ulceration, Neville has been a keynote speaker at many meetings worldwide, presenting in an authoritative but entertaining way, often intermingling art, music and science.

Neville has also demonstrated his innate leadership skills in many areas. As editor of the *Journal of Gastroenterology and Hepatology* and other journals, Neville has used his wisdom and foresight in molding a greater part of the contemporary gastroenterological literature. He has also been very active in the International Society of Gastroenterology and, in 2004, was awarded the Distinguished Research Prize of the Gastroenterology Society of Australia.

Neville has also provided leadership in the Royal Australasian College of Physicians with membership of and active participation in almost all of the state and federal committees in the areas of research and education, membership of the council executive and the award of the John Sands Medal for his service to the college in 2003.

He has served the medical profession and research community as a member and chair of grants reviewing committees for the NHMRC and was a member of the Universities Accreditation Committee of the Australian Medical Council. He has served on numerous Commonwealth and state bodies where his wisdom and experience was always valued in pursuing the important roles of the profession and the academic community in translating research findings into benefits for patient welfare.

Neville made a major contribution to the Faculty of Medicine, Dentistry and Health Sciences, particularly in association with the introduction of the new medical curriculum. After many years as assistant dean for undergraduate studies within the faculty, he became associate dean academic programs in 1998 and had the awesome responsibility of developing and introducing a new medical curriculum as well as taking responsibility for selection of students to the new postgraduate program. He has been roundly congratulated for his efforts in establishing the academic program, establishing training programs for those who would teach the new curriculum, and ensuring that adequate assessments were undertaken.

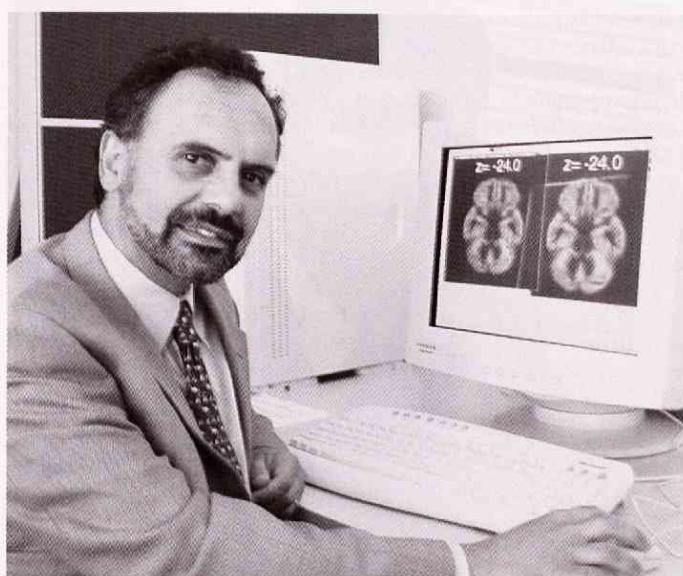
We wish Neville well in the challenges to be faced as Foundation Dean of the School of Medicine for the University of Western Sydney. Few people in Australia are better qualified to oversee the development of a completely new medical school and we are grateful for his magnificent contribution to the School of Medicine. Our loss is Sydney's gain.

Minute of Appreciation adopted by the university Academic Board with additional information and comments from Geoff McColl, Clinical Dean, Royal Melbourne Hospital and Western Health Clinical School

Christos Pantelis

Professor of Neuropsychiatry and Scientific Director, Melbourne Neuropsychiatry Centre

CHRISTOS PANTELIS HAS been appointed to the first chair of neuropsychiatry in Victoria and Scientific Director of the Melbourne Neuropsychiatry Centre, established just last year as a joint centre of the Department of Psychiatry at the University of Melbourne and NorthWestern Mental Health. The centre brings together the clinical and research activity in neuropsychiatry at both Sunshine Hospital and Royal Melbourne Hospital. It will build on the existing international reputation of these groups in the areas of cognition and neuroimaging, particularly in schizophrenia, and provide a centre for research across several disciplines, with links to national and international research groups. The research will range from neurobiological



CHRISTOS PANTELIS

research in neuropsychiatric illness through to service-based research aimed at bringing neuropsychiatric expertise to mental health services across the state. A third site has also been established at the National Neuroscience Facility in Parkville, which will provide state-of-the-art imaging analysis facilities.

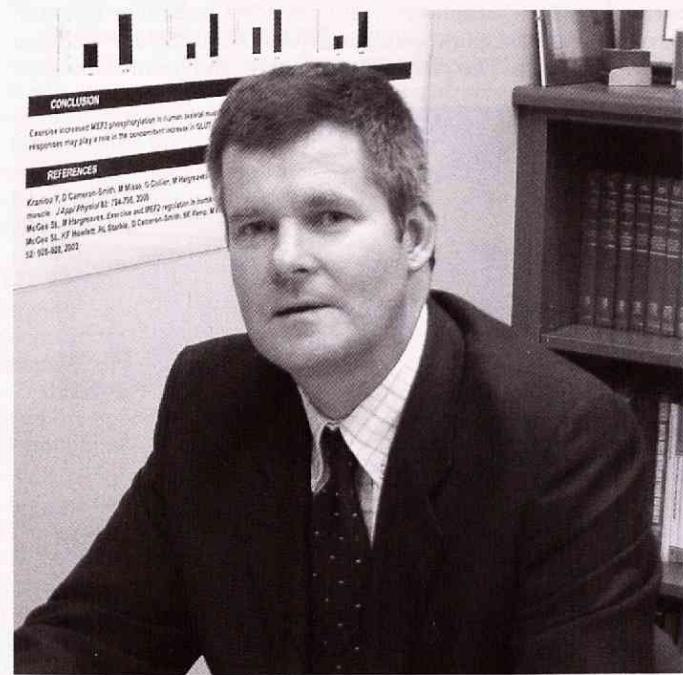
Chris is a Melbourne University MB BS graduate (1979). He trained in psychiatry at the Royal Free Hospital in London and conducted epidemiological research in schizophrenia as a full-time research registrar and was appointed as lecturer in psychiatry at Charing Cross and Westminster Medical School in 1987, where he began work on the neuropsychology of schizophrenia, the basis of his MD thesis awarded in 2004.

From London, Chris took a travelling fellowship to the National Institute of Mental Health in Washington DC, where he undertook neuroimaging work. He returned to Australia in 1992 to work at the Royal Park Psychiatric Hospital and the Mental Health Research Institute, where he established the Cognitive Neuropsychiatry Unit. He established the first MRI-based imaging studies in psychosis and schizophrenia in Melbourne, which has grown to a brain imaging database of almost 2000 brain scans. He also helped develop rehabilitation psychiatry in the NorthWestern Mental Health Program. In 2002, with the closure of Royal Park Hospital, Chris established his clinical and research activity at Sunshine Hospital, the first academic unit of its kind in the western suburbs of Melbourne.

Mark Hargreaves

Professor of Physiology

MARK HARGREAVES COMPLETED his BSc (1982) and PhD (1989) degrees in physiology at the University of Melbourne and an MA (1984) in exercise physiology from Ball State University, USA. Prior to taking up his appointment at Melbourne, Mark was professor of exercise physiology at Deakin University (Melbourne) since 1996. His research interests focus on the physiological and metabolic responses to exercise, with particular emphasis on the regulation of skeletal muscle



MARK HARGREAVES

carbohydrate metabolism. He is currently investigating the molecular regulation of glucose transporter proteins (GLUT4) in skeletal muscle following acute and chronic exercise, and the effects of exercise on glycogen-protein interactions in muscle. His research has implications for exercise in metabolic disease and for athletic performance. He has published over 100 original articles and serves on editorial boards for a number of human and exercise physiology journals, notably *Journal of Applied Physiology; Medicine and Science in Sports and Exercise; and Exercise and Sport Sciences Reviews*.

Trevor Kilpatrick

Head of the Centre for Neuroscience and Professor of Neurology

TREVOR KILPATRICK GRADUATED MB BS top of his year from the University of Melbourne in 1982. Following training in neurology, he embarked on postgraduate research studies towards a PhD, under the supervision of Sir Gustav Nossal and Perry Bartlett of the Walter & Eliza Hall Institute of Medical Research (WEHI). Appointments at the Salk Institute for Biological Studies (La Jolla, USA), Institute of Neurology (London) and the National Hospital and Moorfields Eye Hospital (London) ensued. He returned to Melbourne as the Vieret senior medical research fellow at the WEHI and as head of the Melbourne Multiple Sclerosis Research Unit at the Royal Melbourne Hospital. Trevor has been the recipient of the Sunderland Award (1994), AMRAD Postdoctoral Award (1995) and inaugural Leonard Cox Award (2000). He has published widely, primarily in the area of multiple sclerosis (MS), and he continues to be an external assessor and member of the discipline panel for the NHMRC and to serve on other granting bodies.

Trevor is a clinical neurologist with a strong research interest in the area of demyelinating diseases (including MS). Currently, in a collaboration between the Centre for Neuroscience and the Howard Florey Institute, Trevor leads a research group focused on MS. His group is investigating the cellular and molecular events that influence the capacity of the demyelinated brain to remyelinate. The particular emphasis is to identify growth factors that can increase the survival of the oligodendrocyte, the cell that is responsible for producing myelin, the insulating coat that protects nerve cells, and which is targeted in demyelinating disease. The work is also directed at identifying mechanisms to promote the capacity of the brain's endogenous precursor or stem cells to repopulate demyelinated regions with newly derived oligodendrocytes. Trevor and his colleagues are also attempting to unravel the cause of MS by studying the genetic and environmental factors that contribute to the disease.



TREVOR KILPATRICK

EYE RESEARCH AUSTRALIA

Working Against Blindness and Vision Impairment

by Professor Hugh R Taylor AC

*Ringland Anderson Professor of Ophthalmology
Managing Director, Eye Research Australia*

IN 2004, EYE Research Australia (ERA) commissioned Access Economics Pty Ltd to report on the economic impact of vision loss in Australia. The report, *Clear Insight, the economic impact and cost of vision impairment in Australia*, estimated that vision impairment cost Australia close to \$10 billion that year. It also estimated that the direct costs for vision disorders are more than for many of the national health priority areas such as coronary heart disease, stroke, arthritis or depression, and as much as for diabetes and asthma combined. Yet three quarters of visual impairment is unnecessary: it can be either prevented or treated.

The report identified three key areas of action to eliminate preventable blindness in Australia:

- Appropriately resourced, long-term eye health promotion initiatives to reduce avoidable vision loss.
- Adequate funding for eye care services for treatable conditions and for low vision support services.
- A substantial increase in research into the causes of vision loss and blindness that cannot presently be prevented or treated.

This landmark report epitomises the work of ERA. Established in 1996, the centre is world renowned for its work in the diagnosis, prevention and treatment and establishing the causes of eye disease, vision loss and blindness through its teaching and research.

Our aims are to:

- Develop activities for the prevention and treatment of eye disease and blindness.
- Provide facilities for training professional personnel, especially those from developing countries.
- Conduct applied field research on the epidemiology, management and operational aspects of avoidable blindness.
- Foster a multidisciplinary approach to the promotion of eye health and the delivery of eye care to everyone, including rehabilitation.
- Participate in the collection and distribution of pertinent information.

We are one of the four core participants of the Vision CRC, the largest cooperative research centre yet funded. Other core participants are the International Centre for Eye Care Education, LV Prasad Eye Institute (Hyderabad, India) and the Institute for Eye Research (Sydney).

The Vision CRC aims to become a world leader in eye research and education, delivering vision correction and maximising commercial opportunities and, ultimately, to eliminate refractive error as a cause of visual impairment.

At ERA, we are currently involved in six Vision CRC projects: myopia genetics, eye care delivery, enabling technology (a new



HEATHCOTE WRIGHT, PHD STUDENT IN THE DEPARTMENT OF OPHTHALMOLOGY, SCREENS CHILDREN IN THE NORTHERN TERRITORY AS PART OF AN ONGOING STUDY ON TRACHOMA IN INDIGENOUS CHILDREN

low-cost digital retinal camera), a low cost spectacles program, Aboriginal eye health, and monitoring and evaluating the Vision Initiative.

The Vision Initiative grew directly out of our research findings and public health activities and is implemented by Vision 2020 Australia, the peak body for vision groups in Australia. In addition to public eye health promotion activities, the Vision Initiative promotes professional best practice enabling ophthalmologists, optometrists, general practitioners, pharmacists and

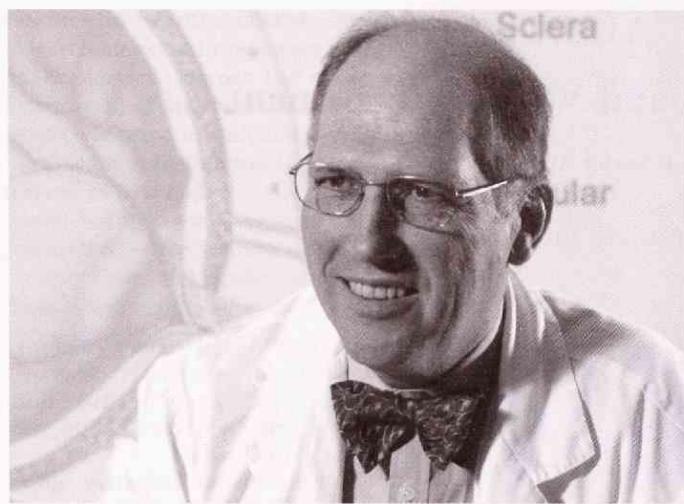
others to provide consistent eye care messages to the community. In 2002, the Victorian Government granted \$1.8 million over three years to fund the initiative in Victoria.

Led by Associate Professor Jill Keefe, research groups in our Population Health Division work on the prevention of blindness, health services research and eye health promotion. The division also conducts studies on the economic and quality of life impact of vision impairment, on low vision and on diabetic retinopathy and is involved in evaluating the Vision Initiative. Its goal is to reduce the prevalence and impact of vision impairment in diverse and often underserved populations including people with diabetes, Indigenous Australians, the elderly, and those in developing countries or with a family history of glaucoma. With a broad research agenda to cover, the senior research staff includes ophthalmologists, psychologists, public health researchers, physiologists and economists.

Associate Professor Tien Wong joined the centre in 2003 and leads our new Clinical Epidemiology Division. An ophthalmologist from Singapore, with a PhD from Johns Hopkins University, Tien Wong won the prestigious American Heart Association Sandra Doherty Award in 2004 for his work correlating changes in retinal blood vessels and cardiovascular and diabetes complications. Associate Professor Wong has demonstrated proof of concept that retinal vascular changes predict the risk of heart disease, stroke, diabetes, hypertension, dementia, kidney and other vascular conditions years before their development and independent of current diagnostic methods. His work is funded in part by the NHMRC and NIH (USA).

His team is now examining the relationship between retinal microvascular signs and the prevalence and five-year incidence of cardiovascular and other complications (peripheral vascular disease, neuropathy and nephropathy) in type II diabetes. One study will include the 1600 participants in the AusDiab study who underwent a baseline examination in 1999-2000 which is being repeated in 2004/05.

The team also participates in collaborative, large-scale studies examining the relationship between retinal vascular signs and vascular disease in Australia, the United States, Japan and Singapore. The retinal vascular imaging centre (RetVIC) is being developed to provide diagnostic analysis of retinal images for



HUGH TAYLOR

early prediction of vascular diseases. It will develop a computer-based imaging system, with telemedicine capability for image delivery from rural and remote areas. RetVIC will coordinate and conduct clinical trials and community screening studies, and perform cost-benefit and feasibility analyses to demonstrate the clinical value of retinal vessel imaging for risk protection.

The centre's Macular Research Unit, led by Associate Professor Robyn Guymer, investigates the genetic and environmental risk factors for age-related macular degeneration (AMD). The unit aims to define new treatments for this slowly progressing disease, the leading cause of blindness in our community and responsible for one third of untreatable vision loss. Robyn Guymer was the first ophthalmologist in Australia dedicated to full-time research of AMD and has recently been inducted as only the second Australian full member of the USA Macular Society.

Fifteen per cent of Australians over fifty years old have early signs of AMD, the prevalence of which is age dependent and increases exponentially with each decade. The number of people in Australia with AMD is predicted to double in the next twenty years.

The aetiology of AMD is unclear—both environmental and genetic risk factors are involved. Apart from age, the only confirmed risk factors for AMD are family history and smoking. Treatments are limited and there are no preventive options. The high prevalence of AMD, the anticipated increase in the ageing population and the limited treatment options all highlight the need for basic research into this area. The unit is developing a comprehensive bank of AMD cases and their families for use in studies of genes that might influence AMD. Twin family studies and population-based studies have shown that genetic factors have an important role in the aetiology of AMD. Research has tried to identify specific genes but so far this has been disappointing, with only the apolipoprotein (ApoE) gene being implicated as a genetic risk factor.

Research into the genetics of other eye diseases, especially glaucoma, is undertaken by the centre's Clinical Genetics Unit, headed by Associate Professor David Mackey. The unit has focused on the ocular phenotyping and genetic analysis of twins in the largest twin eye study in the world and on identifying the genes responsible for glaucoma. The unit collaborates worldwide and continues a decade of collecting clinical information and DNA from 400 families and 5000 individuals to identify the genes associated with glaucoma with the aim of developing better treatment and screening.

The Ocular Genetics Unit, led by Dr Paul Baird, is working to identify the genes involved in myopia. Over the last few decades the number of people with myopia has increased alarmingly. On a worldwide scale, myopia affects some 1.6 billion people: ten times the number of people who suffer from diabetes. By

the year 2020 the number of people with myopia is expected to almost double. This study is part of the Vision CRC's approach to combating this enormous increase in myopia. They also work with other units such as the Macular Research Unit to examine links between AMD and Alzheimer's disease, for example by analysing the common allelic variants of the ApoE gene and progression of AMD.

Under the directorship of Dr Graeme Pollock, the Corneal Research Unit includes the work of the Lions Corneal Donation Service and the research activities of the Melbourne Excimer Laser Group and the Royal Victorian Eye and Ear Hospital Corneal Unit. It is involved in a number of trials, including a bacterial keratitis clinical trial and a study on the use of Cyclosporin.

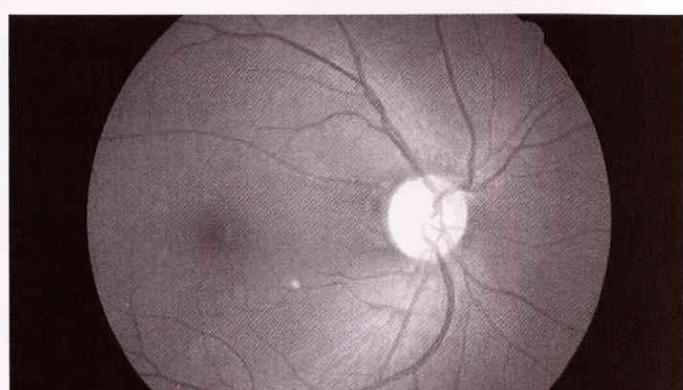
Postgraduate research training is a central activity. The centre's postgraduate committee, chaired by Associate Professor Jill Keeffe, oversees masters, PhD and MD students. It organises an active program of seminars and tutorials and monitors progress. Associate Professor Deb Colville leads the education unit and coordinates under and postgraduate teaching of ophthalmology. This includes curriculum development, face-to-face teaching, support for ophthalmologists as teachers, and educational research publications. Associate Professor Deb Colville also supervises the Advanced Medical Science (AMS) students. The centre normally has four to six AMS students who have worked in projects ranging from refractive surgery to eye banking as far afield as Boston and Fiji.

In 1998 the World Health Organisation (WHO) established that, globally, there were around fifty million blind people, and an additional 150 million people suffering from visual impairment. Vision 2020: The Right to Sight was then established with the global aim of eliminating avoidable blindness by the year 2020. This initiative builds on the alliance between WHO and the International Agency for the Prevention of Blindness (IAPB). I am currently regional chairman for the western Pacific for IAPB and the centre also houses the western Pacific regional coordinator for Vision 2020, Dr Richard LeMesurier.

ERA is the only WHO Collaborating Centre for the Prevention of Blindness in Australia. This work includes support for Vision 2020, Jill Keeffe's work as chair of the WHO Low Vision Working Group and my role as advisor to the WHO Alliance for the Global Elimination of Trachoma.

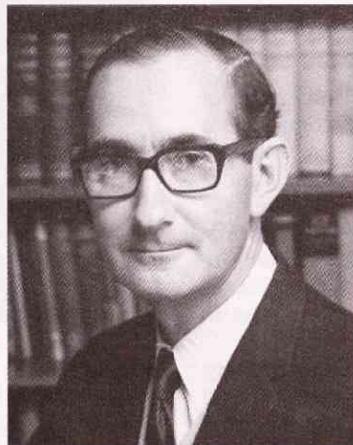
Since it was established in 1996, ERA has developed an imposing research capacity in ophthalmology and works to focus attention on the importance of eye health in the community. It is committed to the continuous development of this research in an effort to reduce the economic impact of vision loss in the community.

ERA is a collaborative undertaking between the Department of Ophthalmology at the University of Melbourne, the Royal Victorian Eye and Ear Hospital, the Royal Australian and New Zealand College of Ophthalmologists, the Ansell Ophthalmology Foundation, Christian Blind Mission International, the Lions Clubs of Victoria and RBS, RVIB, VAF Ltd. ERA can be contacted on +61 3 9929 8368, or visit the web at www.cera.org.au



FUNDUS OF A RIGHT EYE. RETVIC WILL ANALYSE SUCH IMAGES FOR PATHOLOGY AND EPIDEMIOLOGICAL PURPOSES

Ophthalmology was the first specialty chair in an Australian medical school. The Ringland Anderson Chair of Ophthalmology was gazetted in 1963. Foundation professor Gerard Crock established a biomedical engineering facility during his tenure. The research teams of Jean Marie Parel and Lbjumir Pericic, and the clinical teams of Dick Galbraith, Jim Cairns and Julian Heinze pioneered revolutionary changes in microsurgery, corneal grafting, binocular ophthalmoscopy, and retinal angiography. Most notably they designed and manufactured the first vitrectomy instrument, in a joint venture with the University of Miami, establishing modern vitreoretinal surgery that transformed the



GERARD CROCK

management of ocular trauma and diabetic eye disease.

With Gerard Crock's retirement in 1990, Hugh Taylor took up the Ringland Anderson chair, named in honour of his grandfather. Since 1996 the work of the department has been closely coordinated with Eye Research Australia.

In honour of Professor Emeritus Crock's outstanding contributions to the profession, the Eye Research Australia Foundation established the Gerard W Crock Fellowship in 2003. This fellowship will assist gifted Australian ophthalmologists to continue their academic research here in Australia, following their overseas fellowships, prior to entering private practice.

FOCUS ON RESEARCH AT MELBOURNE

John B Furness

Professor of Anatomy and Cell Biology; Head, Autonomic Neuroscience, Pain and Sensory Mechanisms Laboratories; Deputy Director, Centre for Neuroscience

JOHN FURNESS WAS educated at the University of Melbourne, gaining a BSc (physics), a MSc and a PhD (zoology). After many appointments, both in Australia and overseas, he returned to the university to take up an appointment as professor of physiology in 1990. He is best known for the chemical coding hypothesis that has strongly influenced studies of the organisation of nerve circuits, for his work in unravelling the intrinsic circuits in the digestive tract (the enteric nervous system) and for the discovery and characterisation of sensory neurons intrinsic to the digestive tract.

His current work focuses on visceral sensory neurons, particularly those responsible for visceral pain, the investigation of drugs that can reduce visceral pain and on the control of ion channels that determine the excitabilities of neurons.

John has been prominent in developing links between industry and the university sector, and in translating basic knowledge into applied technologies.

Since 1991 he has been involved in collaborative research with the pharmaceutical industry, his work with Pfizer leading to patents and his work with GlaxoSmithKline leading to clinical trials of the anti-IBS drug Talnetant.

John holds patents for devices to treat incontinence and was a founder of M7 Pty Ltd, which was set up to exploit the technology. He was an initiator and is a director of Neurosciences Australia Ltd, which has raised over \$70 million to develop neuroscience research and intellectual property.

A fellow of the Australian Academy of Science, John is a recipient of the Janssen International Research Award, the Davenport Medal of the American Physiological Society, the Distinguished Achievement Award of the Australian Neuroscience Society and a Centenary Medal.

Ann Turnley

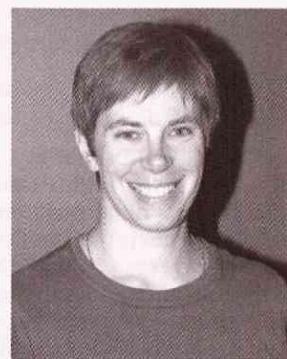
Head, Neural Regeneration Laboratory, Centre for Neuroscience

ANN TURNLEY GRADUATED from the University of Melbourne with a BSc (Hons) in 1988 and completed her PhD, *A Transgenic Model of Dysmyelination*, at the Walter and Eliza Hall Institute of Medical Research (WEHI) in 1992. During this time she examined myelination of the central nervous system and developed a transgenic dysmyelinating mutant mouse model that resulted in a publication, a News and Views article and a comment in the prestigious journal *Nature*.

She was awarded a Lucille P Markey Charitable Trust Visiting Fellow Award (USA) and took up a postdoctoral position at the Bookdale Center for Molecular Biology at the Mount Sinai School of Medicine in New York. She returned to the WEHI in 1995 as an Australian Research Council postdoctoral fellow and then the Sir Colin and Lady MacKenzie Trust fellow. Ann's increasing interest in the regulation of neural stem cell differentiation into neurons led to a publication in *Nature Neuroscience* in 2002. Her research interests have now expanded to include regulation of neurite outgrowth, axonal regeneration and astrocytic gliosis following nervous system injury.

Ann has received many grants from organisations such as the NHMRC, the National Multiple Sclerosis Society of Australia, the Australasian Spinal Research Trust, the Motor Neurone Disease Research Institute of Australia, the Clive and Vera Ramaciotti Foundation, ANZ Charitable Trust, the BHP Community Trust and the Harold and Cora Brennan Benevolent Trust.

Ann came to the Centre for Neuroscience in 2001 to head the Neural Regeneration Laboratory and is currently one of the University of Melbourne's CR Roper fellows.



ANN TURNLEY

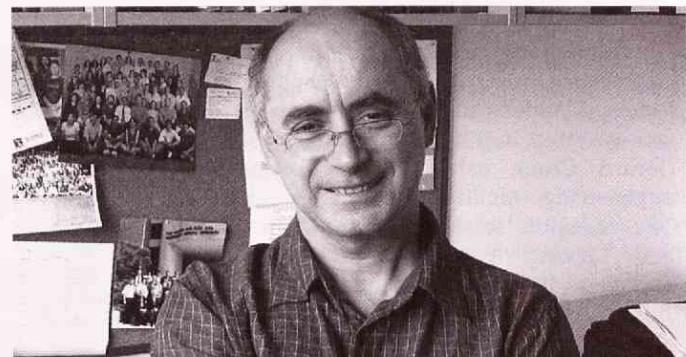
Francis (Frank) R Carbone

Professor of Immunology, Department of Microbiology and Immunology

FRANK CARBONE GRADUATED from the University of Melbourne BSc (first class honours) in 1980 and completed a PhD in the Department of Biochemistry in 1985. He was then awarded postdoctoral fellowships from the American Cancer Society and the American Arthritis Foundation to undertake research at the highly prestigious Scripps Clinic in California. In 1989 he received an American Cancer Research Institute Investigator Award, the Hilda Irene Duggan Investigator Award from the American Arthritis Foundation and was appointed an assistant professor at the Scripps Clinic.

Frank's research focus is on T-lymphocyte immunology. Together with Bill Heath, from the Walter and Eliza Hall Institute of Medical Research, he pioneered the field of 'cross-presentation', which is critical to the initiation of cytotoxic T-cell responses in infection and disease. This research has made a major contribution to our understanding of how certain viruses, such as herpes, are able to persist in the body for prolonged periods. Much of this research has been published in the highest ranking peer-reviewed journals and his scholarly papers are regularly cited by others.

Since re-joining the University of Melbourne, Frank has assumed a leadership role in the teaching of immunology to BSc and honours students. His courses are extremely well received and he attracts many top performing students to his laboratory



FRANK CARBONE

as graduate students. Overall, he has supervised fourteen BSc honours students and twelve PhD students. He currently has one honours and four PhD students.

Frank Carbone's research has been supported by substantial grants from the ARC and the NHMRC, including a large NHMRC program grant administered through the university. He is recognised internationally as an outstanding researcher in the field of cytotoxic T-cell immunology, an area of fundamental importance in the response to infection. He is a much sought after research collaborator with extensive research collaborations in Australia and the USA and receives numerous invitations to participate in prestigious international meetings in Australia and overseas.

HW Gordon Baker

Professor, University of Melbourne Department of Obstetrics and Gynaecology, Royal Women's Hospital

GORDON BAKER IS a 1966 Melbourne MB BS graduate. He also has a PhD (Monash) and an MD from Melbourne. After initial positions as a resident medical officer and medical registrar at the Royal Melbourne Hospital, Gordon was registrar, research fellow and then assistant physician in the Department of Endocrinology at Prince Henry's Hospital, where he performed research work on rhythms of hormone secretion and the endocrinology of liver disease. He then spent two years as visiting scientist at the Milton S Hershey Medical Center in Pennsylvania, USA.

Returning to Australia in 1976, Gordon took up a research fellowship at the Howard Florey Institute of Experimental Physiology and Medicine at the University of Melbourne, then an NHMRC senior research fellowship at the Medical Research Centre at Prince Henry's Hospital. Gordon has held many full- and part-time appointments in andrology and in endocrinology at the Monash Medical Centre and at the Royal Women's, Prince Henry's, the Austin and the Royal Children's hospitals. In 2000 Gordon was appointed to a tenured post as associate professor in the University of Melbourne Department of Obstetrics and Gynaecology at the Royal Women's Hospital.

Gordon specialises in clinical research on male infertility and has supervised the research of numerous higher degree students. He has published widely on the causes and management of male infertility, human sperm-oocyte interaction, semen testing and analysis of fertility and in-vitro fertilisation data. He teaches about infertility from undergraduate to sub-specialist levels.

With an outstanding national and international reputation as a leader in the field of male infertility, Gordon is frequently invited to speak. He is particularly renowned for his discovery and research of the male infertility problem known as disordered zona pellucida induced acrosome reaction. His major commitment is to research.

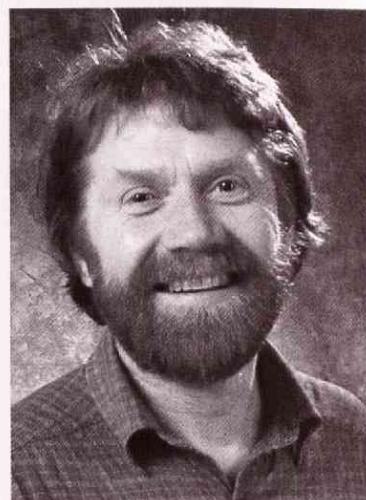
Paul A Gleeson

Deputy Head, Department of Biochemistry and Molecular Biology

PAUL GLEESON GRADUATED BSc (Hons) from the University of Melbourne in 1973. His PhD was in the field of plant polysaccharides. He spent time as a postdoctoral fellow at the Hospital for Sick Children in Toronto, then as a Beit memorial fellow at the National Institute for Medical Research at Mill Hill in London, where he became fascinated by the then emerging field of molecular biology.

Paul returned to Melbourne at the Department of Pathology and Immunology at Monash University where he contributed to both postgraduate and research policy formation at a faculty level. In 2001 he returned to Melbourne University, to the Department of Biochemistry and Molecular Biology, where he plays a major role in fostering research within the department.

With a distinguished reputation as a biochemist and immunologist, Paul is a leader in research into the molecular basis of organ-specific autoimmune diseases, and into the molecular mechanisms of intracellular membrane transport. His research dissects complex cell interactions of the immune system and also applies a range of cell biological approaches to discover the molecular machines



PAUL GLEESON

that regulate transport pathways within cells. He is recognised internationally as an outstanding researcher in both of these research areas and has published over 100 refereed papers, in highly regarded international journals, and ten book chapters. He is on the editorial board of international journals as well as being a member of the Faculty of 1000.

Paul has a strong record of attracting funds to support research, having been chief investigator in twenty-seven successful competitive grant applications from the NHMRC and ARC. He has supervised twenty-three honours students, sixteen postgraduate students and currently has three PhD and two honours students. A number of his postgraduate students have been highly successful. He receives regular invitations to speak at international conferences in cell biology and immunology. Over the past five years he has addressed fourteen international and national meetings including the prestigious American Society of Cell Biology.

Michael South

Deputy Head, University of Melbourne Department of Paediatrics, Royal Children's Hospital

MICHAEL SOUTH WAS educated at the University of London where he obtained his MB BS (1980), a DCH and an MD.

He was recruited from his position as lecturer in paediatrics at the University of Cambridge to the Royal Children's Hospital in Melbourne in 1988. He has held dual appointments with the Royal Children's Hospital and the University of Melbourne from 1990. In his hospital roles he is currently director of the Department of General Medicine, deputy director of the Division of Medicine and a consultant physician in intensive care and general paediatrics.

Michael is recognised nationally and internationally for his leadership in the renewal of general paediatrics as an academic discipline. Over the past six years, in particular, he has reconceptualised the place of general paediatrics within tertiary teaching hospitals, to the acclaim of his peers. The key to this renewal program has been firmly rooted in the academic tradition of research, critical appraisal of literature and a robust translation of new knowledge into practice and policy. The Royal Children's Hospital's clinical practice guidelines have been critical to the maintenance and growth of quality and safety in clinical care at the hospital and are based on a rigorous evaluation of research literature, supported by Michael's own research endeavours. The guidelines are not only used by the staff at the Royal Children's Hospital and the students of the University of Melbourne, but are widely accessible and highly regarded throughout the world.

Michael's research portfolio is broad, with studies including randomised trials of asthma drug treatments, research into abnormalities of the pulmonary surfactant system, the interaction between spontaneous respiration and mechanical ventilation in small babies, capillary leak syndrome and adverse events following cardiopulmonary bypass, immunisation pain and the use of complementary or alternative medicine in children. He is a member of the editorial committee of the *Journal of Paediatrics and Child Health* and the *Internet Journal of Paediatrics and Neonatology*. He has published seventy-nine articles in peer-

reviewed journals and a further seventy-eight peer-reviewed conference reports, edited nine books and published eight book chapters. In addition, as well as supervising many basic and advanced trainees for the RACP, he has supervised nine MD, two PhD and two MMed students to completion, with a further two MD students still in progress.

In the 1990s Michael was involved in the development of computer-aided/multimedia teaching systems that provide simulations of acute paediatric emergencies for undergraduate paediatrics students. This was the first time in Australia that a department of paediatrics delivered course material in this way and was a major innovation at the time, though others have now followed.

Michael is in the top rank of teachers at both undergraduate and postgraduate level and is recognised internationally as one of the most influential people with whom to undertake training in general paediatrics. His model of integration between university and teaching hospital is an outstanding example of how such a model can work to the benefit of quality and safety in the delivery of world-class clinical practice. His contribution to the discipline in this regard is unique nationally and at the leading edge internationally.



MICHAEL SOUTH

2005 DEAN'S LECTURE SERIES

The 2005 Dean's Lecture Series will include lectures by Frank Carbone and Paul Gleeson.

Frank Carbone will deliver his lecture,
Friend or foe: immune surveillance of viral invaders
at 6pm
on Tuesday 5 July.

Paul Gleeson will deliver his lecture,
From the genome to the visible cell and beyond
at 6pm
on Tuesday 2 August.

Dean's Lectures are held in the
Sunderland Lecture Theatre
on the ground floor of the Medical Building.
Readers are welcome and should
indicate their intention
to attend by telephone on 8344 9800
or email to gael@unimelb.edu.au

2004 GRADUATE STORIES

In 2004 the first cohort of students graduated from the new medical curriculum at Melbourne University. The group included 126 who entered the course straight from school, seventy-seven who entered the course from overseas and fifty-one who entered the course with a degree already to their name. Eight of the graduates had studied at the rural clinical school in Shepparton.

Cameron Keating

School Leaver

IARRIVED IN Melbourne wet behind the ears—the sole Tasmanian student in 1999 to survive the swim across Bass Strait. As a school leaver from a non-medical family, I was unaware of the momentous changes in medical education sweeping the western world, including the University of Melbourne. Fortunately I was awarded a National Medicine Scholarship, the first benefit of which included a flight to Melbourne to enrol and a meeting with Susan Elliott before semester started. The driving force behind the roll-out of the new curriculum over the last six years, her enthusiasm and vision for what was to come was palpable. Despite initially disappointing faculty staff when it became apparent I was not related to Paul Keating, I have thoroughly enjoyed my time on campus and at St Vincent's and look back on the course with fond memories.

I quickly settled into university life and made many new friends, particularly at Newman College where I resided for the first three years. My early semesters were spent adapting to footy-mad Melbourne, lounging on South Lawn in the sun, partying at college and acquiring a taste for coffee in Lygon Street.

Not far into first year I confirmed in my own mind that I had made the right decision to move away from home and study medicine. The faculty offers outstanding facilities and high quality teaching that had my friends back in Hobart envious. My memories of early classes include an anatomy lecture when Norm Eizenberg likened the gastrointestinal tract to a 'kiss between two anuses linked by twelve metres of bowel'. There was also a particularly entertaining lecture in second semester involving a nude double lap of the theatre by the Queen's College football team after a victory.

During the inaugural Advanced Medical Science (AMS) research year, I spent my time in the laboratories of the Macfarlane Burnet Institute. It amazed me, during microbiology, how HIV was able to out-manoeuvre our very best efforts to combat it, despite thousands of brilliant minds and billions of dollars being thrown at the problem. I investigated the latter stages of its replication cycle and, after completing my thesis, was able to present my work at the 2002 Australasian Society for HIV Medicine conference in Sydney. I found this a very rewarding experience and I admire the single-minded dedication of the scientists in my team. A clinician's life is much more stable in comparison.

Melbourne University places a strong emphasis on international student exchanges, but such opportunities for medical students are limited. During fourth and fifth year I became involved in helping to set-up a local arm of the International Federation of Medical Students' Association (IFMSA), an organisation which conducts thousands of student exchanges across Europe and the Americas. We successfully hosted a number of students from Europe and South America



CAMERON KEATING

at the Royal Melbourne Hospital in 2003 and I hope the program grows in coming years.

I went on to undertake my clinical training at St Vincent's Hospital. A highlight of this time included studying paediatrics and women's health in Oslo, Norway, on a semester exchange. It was eye opening to experience a completely different health system, with a strong emphasis on social welfare. The beautiful Scandinavian peoples and the splendour of Europe were an added bonus.

I am now enjoying an internship at St Vincent's. My future plans are directed towards a career in surgery, the finer details of which are still being worked out. I enjoy research and plan to undertake a PhD further down the track.

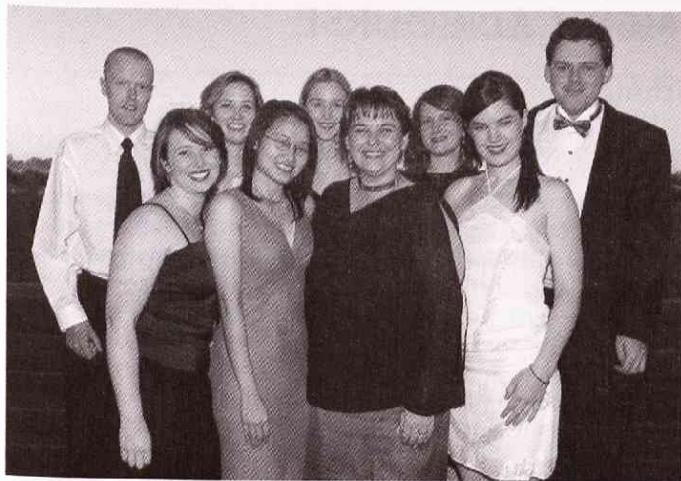
If the opportunity arises I would also like to be involved in teaching, by which time the new medical curriculum will have become a well-oiled machine. However, so long as I have the opportunity to live and work overseas in the future and find time to go heli-skiing in Alaska, I know I will have spent my time productively.

Jodi Cronin

Rural Clinical School

LIKE MANY OTHERS I was a graduate entry student to medicine at Melbourne University. I first found my interest in medicine as a thirteen-year-old volunteer at the RSPCA in Tasmania, but I guess I wasn't your typical medical student. I dropped out of school just before my fourteenth birthday after failing year nine science and losing the battle with truancy and high school bullying. I went to work full-time as a labourer and ship repairer and for the next ten years I renovated and sailed boats, baby sat, worked at supermarket checkouts and had my two gorgeous children, Robert and Alanah.

Not long after my first child was born I realised that I would probably never be able to help him with his school work. My husband and I did everything we could to change our situation and then, while pregnant with my second child, I decided action was needed! I did some TAFE courses and eventually (while still breastfeeding) went back to school, starting with year eight maths and English. Through a special accelerated university bridging course (STEPS) I was able to complete my year twelve equivalency in eight months. It was during this time that one of my teachers (Lois Pinkney) asked me what I wanted to do with my life. Without a thought I replied 'medicine'. She didn't laugh or even tell me it was impossible. With her help I set about the long journey into medicine. I completed all of the advanced maths and chemistry subjects, eventually gaining entry into a three-year undergraduate course in biomedical science at James Cook University. After graduating and receiving four rejections, I finally got into medicine at Melbourne.



JODI CRONIN AND FELLOW GRADUATES FROM THE RURAL CLINICAL SCHOOL
CELEBRATE THE END OF THEIR FINAL YEAR
PICTURED ARE, L-R BACK: TIM COCHRANE, CLAIRE GORDON, EMMA MORRIS,
SARAH ROSALIE, ANDREW LEE
L-R FRONT: KRISTI BATEMAN, TANYA TRUONG, JODI CRONIN, KATIE HOGG.
ABSENT: SAMUEL SIDHARTA. *Photograph Justine Sywak*

We spent two and a half years in Melbourne and when the opportunity to go to a rural clinical school arose I jumped at the chance. This meant less travel, less work and more time with my husband and two children. The move proved to be a wise one and we have really enjoyed our time in Shepparton. The environment at the rural clinical school was friendly, non-confrontational and challenging with several initial teething problems that we conquered as a close-knit group. In my time here I have developed lasting friendships and bonds with the community which have led me to commit to completing my intern year here in Shepparton.

Eventually, I hope to gain entry to obstetrics and gynaecology training to complete the long journey I began nine years ago. My motto in life is to NEVER give up. I believe self-imposed limitations can prevent you from achieving your ideals—a bit idealistic I know but, hey, it worked for me.

I am looking forward to completing my intern year and subsequent training, sure that there will be steep learning curves and several hurdles along the way but also sure that I will, eventually, achieve my goals with the continued support of my husband and children driving me.

Tze Ping Tan

Overseas Student

IGREW UP in Teluk Intan, a small town on the Malaysian Peninsula and came to Melbourne in 1998 to undertake Trinity Foundation Studies at Trinity College, my sister's alma mater. In fact, this is fast becoming a family tradition as numerous cousins over the years have made the same journey.

I actually contemplated studying mechanical engineering before finally settling into medicine. In retrospect I'm glad I decided on medicine because I have some wonderful memories from the last few years.

First of which was the opportunity to meet a bunch of new friends who subsequently became close friends. The first few semesters of medicine were generally uneventful although being the guinea pig for the new course was interesting and I still struggle with anatomy. Research at the Baker Heart Institute during the AMS year was wonderful—it taught me that hard work plus teamwork and a dedicated mentor were a great mix. The encouraging results at the laboratory enabled me to enjoy a free trip to the XIVth World Cardiology Congress in Sydney in 2002, and subsequently some publications.

The other great highlight for me was during my elective in an emergency department in Kuala Lumpur, Malaysia. Being the guy managing the neck of a patient in a MVA with suspected c-spine injury with no one else except another fellow student will be something that I'll remember for some time.

Outside medicine, my chief interest would probably be soccer. I'm also a huge fan of Chinese wuxia literatures, and aim to learn more about Chinese culture in the future.

I have no great plans for the future. I aim to survive my first year in the hospital. Beyond that, everything is unknown.

Matthew Richardson

Graduate Student

MY DECISION TO study medicine as a graduate was not a difficult one. Having not quite made the grade to study medicine as an undergraduate in 1996, I undertook an undergraduate degree in podiatry. I then completed an additional honours year in 1999 as a stalling tactic to joining the work force as a podiatrist, still hoping for a way into medicine, a degree I had hoped to study since I was a child.

The opportunity to start again and study medicine is something I am still grateful for. Surprisingly, in retrospect I think getting into the course was far more difficult than the degree itself. I may be about to dispel hundreds of years of medical school dogma, but you don't have to be a genius to study medicine, as the undergraduate degree entry requirements would still have you believe. What all the graduates seem to have in common (apart from ample brains) is a true commitment to the profession of medicine—a trait that will ensure the ongoing success of the graduate medical program.

The diverse backgrounds of my fellow graduates have brought a new breadth of personalities and life experience to the medical course. Veterinary surgeons, arts graduates, lawyers, science graduates and adventure travel guides fluent in a multitude of languages, just to name a few, have contributed to the eclectic mix of graduate students who joined with the undergraduates in completing their medical studies last year.

While all students make sacrifices when studying, those made by the graduates returning to study are made willingly but can be particularly trying. The very nature of being a 'mature age student' means, for some, combining study with professional work, caring for children, paying off a mortgage and other commitments. Sometimes 'medicine' can't be priority number one. The medical course demands a lot of time and it was a difficult adjustment for many graduate students who had grown accustomed to spending their time working or travelling. Having said this, I'm sure most, if not all, of my graduate peers would say it has been well worth it.

Joining undergraduates in the lecture theatre and tutorials also took varying degrees of adjustment for the graduates and undergraduates alike. For some, assimilation was not difficult as they were only three years older than the undergraduate students. Other graduates, however, had children of their own not a great deal younger than the undergraduate students. While this may seem like a recipe for butting heads, the group jelled quickly and I'm sure lasting friendships have been made.

So, after nine consecutive years of study at university, I am well and truly looking forward to working as a doctor. Like all final year medical students before us, the uncertainty of wondering what sort of doctors we will make, particularly as the first products of the new curriculum, plays on our mind. We'll just have to wait and see.

TEACHING THE NEW MEDICAL COURSE

by Neil Strathmore

HAS THE NEW course changed the experience of teaching? Well, it depends. The students have changed but then the students had already changed from what they were when I went through the course in 1980. They have become kinder and gentler and generally more co-operative with each other. There are more Asian faces, but it's not always possible to pick their origin. In any group there may be fee-paying students from Malaysia or Singapore and Victorian high school graduates who came to Australia as teenagers, together with second or third generation Australians. The large intake of graduates has altered the face of the course. There have been some interesting combinations: the all-graduate group, the group of four graduate (PhD) girls with their two undergraduate toy boys and the all undergraduate group with the barely-tolerated, slightly-awkward, out-of-place graduate.

The course has changed. There is now a curriculum. How ridiculous it was to say that the syllabus was the 'entire subject'. We muddled through with no co-ordination of teaching so that the same topics could be taught by three different consultants and other topics not covered at all. The block advisory groups in both clinical and preclinical years have spent hours developing a curriculum and setting a standard which students should be able to achieve. There have been moans from some that the students don't know this or that—but if it is important it should be on the curriculum and if you want it there then you need to put in the effort to get it there.

Clinicians are now involved in every phase of the preclinical years and the problem-based approach ensures that the students see the clinical relevance of each topic. I have really enjoyed my lectures to the second years and can now cope with the public lecture theatre filled with 350 earnest faces. I've invited email questions on the lectures and regularly get a dozen messages after lectures with questions ranging from idiotic (to which the answer is—re-read the lecture notes) to perceptive (to which the answer is—put in a grant application).

The method of teaching has changed. There are fewer contact hours and the students are more on their own—to learn or not. There is also the new modality of problem-based learning to come to grips with. However, the bedside tutorial lives on. Students are still watched while they examine a patient. Basic clinical skills are taught and not just at the bedside: the clinical skills laboratory has had a major impact. In an exam last year I was amazed at the standard of students taking blood gases. They had to describe the procedure to a real patient and obtain consent then perform the procedure on a dummy arm. This was much better than 'see one, do one, teach one'. Some things stay the same. It is still hard to get the students to actually see patients on the ward. I do a count each week and expect them to have seen at least three and preferably four or five. (Even this clinical exposure seems insignificant when an intern will probably see thirty or forty patients in their first week). There is still the problem of getting the students to focus on the common and important and not on the rare or trivial. Unfortunately both categories occupy the same space in the text book, whereas for the doctor the common and important occupy the greater part of our memory and experience. I would like to see some sort of logbook introduced to make sure the students see patients with the common conditions and observe the common procedures.

There are still students who are shy or rude or unable to relate to patients or staff. There are still students who are delightful, enthusiastic and appreciative. There are still students who are surprised that they got into the course—just how did they get an ENTER of 99.95? And there are students who amaze you with their perception, knowledge and sophistication. And that remains the best part of teaching—the variety of students, their enthusiasm, and the chance to see the world of medicine through their eyes.

NOMINATIONS INVITED FOR UMMS DISTINGUISHED FELLOWS

The University of Melbourne Medical Society has established an annual program to recognise Melbourne MB BS graduates who have given outstanding service to their medical school through academic leadership, or, more broadly, who have made major contributions nationally or internationally to medical policy development, medical research, public service or personal commitments in foreign medical care.

Potential fellows must be nominated by an UMMS member or by a current or past academic staff member of the School of Medicine.

Two awards will be given each year:

The UMMS Distinguished Fellow for graduates up to 45 years of age;

The UMMS Distinguished Senior Fellow for graduates over 45 years of age.

Nominations close on 30 June.

For a nomination form contact:

UMMS, School of Medicine
University of Melbourne Vic 3010

Tel (+61 3) 8344 5888

Fax (+61 3) 9347 7084

Email: umms-medicine@unimelb.edu.au

PETER G JONES ELECTIVE ESSAYS

Each year three Peter G Jones Elective Essay prizes, named in honour of Peter Jones, inaugural editor of *Chiron*, are offered to final year students for essays describing their elective experiences. In 2004, prizes were awarded to Kirsten Scott for her essay *Northern Exposure*, about her time in the East Kimberley region,

to Liesl Celliers for her essay *The Power of One*, about her experience in a provincial hospital in South Africa and to Prassannah Satasivam for his essay *The Gods of Small Things*, about his elective in Vellore, South India. Abridged and edited versions of these essays are published below.

The Power of One

BY LIESL CELLIERS

ITHINK PEOPLE sometimes go to Africa for the wrong reasons. Perhaps they go with the belief that their help is needed; that they will be able to make some kind of change and that everyone will be grateful for their aid and expertise. The problems are so big, I thought, but even if I can just help one person my trip will have been worthwhile. You know, the power of one...

I arrived at Johannesburg International Airport with these figures in the back of my mind: there is a murder here every fifty-four seconds; every minute three women are raped; in 2000 there were more than 7000 fatal firearm injuries and 9000 reported car-jackings; in the same year 170 police officers were murdered. I was met by friends who assured me that the airport was quite safe, pointing to the security guards armed with shot guns. As we left the car park the attendant asked us to turn off the ignition to check that we had the keys—just a routine precaution—'and lock your door' said my friend.

I did my elective at the provincial hospital in George, a beautiful coastal town about four hours drive from Cape Town, population around 40 000. On my first morning I was sent to the emergency department, although there they just called it 'trauma'. The resident who showed me around had just received his fourth rejection for a training position, based on his race, and that week he began his fourth round of HIV prophylaxis following a needle stick injury. This was his second year out. When I told him I had never seen a patient with AIDS, he was incredulous, then laughed: 'You're kidding, right?'

In the Western Cape about one in five people in the community was HIV positive (with higher rates amongst the hospital population) yet health care workers seemed to accept it as some kind of occupational hazard. Most did not wear gloves when putting in cannulas or taking blood. In fact, when I wanted gloves I would inevitably end up on a reconnaissance mission around the department before I was able to find a pair. Sharps were left lying around for nurses to clean up and the yellow sharps disposal units we see in every hospital room were few and far between.

On my first overnight in trauma, the two residents running the department pointed me towards the already growing pile of files and told me to get cracking. At about 11 pm the stab wounds started coming in. The first patient had been assaulted by his wife, who had slashed him across the chest, arms, face and ears with her kitchen knife. The residents were already busy with three patients who had been brought in unconscious following a high speed motor vehicle accident, so they asked me to start suturing. Despite my limited skills, I could hardly protest.

The patient was intoxicated, and they told me there was no need for local anaesthetic. I gave a little bit anyway, at least for the wounds that looked the most painful, and started stitching. Conscious that I had only ever done five stitches before in my life, my hands were shaking. At first my patient lay motionless, but after about the fiftieth stitch he began to rouse and thrash about. I called the resident, a petite young lady not much older than myself, who promptly pushed him flat onto the bed and screamed at him to lie still or she would throw him out onto

the street. This patient was not at all grateful for my help and although I managed not to prick myself, I was angry at the risk I had taken. In two weeks he was back, his old wounds just starting to heal, his new wounds gaping and bleeding.

The two residents from that night left for London the same day I came back to Australia. Of the ten residents at the hospital that year, all but two left the country as soon as their compulsory community service term finished.

During my week on the obstetrics and gynaecology ward there were three patients with disseminated cervical cancer, something we now only read about in Australia. The lists of differential diagnoses were completely different to what I had been taught. Malignancy was usually low down on the list and, if present, was almost always advanced beyond cure. Tuberculosis now jumped to the top of the list (no matter what the presentation was!). And at the back of your mind was always HIV.

The highlight of my placement was catching babies. Juxtaposed with this was my encounter with a Dutch doctor who I met that same week in theatre. One lunchtime, a nurse suggested I go to theatre B to see some interesting procedures by a visiting specialist. Her list was 'unofficial' and there was no anaesthetist. Dr Johansen had recently moved to South Africa and, because she had been unable to establish a clinic, spent her time travelling up and down the coast. Her passion was abortions. The one I saw that day was at nineteen weeks. There were just the three of us in the room, and as the patient began to cry, all I could do was hold her hand in silence. I decided not to stay to watch any more. 'I am one of the few doctors in this country who is actually making a difference', the doctor told me matter-of-factly, 'I hope you will do the same one day'.

I have a vivid memory of a patient who presented with liver failure, on a background of stage four HIV. Feeling out of my depth, I called a resident. The patient was old (at least by African standards), emaciated, dirty, his clothes threadbare, brought in a wheelchair by his son. Yet the resident greeted him warmly, in the patient's own language. 'What can I do for you, grandpa?' he asked, this greeting being a sign of great respect. He listened to the old man's story and then asked to examine him. When the son explained that it was hard for him to walk, the resident bent over, picked the old man up from his wheelchair and placed him gently on the bed. 'I beg your pardon, grandpa. Sorry', the young doctor apologised.

My time at George Provincial Hospital was a baptism of fire. I got more hands-on experience in a month than in my entire training so far. I realised how defensively we practice medicine in Australia and wondered if this was really best for patients. I don't think I made a difference. Nor, I think, do most people who set out with that intention. The real heroes are the doctors and nurses and other health care workers who go to work every day in South Africa, as though it were just another ordinary day. They don't expect to be thanked, and they rarely are. They don't deceive themselves that they are making a difference because it is so abundantly clear to them that what they do is no more than plugging a dam that is bursting.

Note: the names of the doctors mentioned in this essay have been changed.

The Gods of Small Things

BY PRASSANNAH SATASIVAM

IT IS SAID that in India, only the gods are regarded with more respect than doctors. During my elective at Christian Medical College, in Vellore, South India, I discovered that this was no exaggeration but the thing that struck me most was the profound effect of culture on the practice of medicine in India.

Throughout India there is a striking respect for the medical profession. The first day I wore a stethoscope around my neck at breakfast I was served at the canteen ahead of a line of ten people. While waiting to make a phone call at the hospital post office I was very respectfully approached for a medical opinion by a man four times my age. Patients scurried out of my way as I strode through the corridors and after attending a few ward rounds the security guards started saluting me! Even within the profession there is a remarkable respect for seniority. When the head of cardiology walked into a meeting room, all the registrars stopped chatting and immediately stood to attention! None of this is really surprising in a society that existed for thousands of years under a system where one's station in life was predestined at birth. This social conditioning was most striking in the Huxley-esque operating theatres, where the tall and fair alphas plus surgeons and anaesthetists worked alongside the short and dark gamma nurses and epsilon technicians.

Nowhere is the gap between rich and poor more striking than in the realm of access to health care. In India there is no Medicare, no Pharmaceutical Benefits Scheme, no workers' compensation, no disability allowances and no support for pensioners. All appointments, investigations, medications and operations must be paid for by the patients. As a result, many patients present very late to hospital with conditions that have progressed to a stage where reducing morbidity and mortality is difficult, if not impossible. A case in point was that of a man with severe ankylosing spondylitis who couldn't bend to sit down because both his hip joints had fused. Surgery for congenital heart disease costs more money than most families earn in a lifetime. They are often left with the option of either indebting the family for generations or accepting the inevitable decline and death of a child. Despite all of this there was still hope. In the orthopaedics department I encountered an inspiring blend of charity and 'Robin Hood'-style account keeping. A wealthy grandmother getting a hip replacement would be charged an extra fifteen thousand rupees (about AUD \$500) for her operation so that a poor orphan could regain use of his arm. It was also common for patients to be given their operations at half price because they couldn't otherwise afford them. However, this generosity was not universal across the hospital departments. If a patient with unstable angina could not afford catheterisation, for example, the cardiology department would send him home.

It's not hard to see why India is such a spiritual country—simply crossing the road requires you to place your faith in a higher power. On my first day in orthopaedic surgery I saw more fractures, amputations and truly horrific injuries than in my entire orthopaedic term back in Melbourne. Patients'



SURGICAL GOWNS DRYING ON THE ROOF PRIOR TO AUTOCLAVE



ELECTIVE STUDENTS FROM ALL OVER THE WORLD

histories were often quite startling and with these histories came some truly remarkable pathology. One fellow's entire right arm was nearly torn off in a traffic accident and the surgeons had to fuse the humerus to the scapula in order to reattach it. However, a concurrent mid-shaft fracture failed to heal properly and as a result he developed a functional pseudoarthritis in the middle of his upper arm.

Given the scarcity of resources in Indian public hospitals, doctors are forced to rely on their clinical skills to a far greater degree than they would in developed countries. During my rotation in cardiology I saw a twenty-three year old rheumatic heart patient with a combination of tight mitral stenosis, moderate mitral regurgitation, severe tricuspid regurgitation and pulmonary hypertension. I was impressed that the doctors were able to predict these lesions on examination before even auscultating; yet theoretically this is something all doctors should be able to do. This contrast between first and third world practice was summed up perfectly in a question posed to me by a visiting resident from America: 'Why bother learning about murmurs when you're just gonna order an echo anyway?'. On top of their clinical expertise most Indian doctors were fluent in at least three or four Indian languages.

Cultural differences are also manifest in the goals of management. In reconstructive surgery there is a tremendous importance placed on restoring the function of the right upper limb, as this is the hand that is used to eat, while the left is strictly reserved for wiping the bottom: an important distinction when one realises that a roll of toilet paper costs almost half the average daily wage and that the only restrooms with toilet paper and soap are found in luxury hotels.

Halfway though the elective I attended a symposium at a peripheral hospital entitled 'Should we tell our patients when we make mistakes?'. The discussion highlighted the fact that, morally, we should be held accountable for our mistakes, but that the consequences of doing so render us vulnerable to litigation, abuse and physical harm. It took me several minutes to realise why I found it so disquieting. In our increasingly litigious society we would rarely, if ever, discuss mistakes so openly, let alone admit to them. I could picture the headline: 'Doctors conspire to hide truth from patients'.

My elective in India was one of the most rewarding experiences of my medical career. I am now confident in my desire to pursue a career in surgery and the experience of medicine in a third world country has made me more aware of the strengths and limitations of practice here in Australia. On a personal level, I couldn't help feeling that I left the country a better person. My own dilemmas seemed petty when faced with the day-to-day poverty and suffering that so many Indians take in their stride. What's more, I treasure having had the opportunity to enjoy the rich diversity of India, a place with an atmosphere and character unlike any other in the world. And I won't deny that I got a little buzz from being treated almost like a god, even if just a god of small things.

Northern Exposure

BY KIRSTEN SCOTT

DRIVING INTO WYNDHAM, I began to appreciate how far I had travelled. The road carved a path through rich red earth bound by tall orange cliffs. The air was hot and humid. My mobile phone dropped out of range. 'The river's rotten with crocs this time o' year', advised my friendly chauffeur.

Wyndham is situated in the East Kimberley and was a thriving industrial town during the first part of the twentieth century. It now has a population of just 500, most of them Indigenous Australians. The Wyndham hospital was once a very busy spot but now accommodates just a few inpatients, half a dozen elderly people and the occasional guest with nowhere else to go.

Much of my elective experience was gained with the assistance of Wyndham's two hardy doctors. Weekday mornings I sat with them in general practice consultations. Then, in the afternoons, I joined the nurses in the emergency department where patients presented for treatment of a variety of complaints from earaches to boils. The everyday experience of working alongside nurses and doctors in the diagnosis and treatment of patients was invaluable. I was welcomed as a part of the decision-making and treating team. For the first time my future role as a doctor started to become 'real'.

Violence, accidental death and suicide claim a disproportionate number of young male lives in Wyndham. During my stay two brothers were lost in a high-speed car accident and a young father to suicide. These tragedies had an impact on almost everyone in the small community. Funeral commitments and grief took precedence over health for the next few weeks, and subsequently several seriously ill people presented very late to hospital for treatment.

Illness prevention is an important part of health care in Indigenous communities and Wyndham has a team of population health nurses charged with this task. I accompanied them on home visits, weighing babies in the back of a station wagon, delivering leprosy medications to someone who lived too far away to get to the pharmacy, and helping provide immunisations and nutritional advice from a drop-in centre in the middle of town.

Twice a week I accompanied the doctors on their visits to the remote communities of Kalumburu and Oombulgorri, travelling in light aircraft. On occasion we would encounter monsoonal thunderstorms and, white-knuckled, I tried to enjoy the spectacular view of the Kimberley in the midst of the wet season. Large parts of the land were flooded and waterfall cascades could be spotted from the air. Sometimes the flights were delayed, or even cancelled, as heavy rains rendered the dirt landing strips impassable.

A highlight of my elective was the opportunity to spend a week living in Kalumburu. Formerly a Catholic mission, the mission's role in Kalumburu is now limited to church services

and the management of a small shop. The local people now govern their community and have elected to prohibit the sale and consumption of alcohol so that Kalumburu is currently 'dry'.

In Kalumburu, health care is delivered from a modest clinic staffed by two remote area nurses, an Aboriginal health worker, two dogs and a cat. The clinic is a social hub of sorts, where elders chat while waiting for medications, and children wander in to get various cuts and scrapes attended to. The nurses also play an important role in disease prevention, running immunisation and disease screening programs. Each night and during weekends they are on-call to provide acute medical attention should it be required. I developed a great admiration for these health professionals who work tirelessly in the service of such an isolated community.

Kalumburu's locals were both intrigued and appreciative that a young city girl would travel all the way from Melbourne to visit their home. All the children I met were bright, bold and inquisitive. They taught me how to say a few words in their traditional language, and to play some of their games. Making up over forty per cent of the population, they are undoubtedly the lifeblood of their communities.

One of the most important lessons I learned during my elective was on the importance of attempting to understand an individual in the context of their culture. Living in Kalumburu and Wyndham, I was a conspicuous outsider, a white visitor. My Anglo-Saxon city culture that I take for granted each day and the Indigenous culture I encountered were so incredibly different. Our behaviours, daily routines, values, everything, were entirely foreign to one another. I came to envy many aspects of their culture, such as the way in which they lived each day as it came. I wondered what they would think about my frantic life in Melbourne, where I spend many of my days preoccupied with tomorrows.

In many ways, the Kimberley seemed like a foreign, developing country, rather than a part of our first world Australia. Health problems I saw every day, such as scabies and chronic suppurative otitis media, are typically third world problems related to poverty, crowded living conditions and poor nutrition. Despite this, my experience in the Kimberley was uplifting.

The wonderful experience I had working among the children and their families in these communities helped me decide to pursue a career in paediatrics. I hope to return to the Kimberley in a few years as a qualified paediatrician, and perhaps be in a position to make a meaningful contribution to the health of the communities of Wyndham and Kalumburu. Until then, I hope my elective experience has equipped me with skills and understanding that I can apply in interactions with the Indigenous people who might come under my care as a junior doctor.

2004 ROBERT L SIMPSON MEMORIAL ELECTIVE AWARDS

The Robert L Simpson Memorial Fund was established after Robert Simpson's (MB BS 1977) death in 1994. The fund supports students undertaking elective attachments in public health and also occasional memorial lectures. In 2004 awards were made to: Marian Abouzeid who spent her elective at the district hospital of Kununurra and at the Warmun Remote Area Clinic in the eastern Kimberley region

of Western Australia; to Emma Boddy who spent her elective at the Tumaini Clinic in Kibera, an 'informal settlement' just outside Nairobi in Kenya; Christabel Kelly who spent her elective in a Salvation Army hospital in Cochabamba in Bolivia; and Katherine Wilson who spent her elective involved with AIDS projects with the Emmanuel Hospital Association in Raxaul and in Delhi in Northern India.

THE ADVANCED MEDICAL SCIENCE YEAR

From Al Ain to Delhi

Going places with an AMS research project

BY ROBERT COMMONS

The Advanced Medical Science (AMS) year is the final year of the Bachelor of Medical Science degree for undergraduate medical students. Each student undertakes a year long research project hosted by a department or institute on or off campus, interstate or overseas.

Students spend this intensive year researching a topic of their own interest. Self-reliance, initiative, and perseverance are required and a rewarding year is expected. It is not uncommon for students to author peer-reviewed journal articles based on their AMS year research.

The year provides students with a thorough experience of the research process, including an appreciation of the pitfalls and difficulties inherent in a good research project. They

gain a clear understanding of how evidence is gathered to improve medical practice and the limitations of that evidence. Students may use their AMS projects and experience as stepping stones for further study, such as a PhD, or to advance their knowledge of a specialty area.

Each year dozens of students undertake their research at overseas locations such as Singapore, Oxford, Edinburgh, New Zealand, Harvard, Lyon (France), Stanford, India, Hong Kong and Taiwan. An ongoing exchange is being negotiated with the University of Oslo, Norway.

*Associate Professor Stephen Farish, Coordinator,
Advanced Medical Science, Faculty Education Unit*

I LOOKED UP and eighty pairs of female eyes looked back, expectantly. Suddenly the room felt cramped. Looking down at my computer I could see my Powerpoint presentation on the screen. I took a deep breath, hoping that my audience wouldn't notice my nerves, and launched into my lecture to the Second GCC Conference for Medical Students in Al Ain in the United Arab Emirates (UAE). Over the next fifteen minutes the female audience in the classroom, and the male audience watching by video link from the other side of the medical school, learnt about my research into the prevalence of superantigens in invasive and non-invasive group A streptococcus strains—research I had undertaken during the previous six months with Nigel Curtis at the Royal Children's Hospital in Melbourne.

Many months earlier I had received an email inviting students to attend a conference in the UAE. Despite having few results from my research at that stage, I applied for a bursary and sent off an abstract about my work. To my delight, my fledgling results were accepted and I was granted a bursary to give an oral presentation to the conference. The faculty, the School of Medicine and the Department of Paediatrics also provided assistance for my trip.

Al Ain is a city of oases, markets and flat roofed buildings on the border of the Emirates and Oman. The city has evolved from a mud-brick fort and couple of small buildings before oil was discovered forty years ago, to a vibrant metropolis.

The conference was a cultural education for everyone, with over 500 people from countries around the world, mostly the Middle East. I met people from small black townships in South

Africa, went shopping and clubbing with students from Sudan, discussed the UN bombing that shattered an Iraqi student's front windows, and was invited to stay in Iran, Syria, Saudi Arabia, Bahrain, Kuwait and Libya. I gained a remarkable insight into cultures and religions that until then I had known about almost entirely through media reports.

At the conference I met the Australian ambassador to the UAE and, together with the six other Australian medical students, was invited to Australia Day celebrations at the Australian Embassy in the capital, Abu Dhabi. To our surprise and enjoyment we discovered we were guests of honour. We entered the palatial house on a red carpet, shook hands with the welcoming party and walked into a beautiful garden containing fairy-lit palm trees, a barbecue manned by an Aussie chef flown out especially for the occasion, a bar sponsored by Fosters and an amazing buffet, with the requisite mini-pavlovas and topped by an ice sculpture of the opera house.

After ten days in the Emirates I travelled to India to meet up with Carolyn Vasey, another AMS student, who was undertaking her research in India. It is difficult to know how to sum up India—a country of such diversity and contradiction: whether to focus on the poverty and the persistent smell that seeped into my luggage, clothes and skin, or the beauty and diversity of the country, the magnificence and history of its many palaces, forts and monuments, and the generosity and kindness of so many of the billion people struggling to exist there.

Carolyn's project investigated attitudes towards people with disabilities and the way they were treated in World Vision aid programs. We travelled around the country for a month, visiting slums and small villages looked after by World Vision and speaking to children and families who exist in absolute poverty. Their living conditions were shocking (with eight people or more sleeping in single room makeshift shacks), but the work performed by World Vision was obvious and provided some hope of improvement.

While India's poverty contrasted to the wealth and extravagance of the 7-series Mercedes speeding along the illuminated six lane freeways, lined with palms, that traverse the Emirates, both countries provided an immersion into cultures vastly different from our own. Not only did my AMS year produce useful and relevant research that is in the process of being published, but it also provided me with the contacts, the education and motivation that come from such travel and experiences.



ROB COMMONS (BACK, RIGHT) WITH FELLOW STUDENTS FROM MELBOURNE AND MONASH UNIVERSITIES, SOUTH AFRICA, POLAND AND LYBIA AT THE SECOND GCC CONFERENCE FOR MEDICAL STUDENTS IN AL AIN

GRADUATES, PRIZES AND AWARDS

School of Medicine and School of Population Health Graduates 2004

Bachelor of Medicine (1862) and Bachelor of Surgery (1879)

Lesley-Ann Allardyce, Zoe Dina Rich Asher, Anna Rosalba Benz, Adam Andrew Boyt, Daffodil Caballes-Beaty, Pui-Wan Chan, Ken Yen Cheng, Michelle Sue-Lin Chia, Kai Yin Chin, Danny Yin Pun Chiu, Rowena Christiansen, Ying Ying Chua, John Jason Ciciulla, Kristina Rose Coniglio, Jodi-Maree Cronin, David Dao, Julie Dikiciyan, Cuong Phu Do, Fiona Maree Enklemann, Helen Mary Esdale, Nicole Simone Gaffney, Yvette Gainey, Amanda Chen Ling Gwee, Michelle Harris, Danika Jayne Hayler, Jessica Ann Hickmott, Ho Le Onn, Sherming Ho, Tanya Howley, Kristen Maree Jensen, Mark Alexander Johannesen, Timothy Ian Joseph, Charles Julian, Parvin Kaur Khinda, Leon Lai, Melanie Lamden, Yit Hung Leang, Gene Shiung Lee, Sang Yee Lee, Tristan Thomas Leech, Felicia May Yee Leow, Anna Lithgow, Virginia Alexandra Loftus, Anna Jade Lomax, Nathan Wayne Manning, Stefanie Marcella, Jared Mathai, Lisa Emalyn Mitchell, Terence James Murray, Putra Mohd Noh, Lufiani Mulyadi, David Richard Neale, Karen Ai Peng Ng, Alan Tuyen Le Ngo, Evinda Yee Ru Ong, Woon Kai Kevin Ong, Jonathan Peter Paech, Sonny Charles Palmer, Robert Lester Phair, Kerrie Elizabeth Quiney, Hayden Luke Richards, Matthew Garry Richardson, Sally Michelle Riches, Christine Maree Sammartino, Tamsin Joan Santos, Pavani Sathasivam, Kym Nicole Saunders, Samuel Lenkong Sidharta, Paul Edmund Smith, Andrew Stuart Talbot, Ka Earl Tan, Sumitra Thambirajah, Mohammad Ali Mustapha Trad, Agnieszka Warchałowski, Carolyn Wilde, Ronny Anggoro Wirawan, Chin Shing Sam Wong, Hui Li Wong, Kae Sheen Wong, Yew Ngie Wong, Samuel Lachlan Wright, Tricia Marian Wright, Yean Yin Yang

Bachelor of Medicine and Bachelor of Surgery with Honours (1997)

Victoria Anne Alguera-Lara, Xavier Fagan, Catherine Francis, Joseph Isac, Danielle Nikki Ko, Megan Lyn Nelson, Kirsten Verity Scott, Tiffany Jane Symes, Stephanie Pooi Yiin Tang, David Chi Wai Tsang, Deniz Yaka

Bachelor of Medicine and Bachelor of Surgery and Bachelor of Medical Science

Simone Louise Alford, Ekaterina Youssef Alibrahim, Emile Simon Altmann, Soon Ghee Ang, Ar Kar Aung, Peter Joseph Bainbridge, Kristi Dee Bateman, Matthew

James Brooks, Erin Bryce, Kate Elizabeth Carison, Dawn Yanni Chan, Eunice Ka Hei Chan, Justin Chung-Yun Chan, Ka Pui Lisa Chau, Hong Yiu Chen, Yao-Yen Richard Chen, Ye Chen, Yuan Cheng, Ning Cheung, Chen Hsung Edward Chew, Benjamin Paul Chia, Fan-En Chiu, Joseph Chu Liat Choo, Mingzhou John Chua, Siang Chye Chuah, Timothy Cochrane, Ailie Bree Connell, Rocco Cuzzilla, Eliza Jude Eddy, Nilumi Ekanayake, Daniel Engleman, Sandra Fang, K J Farley, Cosmin Jonathan Florescu, Su Yin Eileen Fong, Siew-Min Gan, Ming Lee Goh, Suet-Ling Goh, Shyalamar Gunatheesan, Adam Mark Hill, Vui Kian Ho, Jason Yan-Lin Huang, Yu-Sheng Huang, Senpei Jin, Antonia Jones, Simon Andrew Joosten, Daniel Knox Joyce, Melissa Anne Kaufman, Cameron Peter Keating, Alice Jane Kelly, Richard Chen-Tze Khor, Kent Loong Kiyu, Koh Huey Ling, Justin Ming-Lee Kuay, Kent Kuswanto, Holly Elizabeth Lakey, Andrew Douglas Lee, Chae-Hyun Jason Lee, I-Lynn Lee, Kai Xin Lee, Lai Wah Lee, Michelle Xiao Ling Lee, Herman Lim, Tina Lin, Sheau Wen Lok, Chong Han Low, Sheng Jia Low, Edwin Kai Man Luk, Mei Sim Lung, Benjamin Stewart Marginson, Jacob Mathew, Sunaina Marielle Miranda, Emma Jane Morris, Adnan Mahmood Nagrial, Boon Lung Ng, Suat Li Ng, Mark Andrew Ng Tang Fui, Joseph Mau Shun Ngui, Vi Thuy Anh Nguyen, Sinead Elinid O'Brien, Chong Seng Ong, Lee Wee Olivia Ong, Tee Juan Ong, Susie Fei Cen Parnham, Muhammad Arshad Peerbux, Adam Bernard Pendlebury, Trupti Prasad, Yu-Hong Victoria Qin, Sumita Ratnasingam, Amy Robotham, Thomas Henry Rozen, Michael Jason Sangiorgio, Prassannah Satasivam, Jo-An Seah, Kevin Seow Hsiao Peng, Karina Louise Severin, Lydia Wan Li Sin, Andy Sisnata Siswojo, Lalitha Sivagnanam, Cameron Smirk, Tammy Tim Yee So, Alexandra Stanislavsky, Samuel Lenkong Sidharta, Merlin Silistio, Christine Suriadi, Anna Cheng Sim Tan, Hui Ling Tan, Melissa Jian Luen Tan, Shuh Ying Tan, Tze Ping Tan, Yet Ping Lyndia Tan, Zhi-Yie Tan, Tan Hsin Hui Louisa, Tiffany Tang, Ee Laine Tay, Stanley Tay, Jin Wee Tee, Li Ann Teng, Monique Chantelle Tersteeg, Jonathan Mark Tomaszewski, Claire Louise Toohey, Bach Nga Truong, Emma Kate Tully, Elizabeth Mei-Ying Walton, Shan Wang, Lu Fee Wong, Shu Fen Wong, Siew Wei Wong, Patricia Wong Lian Jin, Seow Leow Woo, David Chi-Tsung Yang, Gary Sai Hung Yip, Bong Kang Yong, Miin Tshiao Zeng

Bachelor of Medicine and Bachelor of Surgery with Honours and Bachelor of Medical Science

Liesl Celliers, Karyn Khai Yin Chan, Melanie Chen, Adam George Cichowitz, Phoebe Alice Collyer, Penelope Janet Helen Cotton, Lisa Xenia Dimitrakakis, Claire Louise Gordon, Bronte Alexandra Holt, Thai Phuoc Hong, Katherine Brooke Howell, Jyotsna Jayarajan, Katherine Josefa Mendra, Siobhan Clare Mullane, Frank Chun Hay Ng, Shereen Pek Chuen Oon, Emma Ruth Renouf, Le-Wen Sim, Elissa Stafford, Kate Amanda Stanton, Alana Jane Tuxen, Christina Tzu-Yuin Wong

COMBINED DEGREES

Bachelor of Arts and Bachelor of Medicine and Bachelor of Surgery

Eleanor Ruth Donelan, Sarah Grace Rosalie

Bachelor of Arts and Bachelor of Medicine and Bachelor of Surgery with Honours

Angus James Husband

Bachelor of Arts and Bachelor of Medicine and Bachelor of Surgery with Honours and Bachelor of Medical Science

Katharine Grace Hogg

MASTERS DEGREES

Master of Audiology (1997)

Joanne Enticott

Master of Clinical Audiology (2000)

Ruth May Ault, Cheng-Chung Chen, Juliet Sien Ai Chin-Lenn, Susan Amanda Collie, Stephanie Louise Eaves, Angela Mary Fanning, Jade Fay Frederiksen, Jutta Hau, Alicia Edwina Hull, Elizabeth Joanna Ignasiak, Rachael Jane Parker, Stacey Lynn Rich, Louise Margaret Richardson, Davina Louise Ross, Claire Elise Rundell, Raymond Taylor, Melanie Beth van der Schoot, Rebecca Jade Welgus, Cathryn Mary Williams, Philip Martin Anthony Winfield, Yin Hun Wong, Rebecca Jean Wood

Master of Epidemiology (2003)

Nasra Ahmed

Master of Health Sciences (2000)

Victoria Louise Hill

Master of Medicine (1983)

Yang Yun

Internal Medicine
Ivan Rifai Sentosa

Paediatrics

Sultan Matar Al-Tunaiji

Psychiatry

Anthony Cidoni, Amanda Favilla, John Koutsogiannis, Ramani Sivakadadchan

Radiology

Cathryn Leanne Hui

Master of Psychiatry (2003)

Anita Patricia Bourke, Simon Gregory Jones, Suzanne Nahai Koh, Evangelia Laios, Michelle Thanh Lien, Jacinta Therese Morahan, Devapriya Sudesh Rudolph, Maria Tsanglis, James Rae Whan, Jianyi Zhang

Master of Public Health (1999)

Bilyana Aceska, Helen Chakma, Qu Cui, Duc Giang Dao, Sonia Maree Denisenko, Sabitri Devkota, Jesus Jr Encena, Mei Guo, Khin Su Su Hlaing, Jennifer Etienne Hutton, Manyun Li, Ngoc Minh Pham, Nguyen Tuan Phong, Sabee Amatya Pradhananga, Prabha Devi Shrestha, Thi Tuy Uyen Tran, Elaine Yee Hang Wong, Delian Zhang, Xian Zhou

Master of Rural Health (2004)

Judith Helen Artridge

Master of Sports Medicine (2002)

Leesa Kym Huguenin

Master of Women's Health (1996)

Lauren Dallas Matheson, Thi An Nguyen, Nicole Elizabeth Wilbur, Attiqa Zaigham

DOCTORATES

Doctor of Medicine (1862)

Katie Lynette Heathershaw, James Malcolm Hendrie, Zoltan Hrabovszky, Chee Hong Ng, David Andrew Story, Adrienne Alison Williamson

Doctor of Public Health (1999)

Marjory Lucy Moodie

Doctor of Philosophy (1948)

Anatomy and Cell Biology

Jacinta Caddy, Alison Carty, Michelle Mary Loeliger, Naomi Blair Morison, Jess Nithianantharajah, Kulmira Nurgali

Biochemistry and Molecular Biology

Travis Clarke Beddoe, Antonia Alexandra Claasz, Briony Elizabeth Cristiano, Teo Franic, Joanna Elizabeth Gajewski, Diana Macasev, Christopher Andrew MacRaild, Thomas Naderer, Vivian Ng, Benjamin James Shields, Peter James Walsh

Medical Biology

Elizabeth Blink, Mark Michael Weishung Chong, Alexandra Jane Corbett, Elisabeth Farah Novita Coutrier, Colleen Mary Else, Kathryn Elizabeth Lawlor, Vanessa Sarah Marsden, Susanne Kaye Miller, Marc Pellegrini

Medicine

Catherine Louise Cole, Steve Christov, Barbara Christine Fam, Scott Fraser, Natasha Ilievská, Bereha Khodr, Marijana Lijovic, David John Mawdsley, Kevin Francis Morris, Daniel Peng Keat Ng, Eric Charles John Seal, Jun Shen, Shaoming Song, Kiki Tahtis, Niall Christopher Tebbutt, David Francis Tucker, Rhys Barrington Vaughan, Frances Marie Wise

Microbiology and Immunology

Carolyn Rachael Bath, Lyndal Sharon Borrell, Natalie Borg, Travis Michael Gooding, Whitney Alison Macdonald, Debra Christine Tamvakis

Otolaryngology

Justin Andrew Zakis

Paediatrics

Catherine Michelle Bauld, Elizabeth Blink, Veronica Rose Collins, Tany Maree Hurley, Melanie Alison Knight, Samara Lindley Lewis, Kylie Ann Patterson, Joanne Michelle Smart, Huseyin Sumer

Pathology

Fiona Margaret Battah, Lisa Rose Fodero, Ramsworth Michael Damian Holsinger, Christa Maynard, Mark Cameron McLeod, Elise Joy Needham, Janelle Margaret Nunan, Dodie Stephanie Pouniotis, Marijke Fleur Sernee

Pharmacology

Kylie Michelle Burrell, Sophocles Chrissobolis, Michelle Joan Hansen, Michael Aron Lane, Alfred Anthony Lanzafame, Thai Tran

Psychiatry

Litza Anthoula Kiopoulos, Margaret Terese Grigg, Robb Owen Stanley

Physiology

Jacinta Baldwin

Public Health

Holly Ruth Buchanan-Aruwafu, Nicole Lisa Asquith, Gillian Sue Dite, Sarah Elizabeth Drew, Ainsley Janelle Newson, Lakshmi Ramachandar, Michaela Riddell, Jeanette Sharples

DIPLOMAS

Graduate Diploma in Adolescent Health and Welfare

Jacqueline Louise Connelly, Emily D'Amico, Julianne Wallish Freeman, Rebecca Jane May, Matthew Simon O'Brien, Michael Kendrick Wells

Graduate Diploma in Audiological Science

Joanne Christine Benne, Yvonne Marie Cahill, Kathryn Elizabeth Cainer, Jason Wen-Dar Chew, Louisa Mary Cooke, Meliza Anne Dalisay-Cruz, Kelley Rebecca Graydon, Miranda Griffiths, Katherine Eve Kisielewski, Justine Majella O'Shea, Jacqui Michelle Pollock, Amy Jade Reese, Ricki Salomon, Damon Paul Shepherd, Georgina Lay Khim Tan, John Trampevski, Ioanna Tsialios, Rebecca Anne Verhoeft, Christine Gwendolen Whitehead

Graduate Diploma in Mental Health Sciences (Child, Adolescent and Family Mental Health)

Linda Isabel Bearup, David George Leach, Julie Marion Prentice

Graduate Diploma in Mental Health Sciences (Clinical Hypnosis)

Peter Bosanac, Caroline McGrath, Julie Norine Mogan, James Samuel Olver

Graduate Diploma in Mental Health Sciences (Community Mental Health)

Rita Bonnici, Timothy Brewster, Catherine Frances Davison, Rebecca Marie Durrant, Pamela May Ewert, Danielle Patricia Hitch, Robert Allen Lyon, Linda Margaret MacGregor, Naomi Maguire, Sylvia May Steny, Wayne Leslie Watts

Graduate Diploma in Mental Health Sciences (Infant and Parent Mental Health)

Gyan Bhadra, Michelle Anne Elmitt, Lisa Clare Milne, Susie Nasser, Elisabeth Sarah Shugg

Graduate Diploma in Mental Health Sciences (Young People's Mental Health)

Nicola Jane Begg, John Harry Ellison, Vivienne Louise Harris, Kim Leanne Hyam, Gemma Louise Lindeman, Catherine May Livermore, Lindsay Douglas Paterson, Kirsten Louise Sauer, Carmel Walsh

Graduate Diploma in Women's Health

Wahdini Hakim, Janice McGrath

Dean's Honours List 2004

Semesters One and Two

Luke Campbell
Ruth Dodson
Kai En Leong
Hui Yin Lim
Heath Liddell
Vincent Mok
Kanae Nagao
Candice Simpson
Dalveer Singh
Bonnie Swan
David Syfret
Nilmini Wijemunige
Angela Wilson
Nathan Wong

Semesters Three and Four

Kirsty Burn
Naomi Clarke
Jodi Halford
Warrick Pill
Scott Shemer
Hannah Skrzypek

Jessie Teng

Charmaine Teo
Sarah Wongseelashote
Yiying Zhao

Semester Five

Colleen Chew
Nicole Dyer
Daniel Elsner
Jonathan Epstein
Nicole Gao
Ying Zhi Gu
Elissa McNamara
Allison Gwun-Yee Mo
Luke Robinson
Kate Robson
Hao-Wen Sim
Bo Xu
Jennifer Yan

Semesters Eight and Nine

Cameron Fairbrother
Emma Goeman

Andrew Hardley

Arian Lasocki
Lucy Modra
Sarah Nicole
Joseph Paiva
Anita Pogorzelski
Katherine Wilson
Bernadette Young

Semesters Ten and Eleven

Kate Carlson
Phoebe Collyer
Claire Gordon
Katharine Hogg
Katherine Howell
Siobhan Mullane
Frank Ng
Shereen Oon
Adam Pendlebury
Emma Renouf
Kirsten Scott
Ie Wen Sim
Claire Toohey
David Tsang

Semester Twelve

Matthew Brooks
Liesl Celliers
Adam Cichowitz
Eliza Eddy
Fiona Enkelmann
Bronte Holt
Katherine Howell
Angus James Husband
Jyotsna Jayarajan
Holly Lakey
Siobhan Mullane
Frank Chun Hay Ng
Shereen Oon
Adam Pendlebury
Matthew Richardson
Emma Renouf
Andrew Talbot
Claire Toohey
Alana Tuxen
Christina Tzu-Yuin Wong
Hui-Li Wong

School of Medicine Prizes 2004

Australian College of Ophthalmologists' Prize
Angela Harper

Australian Medical Association Prize
Angus Husband

The Clara Myers Prize in Surgical Paediatrics
Matthew Richardson

Dr Kate Campbell Prize in Neonatal Paediatrics
Tze Ping Tan

Dwight's Prize in Integrated Clinical Studies 2004
Andrew Hardley

The Edgar and Mabel Coles Prize
Adam Cichowitz

The Edgar Rouse Prize
Katharine Hogg, Tiffany Symes, Kirsten Scott and Emma Renouf

ESJ King Prize
Bo Xu

Fulton Scholarship in Obstetrics and Gynaecology
Siobhan Mullane

GA Syme Exhibition
Mali Okada

Geoffrey Royal Prize in Clinical Surgery
Katherine Howell

The Harold Attwood Prize in Pathology
Andrew Hardley

Hedley F Summons Prize (for Otolaryngology)
Zhi-Yie Tan

Herman Lawrence Prize in Clinical Dermatology
Alana Tuxen

Howard E Williams Prize
Karyn Chan

Ian Johnston Prize in Reproductive Medicine/Biology
Lalitha Sivagnanam

The Jamieson Prize
Angus Husband

John Adey Prize in Psychiatry
Alana Tuxen

John Cade Memorial Medal in Clinical Psychiatry
Alana Tuxen and Katherine Howell

Katharine Woodruff Memorial Prize – Palliative Medicine
Katharine Hogg

The Keith Levi Prize
Angus Husband

The Max Kohane Prize
Karyn Khai Yin Chan and Kent Kuswanto

The Neil Johnson Prize
Katherine Wilson and Arian Lasocki

Prize in Clinical Gynaecology
Siobhan Mullane

RACGP Victoria Faculty Prize
Claire Gordon

RAPP (The Rehabilitation, Aged Care, Palliative Care and Psychiatry of Old Age) Prize
Katherine Howell

RD Wright Summer Research Studentship in Physiology
Kitipong Uaesoontrachoo, Rachael Roberts and Kathryn Marks

The Robert Gartly Healy Prize in Medicine
Angus Husband

The Robert Gartly Healy Prize in Obstetrics
Jyotsna Jayarajan

The Robert Gartly Healy Prize in Surgery
Andrew Hardley

Robert Yee Prize in Medicine
Judith Tan

Rowden White Faculty Prize
Katherine Howell

Royal Children's Hospital Paediatric Handbook Award
Mark Ng Tang Fui

Sir Albert Coates Prize
Bo Xu

Sir Alfred Edward Rowden White Prize in Clinical Obstetrics
Kae Sheen Wong

The Vernon Collins Prize in Paediatrics
Phoebe Collyer

Victorian Metropolitan Alliance in General Practice
Adam Cichowitz

Walter and Eliza Hall Exhibition
Bo Xu

UMMS ADVANCED MEDICAL SCIENCE PRIZE 2004

The UMMS Advanced Medical Science Prize is supported by donations from UMMS members. Two prizes of \$500 each are awarded each year. Prizes for 2004 were awarded to Andrew Gogos and Michael Hong.

The risk of subsequent events, etiology and yield of diagnostic testing in patients admitted for an apparent life-threatening event (ALTE)

ANDREW GOGOS

Paediatric Emergency Medicine

Supervisor: Dr Marc Baskin, Boston Children's Hospital

FOR INFANTS WITH an ALTE, the length of stay necessary to prevent morbidity is unknown and little data exists on the yield of diagnostic testing. This study set out to describe the risk of subsequent events, etiology and yield of diagnostic testing in infants admitted for an ALTE.

A retrospective chart review was conducted of consecutive infants <1 year of age admitted to a tertiary children's hospital due to an ALTE between October 1995 and September 2003. Cases were identified by electronically searching the emergency department records for the words 'apnea', 'limp', 'cyanosis', 'choke' and 'pale'. Additionally the entire department records were searched for the acronym 'ALTE'. Serious events were defined as the occurrence of cyanosis, apnea, seizure, oxygen saturation $\leq 90\%$, limpness, unresponsiveness or death. Cases were crosschecked with the Massachusetts Center for Sudden Infant Death Syndrome (SIDS) database for post-discharge mortality.

There were 1039 patients identified and 994 (95%) charts reviewed. 166 were excluded because their history was not consistent with an ALTE. Of the 828 cases, 267 were managed as outpatients and 561 were admitted. 135/561 (24%) patients had a serious event during their hospitalisation. Most serious events were some combination of oxygen desaturation and apnea or cyanosis. Six patients had seizures and there were no deaths.

The events occurred a median of 7.7 hours after admission and only fourteen patients (2.5%) had a first serious event >24 hours after admission. Patients who did not appear ill, had no events in the emergency department and were not admitted to an ICU were at low risk for serious events, relative risk 0.28 (95% confidence interval 0.22, 0.37). Patients with only one event prior to presentation and a gestational age of ≥ 35 weeks were also at reduced risk. 47% of patients were discharged without a clear etiology. The most common causes were gastroesophageal reflux (28%) and bronchiolitis (8.0%). 5.2% of patients had a life threatening condition diagnosed. There were twelve seizures, eight cases of pertussis and two of abuse.

Of the nine emergency department investigations performed in more than 25% of our sample, only chest radiographs had a yield of $>2.5\%$. Some more infrequently performed tests had a higher yield: pertussis PCR (38%), RSV antigen detection (31%), airway films (25%) and arterial and venous blood gases (both 13%). There was no post discharge mortality from SIDS.

This investigation concluded that the risk of serious events was sufficient to warrant observation in all patients, and a length of stay of twenty-four hours was appropriate for safe evaluation of those at low risk for repeat events. One in twenty patients had a life threatening condition diagnosed and the yield of emergency department testing was low.

The angiosome territories of the spinal cord

An anatomical study and clinical implications

MICHAEL K-Y HONG

Department of Surgery, Royal Melbourne Hospital and Reconstructive Plastic Surgery Unit, Department of Anatomy and Cell Biology, University of Melbourne

Supervisor: Professor Ian Taylor AO

THE ARTERIAL SUPPLY of the spinal cord remains poorly understood despite numerous studies in the past. A study on the vascular territories (angiosomes) of the spinal cord and their source vessels was conducted to fill this gap in the literature. Two fresh cadavers were injected with a gelatin-lead oxide mixture via the femoral arteries. The spinal cords were carefully and meticulously dissected from each cadaver along with their source arteries. They were radiographed, photographed and their vascular territories were defined. Four angiosomes of the spinal cord were found: vertebral, subclavian,

posterior intercostal and lumbar. The anterior spinal cord relied on fewer feeder arteries than the posterior and varied between specimens. Anastomosis between the anterior and posterior vasculature was generally poor. This was among a few key features that account for the vulnerability of the spinal cord to ischaemia. However, the blood supply of the spinal cord was found to be a dynamic system capable of adapting to gradual occlusion. Although it may seem complicated, the blood supply of the spinal cord follows the rules of vascular anatomy and reinforces the angiosome concept.

TOP STUDENT 2004

SHEREEN OON WAS the top student in 2004 and was awarded a first class honours MB BS degree for excellence throughout the course. She also received the prestigious Stephen Rosen award, bestowed by the St Vincent's Hospital & Geelong Hospital Clinical School for excellence in clinical medicine, and was on the Dean's honours list in each year of the medical curriculum.

Shereen was born in Melbourne where she went to school at Caulfield Grammar School before she was awarded a full scholarship to the Presbyterian Ladies College. Her parents both came from Malaysia—her father, an accountant who studied for his commerce degree at Melbourne University, and her mother readily adapted to bringing up their two gifted daughters in Australia. At school Shereen excelled in her academic work but also developed her many other talents as she sang in the school choir, played the piano (gaining her AMusA diploma in year ten), and played in a recorder consort and the school badminton team, making many steadfast friends, some of whom graduated alongside her last year.

Following in her father's footsteps, Shereen decided to study at Melbourne University and entered the School of Medicine in 1999, the first year of the new curriculum. She immediately showed a strong aptitude for clinical studies, and was awarded an Anti-Cancer Council vacation scholarship in her third year for osteosarcoma research in Professor Choong's department at St Vincent's Hospital. Her AMS year was spent at the Royal Melbourne Hospital, looking at anatomical



SHEREEN OON

anomalies of the recurrent laryngeal nerve under the direction of Dr Karl Alexander, and she greatly enjoyed the surgical and anaesthetics experience.

After her AMS year Shereen entered St Vincent's Hospital & Geelong Hospital clinical school, where she was an enthusiastic and popular student with eclectic interests—music, reading and socialising. Her musical talents stood her in good stead when she sang soprano in the clinical school choir at the graduation day service, but her interest in playing cards (bridge, big 2 and other Asian games) was less well known—with her intellect and ability it's probably just as well that she doesn't play for money or we should all be broke.

Shereen has continued to excel in her clinical work, and was a well-deserved top student of the 1999-2004 MB BS course. She is

an exceptionally modest, personable and talented person with all-round abilities and a strong sense of vocation, who 'wants to remain useful'. She is very proud of her family, particularly her creative sister, Elaine, a commerce/law student at Melbourne University, who also designs and makes original clothes.

Shereen has taken an intern post at St Vincent's Hospital, and, while greatly enjoying her current surgical rotation, is leaving career path decisions open for the present. Meantime, on her days off she is hoping to catch up on reading (Agatha Christie thrillers are a favourite), going to the opera, and playing the piano, of course!

*Jacqueline Walters, Clinical Sub-Dean,
St Vincent's Clinical School*

MB BS 2005/2006 REUNIONS

65th year of 1940

7 November 2005
Melbourne Club
John Bignell
(+61 3) 9817 2268 (ah)

64th year of 1941

16 September 2005
University House
James Guest
(+61 3) 9347 3852 (ah)

63rd year of 1942

1 June 2005
University House
Ian and Ruth Chenoweth
(+61 7) 3855 9029

62nd year of 1943

16 March 2005
Leonda
Dulcie Rayment
(+61 3) 9890 8653

60th year of 1945

1 April 2005
Melbourne Club
Donald Cordner
(+61 3) 5258 2373 (ah)

55th year of 1950

22 October 2005
Melbourne Club (tbc)

Mary Morland

(+61 3) 9817 4837

50th year of 1955

14 October 2005
University House
John O'Brien
(+61 3) 5984 5151 (ah)

45th year of 1960

8-9 October 2005
Peninsula Country Golf Club,
Frankston
Jack Martin
(+61 3) 9288 2480 (bh)
0415 144 663 (mob)
(+61 3) 9416 2676 (fax)
jmartin@svi.edu.au

40th year of 1965

12-13 November 2005 (tbc)
Peter Habersberger
(+61 3) 9576 0021 (bh)
pghabers@bigpond.com

30th year of 1975

19 November 2005
Royal Melbourne Yacht
Squadron
Robin Wilson
(+61 3) 9853 6370 (ah)
rjwilson@bigpond.net.au

25th year of 1980

8 October 2005
Australian Club
Rod Sitlington
(+61 3) 9836 1777
rod@shhm.com.au

15th year of 1990

Late 2005 (tbc)
Amanda Favilla
(+61 3) 9554 1847 (bh)
amanda.favilla@med.
monash.edu.au

10th year of 1995

16 April 2005
3 Station Pier
Yelda Kaya
(+61 3) 9833 7007 (ah)
yelda@netspace.net.au

57th year of 1949

8 November 2006
Noel Cass
(+61 3) 5974 1489 (ah)

MB BS graduate anniversaries in 2005

5th year of '00
10th year of '95
15th year of '90
20th year of '85

25th year of '80

30th year of '75
35th year of '70
40th year of '65
45th year of '60
50th year of '55
55th year of '50
60th year of '45

University House on the campus of the University of Melbourne is the ideal venue for reunion groups ranging in size from thirty to 250 guests. Please contact Gaille Javier on (+61 3) 8344 5254 or visit the website at www.unihouse.org.au

If you are organising a reunion, please contact the UMMS office for a list of graduates and address labels for your year.

To ensure you continue to receive information about reunions, please let us know of address and email changes.

UMMS, School of Medicine,
University of Melbourne VIC
3010. Tel (+61 3) 8344 5888, Fax
(+61 3) 9347 7084, Email: umms-medicine@unimelb.edu.au

REUNIONS

MB BS 1933

FOR MANY YEARS *Chiron* has published reports of the 1933 graduate reunions, but Spot Turnbull has been arranging them for much longer.

For the 2002 reunion Lorna Lloyd-Green and Spot joined Dorothy Sinclair, on 18 September, at her bedside for the celebration. When Lorna died later that year Spot and Dorothy were the only two of the six remaining graduates of 1933 left living in Melbourne.

On 18 September 2003, Spot and his wife, Nell, took a bottle of champagne to Dorothy's bedside where they celebrated the seventieth anniversary of the graduates of 1933 and once again drank to the others.

In 2004 Spot rang Frank Ebell and Ken Starke in Perth to remind them to celebrate their anniversary on 18 September. He then tried to contact Dorothy Sinclair but discovered from her son that she had died the very morning he had tried to find her.

Dorothy was married to the psychiatrist Alex Sinclair and practised as a paediatrician, first at the Royal Children's Hospital, then for the Maternal and Child Welfare Service while raising their family (see obituaries, page 41).

Upon further investigation Spot discovered that Cameron Duncan had also recently died, in Horsham, leaving only four graduates: Spot, Frank and Ken in Australia and Bill Hollingsworth in England. We spoke with Spot soon after he discovered himself to be the only surviving graduate of 1933 in Victoria.

Spot Turnbull was Tasmanian minister for health and Cameron Duncan was working as a pathologist for the

Commonwealth, in Hobart Hospital, when the Pap smear was first introduced. Spot planned to establish a special women's clinic offering Pap smears and, on his suggestion, Cameron left for three months in America to learn about the 'Papanicolaou technique'. He returned after six weeks saying he needed only to practise the test although, actually, he also needed to convince the local gynaecologists of the test's merit. He practised first on his own wife and the results came back positive. Another sample was sent to Melbourne for an opinion which was, again, positive. The gynaecologist was still sceptical but, 'Cam said, "Look, I believe in this, do a punch"...and sure enough it came back positive. And so they did a hysterectomy...and she lived for forty years after that.'

Spot's transition from medicine to politics started before the Second World War when he tried to tackle the problem of tuberculosis in Tasmania. 'It was a terrible disease to get. No-one wanted to be called tubercular because that meant being off work for two to three years and it was absolute financial ruin. So everyone tried to pretend it was chronic bronchitis.' His proposals for compulsory x-rays and a tuberculosis allowance were welcomed by the Tasmanian Labor Party, but after the war, '...when I came out of the army they'd done nothing. So I stood for the Labor Party and got in and after two years...became minister for health and I brought in the [two bills myself].'

On 18 September this year it will be seventy-two years since Spot Turnbull's graduation. We hope he enjoys some celebratory champagne, and that he manages to contact his fellow graduates in Perth and the UK.

Eds



THE MEDICAL GRADUATES OF 1933 WITH THEN VICE-CHANCELLOR, DAVID PENINGTON, AT THEIR SIXTY YEARS REUNION, 13 SEPTEMBER 1993. BACK L-R: ALEC MCGREGOR, JOHN HAYWARD, CAMERON DUNCAN, ANTHONY KELLY, NORMAN CUST, RUSSELL MACDOUGALL, SPOT TURNBULL. FRONT L-R: DOROTHY SINCLAIR, SHEILA PETERS, DAVID PENINGTON, LORNA LLOYD-GREEN, HARRY SINK, GEORGE WATTERS

MB BS 1941

Sixty-Three Years Reunion

From Jim Guest—Our numbers remained stable over the last year, although only twelve were able to attend the luncheon at University House on 24 September last year.

It was a cheerful occasion. For our age group we all seemed to be reasonably active and two people have published books since we last met.

Those present were: Stewart Moroney, Bill Sloss, Brian Costello, John Billings, Peter Bird, Frank De Crespigny, Jim Guest, Elizabeth Kenny, Mary Wheeler, Alexe Gale, Clarice Hetherington and David Pitt.

MB BS 1969

Thirty-Five Years Reunion

From Hannah Parker—Our reunion was held at Queen's Hall, Parliament House, Melbourne on the evening of 13 November 2004. This splendid Victorian hall was a fitting venue, guests being piped in as they ascended the steps.

Seventy-seven members of the class of '69 attended, plus guests making a total of 126 from all parts of Victoria, at least one representative for every state in Australia and one couple each from Dubai and Hong Kong. Our class has certainly spread its wings widely.

Everyone enjoyed the evening so much that midnight arrived far too soon and alas, we had to enter our pumpkins and depart. Some met the following day for follow-up luncheons.

We all look forward to 2009 when it will at last be genuinely 'Forty Years On'.

MB BS 1949

Fifty-Five Years Reunion

From Noel Cass—On 3 November 2004, the MB BS graduates of 1949 celebrated their fifty-fifth year since graduation with a luncheon at the Kooyong Lawn Tennis Club. Thirty graduates attended and there were twenty-one apologies, including two from London and several from interstate.

It was an informal occasion, allowing attendees to move about between courses. Two graduates have received honours and we have a member of the Royal Swedish Academy of Sciences. One graduate has twenty-one grandchildren. Six are still doing medical work of some sort, while others have retired into gardening and artistic pursuits of various kinds. The Mornington Peninsula has attracted a large group of retirees who enthused on its advantages. One graduate flew from Queensland and returned the same day, but assured us that this was not in protest about the Melbourne weather. As might be expected there were many apologies based on 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.

MB BS 1954

Fifty Years Reunion

From Norman Beischer—A reunion to celebrate fifty years since the MB BS graduation of the class of '54 was held at the Royal South Yarra Lawn Tennis Club in November 2004. The night was a great success with 109 attending, including partners. Professor Richard Larkins was guest speaker and performed magnificently.

UNIVERSITY OF MELBOURNE MEDICAL SOCIETY (UMMS) MEMBERSHIP

The University of Melbourne Medical Society was founded in 1982 to promote communication between graduates and the School of Medicine. UMMS also promotes excellence in medical education and research and raises funds to support initiatives within the school. It provides a means for medical graduates to stay in touch with former classmates and teachers and opportunities to continue active links with the School of Medicine and the university. Student prizes sponsored by the society are the UMMS Advanced Medical Science Prize – two prizes of \$500 each year, and the Peter G Jones Elective Essay Prize – three prizes of \$100 each year. Members are kept informed about the medical school and fellow graduates through *Chiron* and *Melbourne PostCard*, and receive advance notice of and invitations to the Dean's

Lecture Series including the annual ethics seminar, the society's annual lecture and function and reunions of their graduate year.

Medical Graduate Reunion Assistance

The University of Melbourne Medical Society office can assist with reunions. We can list reunion details in *Chiron* and in *Melbourne PostCard*, obtain on your behalf a list of graduates and mailing labels for your year group and advise on possible university venues for your reunion. For further details contact the UMMS office, School of Medicine, University of Melbourne, VIC 3010. Telephone: (+61 3) 8344 5888, Facsimile: (+61 3) 9347 7084, Email: umms-medicine@unimelb.edu.au

THE UNIVERSITY OF MELBOURNE
MEDICAL SOCIETY CONGRATULATES...

Laureate Professor Graeme M Clark AC (Bionic Ear Institute) received the 2004 Prime Minister's Prize for Science.

Dr Ben Croker (PhD 2004, Department of Medical Biology, Walter and Eliza Hall Institute of Medical Research) who was awarded the 2004 Premier's Award for Medical Research. His award acknowledges pioneering research into a cellular protein that can repress abnormal cell behaviour and prevent the development of disease.

Dr Darren Russell (MB BS 1987, Sexual Health Unit, School of Population Health) was awarded the 2004 Bulletin Microsoft Smart 100 Award for Health and Medicine. The award honours clinical work with HIV patients and advocacy work on their behalf.

AC (Companion of the Order of Australia)

Professor Emeritus Derek A Denton (MB BS 1947, Foundation Professor of Experimental Physiology and Medicine; Inaugural Director, Howard Florey Institute for Experimental Physiology and Medicine) – for service to science through leadership in medical research in the field of physiology relating to sodium homeostasis and the body's regulation of fluid and electrolyte balances, and to the arts.

Professor Emeritus Sir Peter John Morris (MB BS 1957, PhD 1972) – for service to medical science as a surgeon and scientist in the areas of vascular surgery and renal transplants through developing tissue typing and testing of immuno-suppression agents.

AO (Officer of the Order of Australia)

Dr Sandra M Hacker (MB BS 1969, Grad Dip Psychological Med 1974) – for service to medicine, particularly in the field of psychiatry, and to excellence in professional education and promotion of the highest standards of health care in Australia.

Professor Frederick Arthur Mendelsohn (MB BS 1965, PhD 1972, MD 1973, Howard Florey Institute for Experimental Physiology and Medicine) – for service to medicine, particularly in the fields of neuroscience and biomedical research as a leading researcher, administrator and practitioner.

Professor Nicos Nicola (PhD 1976, Walter & Eliza Hall Institute of Medical Research) – for service to scientific research and to policy development within the field of cellular and molecular biochemistry, and to the development of medical biotechnology in Australia.

AM (Member of the Order of Australia)

Professor Stephen Cordner (MB BS, BMedSc, GDip Crim, 1977) – for service to forensic medicine, particularly as a contributor to the development of forensic pathology in Australia and internationally.



JILL SEWELL

Professor Brian Fowell Buxton (MB BS 1962, MSurg 1973) – for service to medicine, particularly as an adviser on the development of cardiac surgery in Asia and through training programs for overseas surgeons.

Professor John David Horowitz (PhD 1979) – for service to medicine and medical research in the field of cardiology, particularly in the area of ischaemic heart disease.

Professor Andrew Henry Kaye (MB BS 1973, MD 1989) – for service as a neurosurgeon, particularly in the field of brain tumour therapy, and as a researcher and academic leader.

Associate Professor Justin O'Day (MB BS 1968, GDip Ophthal. 1977) – for service to medicine in the field of ophthalmology as a surgeon, clinician and teacher, to professional associations and to the community.

Dr Jillian R Sewell (MB BS 1971) – for service to paediatrics and improvements in children's health care as a consultant, administrator and educator.

Dr John Hedley Summons (MB BS 1954) – for service to medicine, particularly the advancement of medical education through the Royal Australian College of General Practitioners.

OAM (Medal of the Order of Australia)

Dr Bernard S Gilligan (MB BS 1957) – for service to medicine as a neurologist.

Dr John F McEncroe (MB BS 1963) – for service to medicine as a general practitioner and administrator through the general practice divisions – Victoria, and to the community.

Dr Colin Blackwood Officer (MB BS 1952) – for service to the community of Seymour, particularly as an environmentalist and as a medical practitioner.

Dr Peter M Pearce (MB BS 1952) – for service to medicine and to the community, particularly through support services for homeless people and those with a drug or alcohol dependency.

Dr Eugenie Mary Tuck (MB BS 1966) – for service to the welfare of prisoners through the development of improved practices in the management of state correctional health systems.

PSM (Public Service Medal)

Dr Edward J Ogden (BMedSc 1974, MB BS 1976, MA 1995) – for outstanding public service to Victoria Police in the area of forensic medicine.

OBITUARIES

Howard Hadfield Eddey CMG

BSc 1934, MB BS
1934, FRCS, FRACS,
FACS

1910—2004

HOWARD EDDEY WAS an eminent surgeon, teacher and administrator and a caring, compassionate man who was loved and respected by his patients, his colleagues and family. He ably served the medical profession in Australia and South-East Asia during a long and distinguished career.

Born in Box Hill, Howard completed his secondary education at Melbourne High School where he was awarded school colours for rowing and was captain of boats. He was a talented lacrosse player and while at Melbourne University gained a blue and an all-Australian blue in that sport.

Howard won many honours, exhibitions, prizes and scholarships while gaining his medical qualifications. He became a resident at the Royal Melbourne Hospital then, in 1937, travelled to England where he gained fellowship of the Royal College of Surgeons and won their prestigious Hallett Prize. Fellowships of the Royal Australasian College of Surgeons (RACS), in 1941, and of the American College of Surgeons, in 1964, followed. In between his studies and work Howard courted and married Alice—a happy union until her untimely death in 1987.

Howard was a major (Australian General Hospital) with the AIF during the Second World War. He was captured at the fall of Singapore and served in Japanese POW camps in Changi, Sandakan and Kuching where he was involved in making 'kangkong'—harvesting and treating a local wild vegetable to produce a drink rich in riboflavin and vitamins which was used to reduce the incidence of beriberi and pellagra among fellow prisoners. Howard also drafted an anatomy text book, which was later published, on scrap paper provided to him by a sympathetic guard.

After the war Howard returned to the Royal Melbourne Hospital as an honorary surgeon and also held appointments at Prince Henry's and the Alfred hospitals. He practised as a general surgeon with a special interest in diseases of the neck and mouth and was the author of many publications in medical journals, particularly in relation to diseases of the salivary glands and cancer of the mouth.

Howard was always interested in the education of doctors. Among his many appointments, he was independent lecturer in surgical anatomy, University of Melbourne (1950-65) and dean of the Royal Melbourne Hospital Clinical School (1965-67). His interest in medical education included membership of the Medical Board of Victoria and convocation of the University of Melbourne, and of the council and board of examiners of the RACS. He was involved in medical education and training in South-East Asia and paved the way for much of the college's educational activities in the region. In recognition of Howard's work in South-East Asia the college council named the award for the region's top student in the primary exam for the fellowship, the Howard Eddey Medal.

Howard held a number of visiting professorial appointments in Melbourne, England and South-East Asia. In 1967 he was appointed by the University of Melbourne to the first chair of surgery at the Austin Hospital, with the addition of the Repatriation General Hospital in 1970. He overcame the many problems faced in setting up the large department and created



HOWARD EDDEY

an efficiently run teaching facility. He retired as professor in 1975 and in 1984 the new operating theatres at the Austin Hospital were named the Howard Eddey Operating Suite. In recognition of his outstanding service to the University of Melbourne, the title of professor emeritus was conferred in 1976. He was appointed a Companion of the Most Distinguished Order of Saint Michael and Saint George (CMG) in June 1974.

In the years prior to and after his retirement as professor of surgery, Howard was involved with medico-legal work and was highly regarded for his expertise in this area. He never lost sight of the purpose of medicine. He was extremely interested in his patients' progress and welfare and kept in touch with many of the doctors he trained, not hesitating to travel to country Victoria or interstate if asked to assist with an operation.

Howard continued his medico-legal practice until 1987 when he retired to Geelong following the death of Alice. He remained in good health until the last few years of his life and died peacefully on 16 September 2004. He is survived by his sons Michael and Peter, his daughter Pam, seven grandchildren and his great-granddaughter.

Michael Eddey

Heather B Gibson

MB BS 1942

1919—2005

HEATHER GIBSON PASSED away on 8 January 2005, aged eighty-five. She was very proud of her association with the University of Melbourne and her achievements in Tasmania through her work in the area of school health as the senior medical officer in the Tasmanian school health service until her retirement in 1984. Her original research done at that time still forms the basis of continuing studies in Tasmania, particularly in the area of asthma and iodine deficiency. She was a woman ahead of her time and an inspiration to her two daughters and many of their friends at a time when professional women were few and far between.

Helen Kibbey

Victor Leon Goldenfein

MB BS 1978

1952—2004

VICTOR GOLDENFEIN, BELOVED family man, loyal friend and respected physician, passed away on 21 September 2004 after a courageous battle with cancer. Born in Melbourne on 27 August 1952 to Holocaust survivors, Victor was educated at Mount Scopus War Memorial College in Burwood and matriculated with honors in 1970.

Victor studied medicine at the University of Melbourne and graduated in 1977, a year after marrying Dia. He interned at Shepparton Base Hospital during 1978 then completed a residency in family practice at Moorabbin Hospital before setting up in solo general practice in Malvern in 1981.

Working hard, Victor built a large and successful practice with special interests in preventive medicine, nutrition and weight management. He earned the admiration and respect of his patients and peers for his excellent care and innovative ideas, including the early introduction of holistic and alternative therapies and acupuncture to his patients' care. During these years his two sons, Marc and Jake, were born and, despite his busy professional life, Victor and Dia raised two wonderful boys. Victor always strived to find better ways to address his patients' needs and, as recently as 2000, expanded his practice by setting up a male sexual disorders clinic.

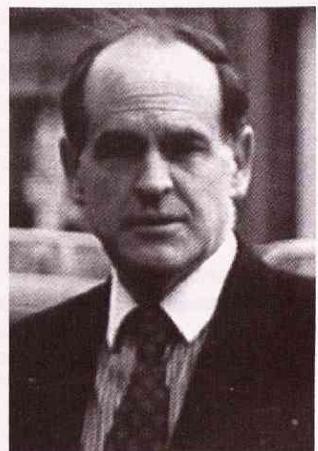
After a decade of practice, at the young age of thirty-eight, Victor was diagnosed with severe coronary artery disease. He underwent coronary artery bypass surgery in 1990 and again, following a myocardial infarction, in 1997. He tackled this as he approached all of life's obstacles—with disciplined self-confidence, focused application and a zestful love of life. He rehabilitated successfully following surgery, regained his health and vigor and promptly returned to active practice.

Victor was just beginning to reap the rewards of his hard work and dedication when, in mid-1993, he was diagnosed with carcinoma of the pancreas. Though he fought courageously and extracted every moment of living from his shortened life, this was one battle he could not win. Victor was much loved and admired by all who knew him. He touched many lives, helped many people—patients, family and friends alike—and will be sadly missed.

Allan Lew and Tony Kostos

A true generalist, Bruce held appointments as general surgeon at Ballarat Base Hospital and the Queen Elizabeth Centre while at the same time practising as a general practitioner in the Ballarat Group Practice.

Bruce left the Ballarat Base Hospital in 1992 but continued to devote his life to the care of rural Australians—in Derby (WA) and Maryborough (Qld) before joining an Aboriginal health centre in Kempsey (NSW), where he was still working five weeks before his death last October, shortly after he was diagnosed with a brain tumour.



BRUCE GRIFFITHS

From obituaries by Hedley Peach, previously published in the Herald Sun (20/01/05) and MJA (7/2/05)

John Garland Griffiths

MB BS 1955

1929—2004

Bruce Wilson Griffiths

MB BS 1963

1938—2004

BROTHERS JOHN AND Bruce Griffiths, born in Ballarat nearly ten years apart, died within months of each other in late 2004.

Both sons of Ballarat obstetrician and gynaecologist Williams Raymond Griffiths (MB BS 1922) followed their father's example, graduating in medicine from Melbourne University and devoting their lives to rural medicine.

John, or 'JG' as he was known, graduated in 1955 then completed medical residencies in Australia and the UK before training in obstetrics and gynaecology at the Churchill Hospital and the Radcliffe Infirmary in the UK. He returned in 1962 as honorary obstetrician and gynaecologist to Ballarat Base Hospital where he cared for maternity patients and women needing gynaecological surgery until 2003.

A member of the hospital's board of management from 1977 to 1988, JG held various offices, eventually becoming president when he commissioned the writing of the hospital's history. As chairman of the key gifts committee he oversaw a community appeal that raised more than \$300 000, at that time the largest amount raised by the hospital. He became

foundation clinical director of the division of obstetrics, gynaecology and paediatrics in 1992. After his retirement in 1996, he continued to serve as a member of sessional staff until just a couple of years before his death last December.

Bruce graduated in 1963 and after a year's residency at Launceston General Hospital in Tasmania, also left for the UK where he trained in surgery. He then returned to Launceston for a year before moving to Ballarat where he practised for more than twenty years.



JOHN GRIFFITHS

Geoffrey William Harley AM

MB BS 1954, FRANZCO, FRCOPHTH (UK)

1928—2004

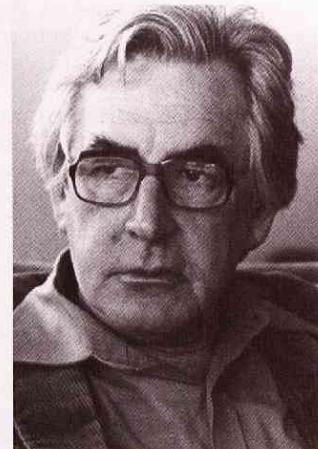
GEORGE WILLIAM HARLEY was born in Melbourne in 1928, the elder son of Alfred and Elizabeth Harley. Alfred was a Melbourne graduate who received his postgraduate training in obstetrics and gynaecology at the Manchester Royal Infirmary where he met Elizabeth, then a nurse at the infirmary.

Geoff was educated at Geelong Grammar School and graduated in medicine from Melbourne University in 1954. After a year at the Royal Melbourne Hospital he chose to specialise in ophthalmology, gaining his diploma after two years at the Royal Victorian Eye and Ear Hospital.

In 1961 he commenced practice in Collins Street, taking over the ophthalmic practice of the late Kevin O'Day, while also working in the public sector at Prince Henry's Hospital. Geoff later developed a large paediatric ophthalmology practice in Collins Street whilst working at the eye department of the Royal Children's Hospital. He was director of the department from 1982 until 1993, during which time he performed ground breaking surgery, including an operation on a blind three week old baby, providing eyesight to a child who later went on to become a top student in the VCE.

In November 2004, Geoff was too ill to accept in person the prestigious gold medal 'for distinguished, meritorious and selfless service to the College', awarded to him by the Royal Australian and New Zealand College of Ophthalmologists at their Melbourne congress. His wife Judith proudly accepted it on his behalf while two of their sons, Tom and Roger, were in the audience. Their third son, David, was absent overseas.

In his citation Chris Buckley related how Geoff played the major role in the founding of the college:



GEOFF HARLEY
Photo Irene Newton John

In 1964, at a meeting of the Victorian Section of the Ophthalmological Society of Australia, Geoff gave notice of a motion that that section form a sub-committee to investigate the possibility of forming an Australian College of Ophthalmologists, to establish uniform Australian training and academic standards. Four years later the society became the College of Ophthalmologists. Geoff drafted the memorandum and articles of association, promoted the formation of a qualification and education committee, an Australian Journal of Ophthalmology, and a common final examination for the Australian and New Zealand colleges, which led to their later amalgamation. He served on the college council for sixteen years, becoming President in 1979.

Later, Geoff became medical secretary of the college's national trachoma and eye health program, which worked to help Indigenous and outback communities. He also directed Fred Hollows, tactfully and with ingenuity, in his field work.

Geoff made eleven trips with eye teams to the Solomon Islands and Kiribati. The team would see up to 2000 patients and perform about 240 eye operations in a single trip. In 2003 Geoff was awarded membership of the Order of Australia for his work, including his humanitarian support for developing countries.

Chris Buckley concluded his talk at Geoff's thanksgiving service thus:

We have lost a kind and generous man; a good mate to many, a great mentor to a fortunate few, a gruff old bugger, a reluctant gentleman, a barefoot eye doctor to our Pacific neighbours, a visionary to those who will follow in the college he established, a compassionate healer, an advocate for what is the right way of doing things, an irreverent dismisser of humbug, a true and generous friend.

This obituary is based on that published in The Age on 14/12/04 with additional information from Chris Buckley, David Kennedy and Judith Harley

Henry (Harry) Alfred Jenkins AM

MSC 1948, MB BS 1952, BA (DEAKIN) 1984

1925—2004

HARRY MIXED HIS schooling and undergraduate days with bike riding, distance running, drama, debating, caddying and rescuing wayward golf balls. He first graduated from Melbourne University with a science degree in 1946 then, under 'Pansy' Wright's guidance, gained the MSc. He was working as a physiology tutor when he joined second year medicine in 1948. Throughout our clinical training at the Alfred he was one of eight in our group. He married Wendy while still a student and they had four children together.

In 1954, after a residency at the Alfred Hospital, Harry began a general practice in Thornbury, moving later to Keon Park. I joined him in general practice in 1957 at a branch surgery in Thomastown.

Harry's interest in politics led to his election to the Victorian Parliament in 1961, the year he was also the charter president of the Preston Lions Club and master of a lodge. He continued to work part-time at the practice for over a year. In 1969 he moved to federal politics as the member for Scullin and eventually became speaker of the house in the first Hawke government. Harry retired from parliament in 1986 and was appointed ambassador to Spain. His son Harry was elected to parliament and continues to be the member for Scullin.

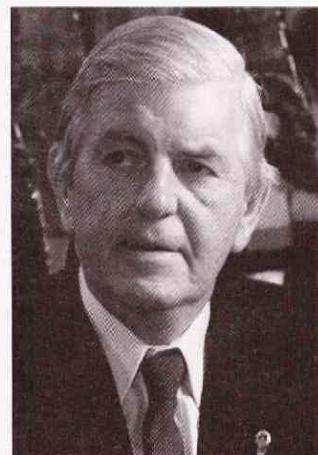
During the mid 1960s Harry came to assist me in the practice on a number of occasions. It was on these visits that Fredrick's disease, a variant of the motor neurone condition with which he was afflicted, first became evident. The disease continued to increase its hold until his passing in July 2004. It did not, however,

stop him in his many activities in his local community and beyond. Harry was a member of the Monash University Council in its early days, which were so important in setting the future course for that institution. He became a real force in the Lions organisation, rising to district governor, which his wife Wendy emulated. Harry's work with the Lions and his involvement with the Motor Neurone Society led to him being awarded the AM in 1991.

A born educationalist, Harry did part of a law course at Monash and completed a BA at Deakin University in 1984.

Harry Jenkins touched many people during his extraordinary career—he knew where he wanted to go and used his powers of negotiation to achieve a satisfactory outcome for all concerned. As his quality of life faded, he was happy to go; his rich history will be an enduring legacy for his family and his many friends and acquaintances.

John North



HARRY JENKINS

Raymond Herbert Kernutt

MB BS 1949, MS 1954, FRCS, FRACS

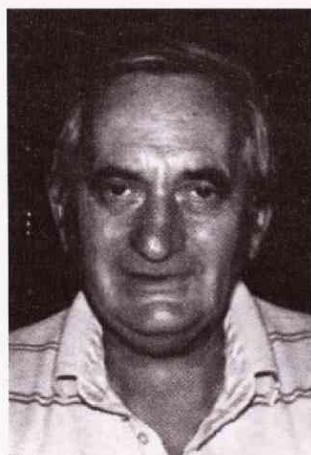
1926—2004

RAY KERNUTT WAS for some years the most influential general surgeon in eastern suburban Melbourne. Honorary surgeon to Box Hill Hospital from its opening in 1956, this brilliant and practical surgeon chaired many significant committees. His contribution to the development of medical facilities in the region was tremendous, until his retirement, as consultant emeritus, in 1991.

His life was forged in Wagin, a small country town out of Albany in Western Australia. The fourth of five children of the local baker, who had migrated from England, Ray's outstanding intellect and bookish instincts made him self-reliant and, combined with diverse practical skills, established his unique personality. At twelve he began to teach himself Latin and had to decline a scholarship for secondary schooling in Perth as his parents had no contacts with whom he could live. With no medical course then available in Perth, he crossed Australia to the University of Melbourne and entered Ormond College. Academic success came easily and after posts at the Royal Melbourne Hospital, the Royal Children's Hospital and the university pathology department he became a fellow of the Royal Australasian College of Surgeons and obtained his MS in the same year.

These were times when the United Kingdom attracted Australia's young surgeons, as work in the National Health Service provided an abundant training ground. Faced with the prospect of leaving his new wife and infant son behind, Ray prepared to go. However, their landlady was so confident in the young couple that she insisted on lending them money so the family unit could remain together—no security, simply, 'Pay me back when you can and, if I'm gone, pay my nephew'.

In London he worked at Hammersmith Postgraduate Hospital, became FRCS and then a registrar at St James' in Balham, described by a visiting American surgeon as, 'the only hospital on earth where the best surgeon in the world operates in a bicycle shed'. Kernutt learnt from his chief, legendary surgeon Norman Tanner, and honed his own surgical skills.



RAY KERNUTT

Kernutt returned to the Box Hill appointment and also spent five years as honorary assistant surgeon at the Royal Melbourne Hospital. It was a hectic life with these commitments as well as private patients in various hospitals in East Melbourne and the suburbs. Melbourne was spreading east and the highways to Eildon and the snowfields saw many crashes. His workload was fearsome, complicated by his purchasing and managing a 180 acre farm at Whittlesea, so Box Hill soon became his main professional focus. From 1972 he consulted

at Box Hill Gardens Medical Centre and soon after left his Collins Street practice.

Kernutt's energy and toughness were bewildering. He was an amazing technician who could operate at lightning speed. His dexterity was blinding and he loved to play his Steinway grand piano. Ray needed no help. Resourceful and confident, sensible and decisive, he seemed able to turn his hand to any known surgical procedure. His magical surgical skill and quirky wit made him a favourite with the very best of the operating theatre nurses. Sometimes brusque in manner, his twinkling eye solved many a momentary contretemps. He and his regular anaesthetist, Bernie Dunn, were a superb team.

His energy as a private surgeon led to travel to country Victoria to operate with local practitioners and he soon became licensed to fly himself on these trips.

Kernutt's unit attracted excellent young surgeons and published an important paper on conservative management of perforated peptic ulcer. In 1981 his efforts among Box Hill Hospital staff ensured the success of the hospital's silver anniversary appeal, which raised \$1.5 million and enabled great improvements.

After 'retiring' Kernutt took various positions in surgery or general practice at Christmas Island, Nauru and country Victoria. Addicted to cigarettes, the latter years of his life were made difficult owing to diabetes, vascular disease and major abdominal surgery.

He is survived by the two wives who were devoted to him: Peg, their two sons, a daughter and four grandchildren; and Jill, and their two sons.

Geoffrey WG Sinclair

Francis C Nagle

MB BS 1949

1927—2004

FRANK NAGLE WAS a unique individual—the universal man. He was expert in his medical field, raised a large family with his wife Betty, and combined all this with his other leisure activities.

He will be remembered for many things, in particular the fact that he engineered in this country the change from the old conventional type of ear, nose and throat (ENT) surgery to otorhinolaryngology, head and neck surgery. Frank had trained in ENT surgery in America and was successful in obtaining a residency in otolaryngology head and neck surgery for Jack Kennedy at the University of Iowa Hospitals. Kennedy was the first Australian to train in this particular specialty in America and, in 1972, the first Australian to be board certified in otolaryngology head and neck surgery.

Frank then arranged for Kennedy to return to St Vincent's where he retired as head of the unit, allowing Kennedy to take his place. Thus, in 1974, the first ENT head and neck surgery unit in Australia began.

From that time on, Australians streamed to America to train and the combination of ENT and head and neck surgery quickly spread through the country under the major influence of St Vincent's Hospital, where Frank's foresight had begun the movement.

A great footballer and cricketer while at Newman College, Frank was also a most proficient golfer. He pursued these interests throughout his career—he was a Collingwood supporter and a short handicap golfer who could snare the money in tight matches.

Frank also had a long-term interest in horse racing, as an owner, a breeder and punter. He and his great friend, Chris Jenkins, were a well-known duo on most Victorian racetracks and together terrorised the bookies for many years.

A pioneer of microsurgery for ear problems in his younger years, Frank continued to practice for many years, finally retiring from active surgical practice to become involved in medico-legal work.

He is survived by his wonderful wife Betty and his large family, all of whom have been successful in their careers.

Frank Nagle was made from a mold for which there will be no duplicate, and while we regret his passing, Frank's great legacy is to have been the man who moved otolaryngology and head and neck surgery in Australia onto the world stage.

John T Kennedy
Director, ENT Head and Neck Surgery, St Vincent's Hospital

David Chiu-Wai Ng

MB BS 1997

1974—2004

DAVID NG PASSED away on 18 June 2004, at the age of twenty-nine, after a four-year battle with osteosarcoma and its subsequent complications.

Born in Hong Kong on 13 November 1974, David was the second child of Steven and Phyllis Ng. His family migrated to Melbourne when he was six years old. David went to a local primary school and then to St Monica's College where he was an excellent student and dux of the school in 1991, his VCE year.

A hard working and inquisitive student, he studied medicine at Melbourne University where he made many friends.

After graduation, David went on to do his internship and residency at the Austin and Northern hospitals. He was a caring doctor to his patients, well liked by his colleagues and praised by the consultants for whom he worked. During his residency he started on the path of physician training.

About five years ago, David suffered from a strange illness which proved to be osteosarcoma in his right hip, and for which he underwent treatment. Despite this illness, he was very motivated—he went on to complete his basic physician training and passed the written examination of the FRACP. David had high aspirations to become a doctor for the World Health Organisation.

A talented musician with a keen interest in music, David learned to play the piano with no formal teaching. He enjoyed



DAVID NG

singing and playing the piano, often entertaining his friends and family at his house. Prior to his illness, David also liked to play golf with his friends.

David was a kind and compassionate doctor. He was very concerned about his parents' health and, even when gravely ill, he was concerned for his patients' and wanted to talk to his consultants about them.

David and his family are devout Buddhists and David regularly attended prayer meetings at Buddhist temples. He is survived by his parents, Phyllis and Steven, his sister Wendy, his brother-in-law Bobby and his nephew Phillip. David's family and friends miss him dearly.

James Mok

Dorothy Marion Sinclair

BSC 1931, MB BS 1933, DCH

1909—2004

DOROTHY GEPP WAS born in Broken Hill on 18 July 1909 and survived into her ninety-sixth year. She was the third of five children born to Herbert and Jessie Gepp. Her father was a colossus—a talented man with a powerful, driven personality who was knighted for his leadership role in the Australian mining industry. With an older brother, a beautiful older sister and two younger sisters, Dorothy defined her position in the family through academic success. At the same time, her recreation and lifelong passion was tennis. She was dux of PLC and runner up to the tennis champion, but always said she would have preferred it the other way around.

Her ambition was to study medicine but her father, a radical, original thinker and activist in his work, was, for once, cautious. He consulted the then Victorian health minister, who advised Herbert Gepp that a medical course would be 'bad for a girl's health' and 'they all get married at any rate'. Dorothy survived this prejudice by doing a science degree and only then would her father allow her to start medicine. She had thought the health minister a fool but without his intervention she would not have met and married Alex Sinclair. They graduated in 1933, Dorothy third in the year and Alex fourth, behind Keith Bowden (forensic pathologist) and John Hayward (cardiothoracic surgeon).

Dorothy and Alex were married in March 1937, departing the day after for postgraduate study in England on the old coal-fired cargo ship the *Port Sydney*. The pair worked their passage as ship's doctors. On the way over, an apparently work-shy stoker with back pain eventually needed drainage of a large perinephric abscess. Alex did the surgery and Dorothy gave the ether and chloroform anaesthetic.

Early in 1939, the couple returned to Australia expecting their first child. During the war Dorothy worked in George Embleton's general practice in Essendon and had two more children. Alex served in the 4th Australian General Hospital in Tobruk and Port Moresby.

On his return, the family moved to the then new suburb of North Balwyn. Alex was busy in psychiatry and Dorothy settled into her life as a paediatrician, wife and mother. Her ideal in paediatrics was the gentle and inspiring Kate Campbell. She worked in the outpatients clinics at the Royal Children's Hospital and travelled Victoria on a regular circuit as far afield as Mildura, for the Department of Maternal and Child Health, examining kindergarten children. She was sometimes pleased to pick up a previously missed heart murmur in a child with congenital heart disease, but her special interest was in trying to help the families of children with behavioural problems.

Tennis and music, particularly opera, formed the core of her social life. Her husband was the centre of her life both while she was working and after retirement. When he died in 1988



DOROTHY SINCLAIR

she was stricken and there is evidence that she planned to take her own life. She continued to play tennis into her eightieth year, but after two big back operations this was no longer possible and her interest in staying alive gradually but definitely declined. She was, however, intellectually alert, and lived alone until near the end. She retained her interest in and love for all of her large family and for tennis and music—she never missed listening to John Cargher's 'Singers of Renown' on the ABC.

Dorothy Sinclair was one of

a female minority in medicine in her era. Others in her year included Lorna Lloyd-Green and Sheila Peters. Her sixtieth graduation reunion, attended by the vice-chancellor, was recorded in *Chiron* (See p. 34). She died only a few days before the seventy-first reunion. Dorothy is survived by her children and by two succeeding generations.

Roger Sinclair

David Ogilvie White AO

MB BS 1954 (SYD), PHD 1958 (ANU), MD
1971 (SYD), MD (HON) 1994, FRCPA, FASM

1931—2004

DAVID WHITE DIED from sclerosing cholangitis, after a decade of illness, on 7 November 2004, leaving a widow, Marjorie, and three daughters.

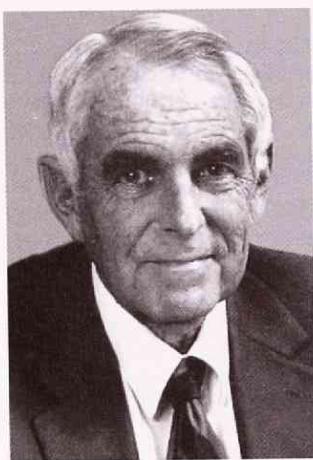
He was born in Canberra in 1931. His talents showed as a teenager when he co-authored a paper on the birds of Canberra and was the ACT chess champion.

He graduated in medicine at the University of Sydney in 1954 and, following internships, worked for a PhD at ANU. The subject of his thesis, the influenza viruses, remained the lifelong major focus of his research. In 1958 he was appointed as the first lecturer in virology at the University of Melbourne's Department of Microbiology and was appointed professor of microbiology in 1967. On the death of Professor Rubbo in 1969, he took over the chairmanship and held that position for fourteen of the next twenty-five years. His administrative skills took him to many major posts in the university during the 1970s, including dean of research and graduate studies, chairman of the academic board and pro-vice-chancellor.

Although he toyed with the idea of moving into university or government administration, David decided to remain in the academic mainstream—to the benefit of the scores of BSc (Hons), MSc and PhD students whom he supervised. His skills and initiatives in teaching earned him the praise of students from Melbourne to Port Moresby, and recognition from the university and the Australian Society for Microbiology.

Well-chosen sabbatical studies, which included biochemistry and immunology, broadened his command of virology. He and his team, funded continuously by grants received in national competition, produced over 100 original papers. With colleagues he wrote six major books on virology, two of which went through multiple editions. His writing ability was outstanding, the product being perceptive, lucid and exceptionally easy to read.

He served the country, the university, the profession and numerous research and academic bodies on a host of committees and reviews, on editorial boards and in organising major conferences.



DAVID WHITE

With all this, and the many awards and accolades which came, he remained modest to the point of being self-effacing—eschewing display in cars, clothing or speech. His integrity was complete. He was unfailingly loyal to his staff and students, and generous with praise and encouragement. He was always approachable and was unstinting in his help with either professional or personal matters.

His foibles were endearing. His desk, like his mind, was a model of neatness. Because he failed to grasp that others might be less honourable and more selfish than himself, David sometimes appeared naïve. Intensely enquiring, he sometimes launched penetrating questions at embarrassing moments. He could time his arrival for an early lecture minutely, but telephone conversations could be prolonged. A characteristic pose was of David, standing by the window, telephone to his ear, mind on the caller's problem—and an appreciative eye on an attractive young woman entering the university.

Wednesday evenings were dedicated to tournament bridge, at which he excelled. Sometimes a champion, he frequently represented the state. He was enthusiastic about sport as participant and spectator, without being partisan, and played tennis regularly with a group of fellow intellectuals.

He never lost his enthusiasm for ornithology. For this he seized all opportunities provided by work-related travel—visiting all continents bar Antarctica. In retirement, and despite his illness, he took his binoculars to Botswana, Sabah and Amazonia.

He earned, and received, the affection and respect of many and is greatly missed.

Joc Forsyth

Robert M Withers OAM

MB BS 1946

1923—2005

WITH THE PASSING of Robert (Bob) Withers, the world has lost a great horticulturalist and doctor.

The only child of Robert and Olga Withers, Bob was close to his parents, particularly his father, who took him fishing and hunting, and from a very early age became interested in growing bulbs and studying wildflowers, birds and butterflies.

Bob went to Haileybury College where his high academic achievement was rewarded with a scholarship to Scotch College. Had he been permitted to follow his heart, perhaps Bob would have set his vocational sights on a career in botany—but his mother was convinced that her son's destiny was in medicine and he duly graduated in medicine from the University of Melbourne in 1946.

Running a general practice from rooms in Abbotsford and Fitzroy during the influx of Greek people to those suburbs in the 1950s, Bob soon realised that if he were to meet the needs of his patients he would need an interpreter. By advertising for a nurse with a Greek background he met Hari, who would become his wife and who introduced him to historical Greek culture, another of his passions. Those who knew his medical work attest to his excellence in diagnosing difficult conditions—not surprising to those who knew the sharpness of his memory and intellect.

Bob's book, *Lilliums in Australia*, set the standard for lilliums when published in 1967 and, after retiring from medicine, Bob increased his interest in many rare plant genera. He held a registered collection of species camellias, which featured many rare and unusual plants and wrote many articles on both rhododendrons and camellias. Recently, he was instrumental in getting the camellia 'Hari Withers' featured in a set of stamps produced by Australia Post.

Large plantings in gardens such as the Royal Botanic Gardens in Melbourne and the National Rhododendron Gardens at Olinda, contain many plants donated by Bob. In 1995 he received the Order of Australia medal in recognition of his services to horticulture. He was made an honorary life member of the Royal Horticultural Society of Victoria and a fellow of the Australian Camellia Research Society and of the Australian Rhododendron Society. The Royal Horticultural Society awarded him the Veitch Gold Memorial Medal, the highest award that the RHS can make to a non-British resident.

Bob was a quietly determined, thoughtful man who worked to achieve his goals in the world of camellias and horticulture. He will be greatly missed throughout the medical and horticultural worlds and his contributions will not be forgotten.

Hari Withers and Geoff Sherrington



BOB WITHERS
Photo Ron Moodycliffe

Contributions to the *Chiron* obituary pages are welcome. Obituaries of up to 400 words can be sent to the editor, *Chiron*, c/- Communications and Alumni Office, School of Medicine, The University of Melbourne, Victoria 3010, Australia, or via email to eabren@unimelb.edu.au

UMMS RECORDS WITH REGRET THE PASSING OF...

Alexander Crawford Bell, MB BS 1941	Gwendoline Hewitt, MB BS 1942
Michael Herbert Bower, MB BS 1947	Sheila Wilson Hyland, MB BS 1946
Paul Carman, MB BS 1974	Robert David Julian, MB BS 1954
John Hume Coldbeck, MB BS 1955	George R Jones, MB BS 1943
John Combes, MB BS 1949	Paul Matthews, MB BS 1951
Ian William Davies, MB BS 1950	Donald D Letham MB BS 1942
Murray Deerbon, MB BS 1951	Alan Leslie Nicholson, MB BS 1956
Llewellyn T Griffiths, MB BS 1941	Neil Glascott Oates, MB BS 1955
David N Hawkins MB BS 1951	William Allen Sanguinetti, MB BS 1939
Beric Glanville-Hicks, MB BS 1941	

BEQUESTS AND MEMORIAL GIFTS

THINKING AHEAD AND REMEMBERING

EARLY IN ITS history, the University of Melbourne defined its obligation to posterity in its motto, *Postera crescam laude*, 'growing in the esteem of future generations'. The School of Medicine, with its outstanding track record in teaching and research and the quality of its graduates over more than 140 years, continues to acknowledge that motto.

Bequests and memorial gifts provide a means by which you can make a contribution to the future wellbeing of the community. Bequests have provided assistance to the university since its earliest days and continue to support many important teaching and research programs. Memorial gifts are named in memory of a deceased individual and can also contribute a long-term benefit to society through the contribution of funds to support education and research, for example through provision of a fellowship, a scholarship or student prize. Over the years such gifts to the university have played an important role in advancing medical education and research.



THE RICHARD LOVELL TRAVELLING SCHOLARSHIP HAS BEEN ESTABLISHED IN MEMORY OF RICHARD ROBERT HAYNES LOVELL AO (1918-2000)

Gifts to two recently established memorial funds supported by friends and graduates of the School of Medicine will each honour outstanding individuals and the significant legacies they have left to the community through their exceptional work.

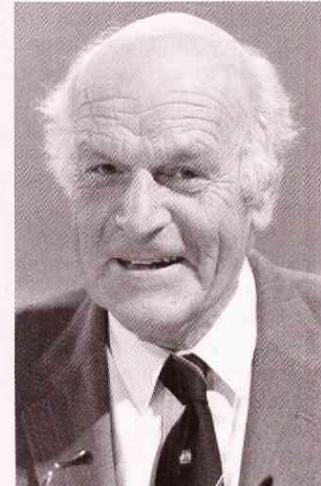
The Richard Lovell Travelling Scholarship has been established in memory of Richard Robert Haynes Lovell AO (1918-2000), the first professor of medicine at the University of Melbourne. Professor Lovell influenced countless doctors who are now in leadership roles in Australia and overseas. He pioneered many areas of academic medicine, particularly clinical epidemiology, and also made outstanding contributions to cancer control and human research ethics in Australia.

An appeal conducted by the Cancer Council of Victoria, in partnership with the School of Medicine, has raised over \$100 000 which will be used to establish a trust in perpetuity to provide an annual amount for the Richard Lovell Travelling Scholarship. The scholarship will be awarded in competition to research students at the University of Melbourne who are working in a field related to cancer epidemiology.

The JHW Birrell Scholarship will honour the memory of road safety pioneer, John Henry Winter Birrell OAM, ISO (1924-2003). Dr Birrell, a medical graduate of the University of Melbourne (MB BS 1950), was Victoria's police surgeon for twenty years from 1957. He was a key advocate for the introduction in Victoria of compulsory seat belt legislation, which was implemented in 1970, and for the acceptance, in 1961, of the breathalyser for testing the blood alcohol levels of drivers. The Victorian road toll, which had reached a peak of 1061 fatalities by 1970, dropped to 333 by 2003.

The JHW Birrell fund has been established at the University of Melbourne to support a scholarship to enable study or research in the field of alcohol, drugs and traffic safety. Friends, family and former colleagues are supporting the fund, and the Transport Accident Commission has pledged \$40 000 over the next two years.

These two scholarships will provide support for students and researchers who are working in areas that will provide future benefits to the community. They are also fitting memorials to the lifetime achievements of Professor Lovell and Dr Birrell, providing inspiration to students and researchers for decades to come.



THE JHW BIRRELL SCHOLARSHIP HAS BEEN ESTABLISHED IN MEMORY OF JOHN HENRY WINTER BIRRELL OAM, ISO (1924-2003)

BEQUEST AND MEMORIAL GIFT INFORMATION

Bequest and Memorial Gift Information

For information about establishing a memorial gift or making a bequest to the university, please contact:

Ms Suzanne McGraw, Bequests and Donations Officer, Development Office, the University of Melbourne, Victoria 3010, Australia. Telephone (+61 3) 8344 4408, email: bequests-development@unimelb.edu.au or Ms Robin Orams, Communications and Alumni Manager, Faculty of Medicine, Dentistry and Health Sciences, the University of Melbourne, Victoria 3010. Telephone (+61) 3 8344 5889, email: robinjo@unimelb.edu.au. All enquiries are treated in strictest confidence.

Alumni in the USA, Mexico and the UK

If you are a resident of or have assets and tax obligations in the USA or Mexico, and are considering a gift or bequest

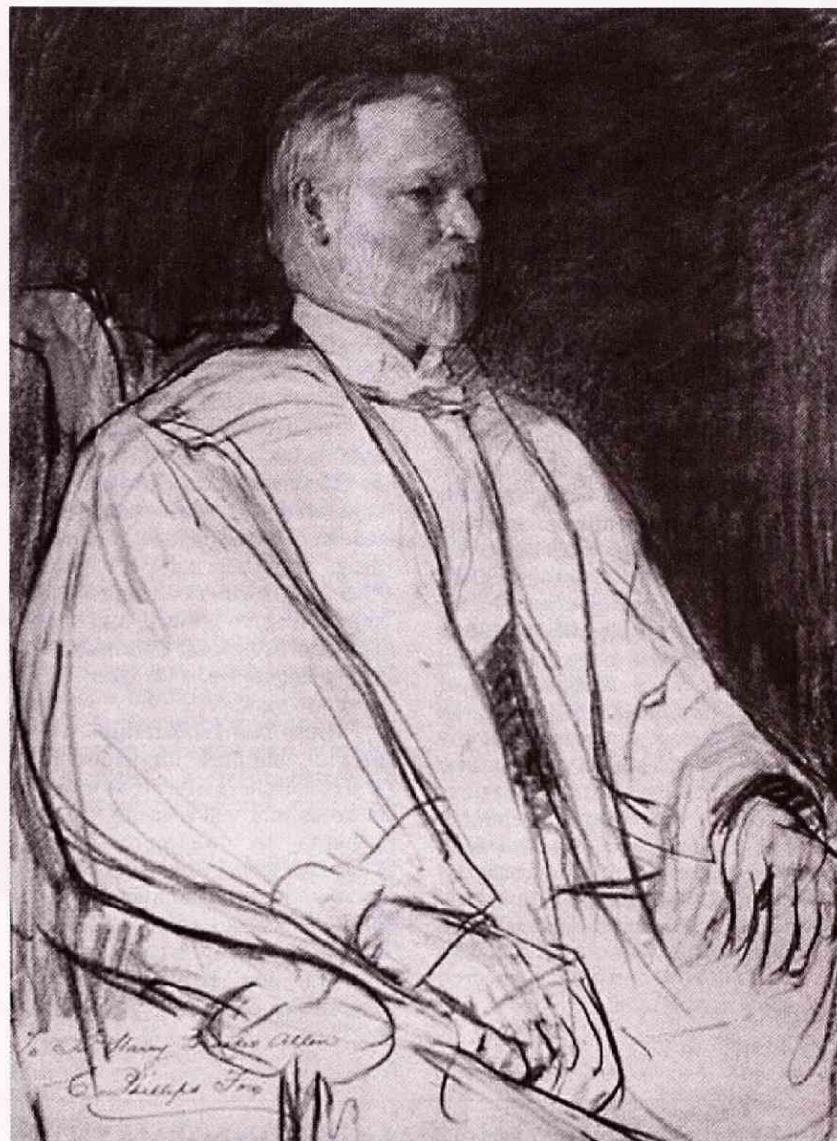
to benefit the university, the University of Melbourne USA Foundation can assist with making such a gift tax effective. The foundation is an incorporated not-for-profit body in the USA.

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

In the United Kingdom, the Friends of the University of Melbourne Charitable Trust is a registered charity and offers similar benefits for prospective supporters in that country.

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

MAGAZINE



This charcoal drawing of Sir Harry Brookes Allen (1854-1926), by E Phillips Fox, was made as a pre-study for an oil portrait which was commissioned by a large number of graduates and unveiled at the medical school's jubilee celebrations in Wilson Hall in 1914. Unfortunately, the oil portrait was destroyed in the Wilson Hall fire in 1952. A copy of the portrait, however, painted by Allen's daughter, Mary Cecille Allen, in 1936, hangs in the Sunderland Lecture Theatre in the Medical Building.

Last year, the Dean, Professor James Angus, was notified that this charcoal drawing was available at auction. Professor Angus and distinguished alumnus Mr James Guest were keen to bring the portrait back to the university, and made personal donations to enable the faculty to acquire it.

The drawing now hangs in the Harry Brookes Allen Museum, where it was unveiled by James Guest and Dr Fay Marles, then Chancellor, at the UMMS function and annual general meeting, held just prior to Suzanne Cory's UMMS lecture on 30 November last year (see page 47).

Dermatological Moulages at the Harry Brookes Allen Museum of Anatomy and Pathology

by Mei Nah Tay

TH E DEPICTION OF normal and pathological anatomy in models developed simultaneously with medicine itself. Early models were created in clay, marble and ivory. During the Renaissance, interest in the sciences, especially anatomy and pathology, increased and wax objects were produced for teaching and documentation.

The art of moulage, the representation of anatomical structures in wax, was perfected in the eighteenth century, when it was practised extensively in Germany and Italy. Wax allowed a versatility and realism unattainable through other, harder mediums. The technique had three steps: a clay model was first sculpted and then used to make a plaster cast; molten wax was then poured into the cast, allowed to set and then removed; lastly, fine details and colour were added to achieve a precise and life-like representation. These wax duplicates were used for teaching and documentation, as they represented diseased parts of the body at an identical scale. Medical moulages flourished around the turn of the nineteenth century, when photography was still in its infancy and, as medical specialties evolved during the nineteenth century, dermatology departments became important customers of moulage makers.

By the mid-nineteenth century, moulages were an established medium in medical centres and schools for documentation, exhibition and teaching purposes. Dermatological moulages were common in Europe but not in Australia. A moulage collection was established, however, at the Harry Brookes Allen Museum of Anatomy and Pathology in the University of Melbourne around the beginning of the twentieth century. It contained the collected works in this medium of Dr Herman Fermor Lawrence (1863–1936), a prominent and pioneering dermatologist in Australia.

Herman Lawrence was born at Penquite, near Launceston, in Tasmania. His medical training, begun in Melbourne, was completed in Edinburgh, in 1888, with a gold medal in surgery. Lawrence studied dermatology under the guidance of Dr Jamieson in Edinburgh and Sir Thomas McCall Anderson in Glasgow. While a student at Edinburgh he was a fellow student and friend of Dr Louis Wickham, of Paris.

Lawrence was appointed surgeon to the department for diseases of the skin at Melbourne's St Vincent's Hospital in 1893, and first dermatologist to the hospital in 1895, a position he held until 1925. In 1907, Lawrence made a tour of Europe and America. While in Paris, Louis Wickham introduced him to Madame Curie and others at the St Louis Hospital where, it was said, he learnt his moulaging skills. After his return to Melbourne, close associates often described Lawrence as taking great delight in preparing wax models of skin lesions.

Recognised as an authority by the leading dermatologists in his day, Lawrence represented Victoria at the International Congress of Dermatology at Rome in 1912. Over the course of his career, he presided at congresses, was a vice-president of the



HERMAN FERMOR LAWRENCE
Photo courtesy SVH archives

British Medical Association in Victoria and president of the Victorian branch of the British Association of Dermatology from its foundation until his death. An annual prize in dermatology commemorates his name to the present day. He helped develop the specialty of dermatology by instructing assistants who included Rowden White, Charles Dennis, Roland Wettenhall, Keith Colquhoun and Robert Brodie. He also investigated the high incidence of skin cancer in Australia and warned of the sun's damaging rays in this part of the world, long before people took notice.

As part of Lawrence's research, he established a collection of moulages for the documentation of his own dermatological cases as well as for exhibition. Moulages were the best medium as they were clearly explanatory by themselves and Lawrence could readily illustrate conditions before and after treatment. In articles he contributed to medical journals, and in his personal publications,

Lawrence describes exhibiting his moulages, often showing before and after radium treatment moulages together in the same box. Dermatologists still offer this form of before and after comparison to demonstrate results.

As early as 1903, Louis Wickham had drawn Lawrence's attention to the possibilities of radium treatment, thus placing these two men among world pioneers in that field. It can be said that Lawrence's practical foresight and ingenuity set the foundation for the development of radiotherapy in Melbourne. Among the people with whom he worked were the Clendinnens, father and son, who pioneered the radiotherapy of cancer in the deeper tissues; Sir Thomas Lyle, professor of physics at the University of Melbourne; and Sir William Bragg of Adelaide. A pioneer in the use of radium to irradiate skin, breast and gynaecological malignancies, he treated public patients at St Vincent's Hospital with his own supply of expensive x-ray equipment.

In 1911 Lawrence published a book, *Radium: how and when to use*. Although a small publication and old-fashioned by modern standards, the book showcased his work and reflected his tremendous energy in exploring the field of dermatology. It also contained photographs of some of his collection of moulages, three of which are still preserved as part of the collection in the Harry Brookes Allen Museum of Anatomy and Pathology.

Moulages by Herman Lawrence form the nucleus of the collection at the museum. No written record is available to verify if the collection was donated to the school by Lawrence or St Vincent's hospital and there is no indication of the original size of the collection. The moulages were probably first housed at St Vincent's Hospital but moved to the university when the hospital authorities could not provide sufficient space to accommodate them. Four moulages, which bear the date 1908, were exhibited at the Ninth Australasian Medical Congress in Melbourne in that year. Another three were photographed for Lawrence's book *Radium: how and when to use*.

The moulages held at the museum are unsigned but careful inspection suggests that Lawrence made all but one. These are all similar in technique and style and labelled by Lawrence as evidence of his research work. The external moulleur was Jules Baretta, a famous moulleur at the Saint Louis Hospital in Paris. A gifted craftsman, producing artificial fruits in a small Parisian street, he was invited to be the official moulleur of the hospital in 1867. Baretta made more than two thousand wax moulages of skin diseases during his appointment as the caretaker of the hospital's museum, using a technique he kept as a professional secret. He was awarded by the Legion of Honour for his contributions to dermatology. His moulages were artistic in effect and vividly realised, and are now collected as works of art. Perhaps the specimen by Baretta now in the museum was given to Lawrence during his time in Paris.

In 1912, the museum was reorganised at the newly renovated medical school and the moulages were probably exhibited there until the 1930s. During and after the First World War, the moulage collection apparently ceased to develop as there are no records of any made after that time. Perhaps the ready availability of photography had rendered the moulage obsolete as a method of documenting dermatological diseases.

There are fourteen moulages in the Harry Brookes Allen Museum of Anatomy and Pathology. Some specimens are in wooden boxes with glass covers while others are nailed onto black Perspex sheets. A diagnosis of the condition represented is usually handwritten on a white paper label in front of or beside the model. Details of the patient, case history and research notes are also written on these labels. The diseases depicted vary from venereal diseases, through feigned eruptions and unidentified dermatological diseases to rare plant allergies reflecting the wide spectrum of dermatological diseases that Lawrence was researching with regard to radium therapy.

The present conditions of the moulages varies. Those that are boxed have been protected from sunlight and dust and are therefore in better condition than those that are only mounted onto black Perspex. There are, however, no signs of severe damage or deterioration, except for a few specimens which, over

time, have become loose from their wooden mounting boards. A variable degree of yellowish discolouration can be seen on those made by Herman Lawrence, a phenomenon called 'dying of moulages' common to many moulages over time. Upon close inspection, the moulage by Jules Baretta has a more porcelain-like colour whereas Lawrence's are more yellow. This might indicate that the individuals depicted in the Australian models had a darker skin tone than their European counterparts, or that the high yellow content of Lawrence's moulages is due to his use of a higher percentage of beeswax, readily available in Australia, in his formula. Baretta's moulage is more artistic and refined in terms of workmanship and representation, whereas Lawrence has made a greater effort to achieve a realistic representation by painting in details such as blood vessels, skin abrasions and even eyelashes.

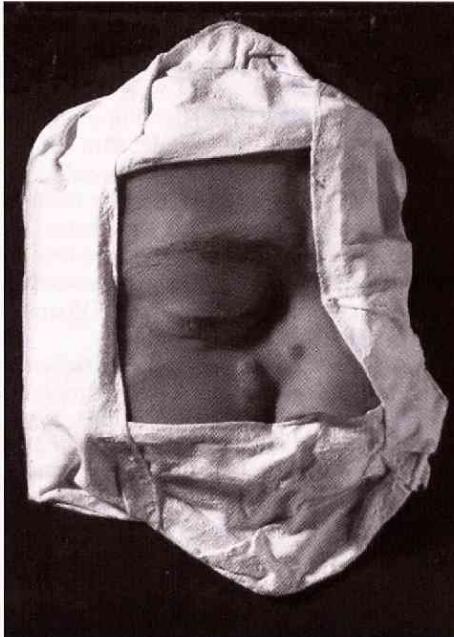
The history, development and fate of the moulage collection at the Harry Brookes Allen Museum of Anatomy and Pathology is similar to many collections around the world. It took shape during the period when dermatology was emerging as an individual speciality from the broad spectrum of medical practice, and was an essential element of the development of the discipline.

Some collections of moulages are dominated by the work of a single moulleur. Other collections were built up by acquiring specimens from overseas artists or studios or from local mouleurs. The collection at the Harry Brookes Allen Museum of Anatomy and Pathology owes its existence to Herman Lawrence's efforts to raise local dermatology to a world standard. The collection is still in a remarkably good state of preservation, despite past lack of conservation measures, and compares favourably in this respect to other collections in Europe.

The introduction of modern photography and modern illustrative media made moulages seem irrelevant to modern society and are largely attributed as the reasons behind their disappearance. Although no longer used for documentation or teaching purposes, there has recently been a revival in this art form in the United States. Schools teaching the art of moulage have been established, and realistic moulages representing injuries are made and used in the medical profession, the military, and the health and safety industry. They are used in training and testing disaster response and to prepare individuals by producing disaster-induced psychological responses. Historical interest in the medical field has also increased in recent years.

Moulages reflect the evolution of dermatology as a speciality and often depict medical conditions which are no longer observed clinically. These wax models and their associated documentation reflect the impact of dermatological diseases which are no longer threats on social life and culture in the past. Moulages are a historical and medical legacy bridging two different fields of study—medical and art history—and are worth conserving for future generations.

Mei Nah Tay's research in the Harry Brookes Allen Museum was done as a placement for the subject 'History in the Field', part of her Bachelor of Arts degree. The placement was organised by Rita Hardiman, museum curator, and Belinda Nemec, the university's cultural collections officer, as part of the university's cultural collections project.



LAWRENCE'S NOTES ATTACHED TO HIS MOULAGE OF MOLLUSCUM CONTAGIOSUM (MOLLUSCUM EPITHELIALE) READ: 'PATIENT, ASSYRIAN CHILD. FEMALE ACT. 10. ATTENDED SKIN DEPARTMENT, ST VINCENT'S HOSPITAL. PAPULE INCISED CONTENTS EXPOSED AND EXAMINED UNDER MICROSCOPE GAVE NUMEROUS MOLLUSCUM BODIES. ACCOMPANYING MICROPHOTOGRAPH SHOWS MOLLUSCUM BODIES.'

Photo Stuart Thyer



LAWRENCE'S MOULAGE OF LUPUS ERYTHEMATOSUS WAS DISPLAYED AT THE 9TH AUSTRALASIAN MEDICAL CONGRESS AND ALSO PUBLISHED IN HIS BOOK.

Photo Stuart Thyer

2004 UMMS LECTURE

30 November 2004

THE DNA REVOLUTION A Personal Perspective

by Professor Suzanne Cory AC

Director, The Walter and Eliza Hall Institute of Medical Research

WE ARE IN the midst of a revolution that will change the world as profoundly as the industrial revolution did in the nineteenth century. This is, of course, the biotechnology revolution, forged from the astounding advances that have taken place in genetics.

The revolution was born in 1953 with the discovery of the structure of DNA by two very brash young men in Cambridge—James Watson and Francis Crick. In making this momentous discovery, Watson and Crick drew together diverse data obtained by other scientists, particularly the x-ray diffraction studies of DNA by Rosalind Franklin and New Zealander Maurice Wilkins. Wilkins shared the Nobel prize with Watson and Crick in 1962 but, sadly, Franklin's premature death of cancer robbed her of adequate recognition until recent times.

Once the structure of DNA was known, a powerful new science, molecular biology, sprang up to decipher the genetic code. The progress made since that time has been breathtaking, far beyond what Watson and Crick's wildest dreams could have envisaged in 1953.

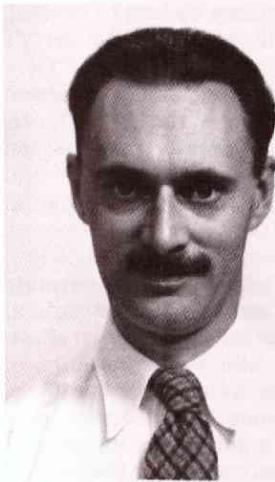
Today, barely fifty years later, we have in our hands the complete sequence of the human genome, nearly three billion bits of information! We also know the genetic blueprints of many microbes and simple organisms, and work is well advanced on many types of plants and animals. This knowledge will give medicine and agriculture enormous opportunities for improving health and economic welfare and for conserving the environment.

I have had the privilege and joy of being a molecular biologist throughout much of this period. What follows is a thumbnail sketch of some of the major events in the DNA revolution, viewed—if you will indulge me—through the glasses of my own scientific journey.

Melbourne University days

My voyage started at Melbourne University in the early sixties. I had just started my science degree and was doing my first genetics course in Biology I. It was classical genetics and I confess I was struggling somewhat. Then came the lecture that was to change the course of my life.

Professor Michael White rushed into the lecture theatre, brandishing the latest edition of a scientific journal. Some of you may recall his slow American drawl. Today he spoke at electrifying speed, unable to contain his excitement as he explained that the paper he was holding up had shown that each chromosome is a *single molecule* of DNA. The concept of this continuous ribbon of thousands of genes obviously blew him away—and he imprinted on me, that day, an enthusiasm and awe about the nature and organisation of our genes that has never left me.



MICHAEL WHITE

I went on to major in biochemistry and was enthralled to hear from Lloyd Finch that the genetic code was just being cracked. I ended up doing my master's degree with him and attending an advanced course in molecular genetics run by Jim Pittard and Bruce Holloway in the Department of Microbiology. The enthusiasm of these three for molecular biology had a profound impact upon me and the die was cast. I caught the research bug and decided to do my PhD.

With the naive audacity of youth, I applied to the MRC Laboratory of Molecular Biology (LMB) in Cambridge, where Watson and Crick had determined the structure of DNA. I still do not know why Crick took me on as a student in his department—perhaps it was simply because it was so unusual at the time to have a request from so far away! I am sure also that the advocacy of Professor Victor Trikojus, head of biochemistry, was an important factor.

Being accepted as a student was only the first hurdle to clear. I also had to get a scholarship. There were even fewer scholarships in those days and most were only available to men! But I was fortunate to win the overseas scholarship from the Royal Commission for the Exhibition of 1851, and started in Cambridge in late 1966, after taking off six wonderful months to travel in Europe.

Cambridge and the Laboratory of Molecular Biology

At first I felt like a complete outsider, because Cambridge was still primarily a male, undergraduate world. I also felt very inadequate in the scientific hothouse of the LMB. It was an amazing place—very overcrowded, but unstinting with high quality equipment and reagents. The post-docs and scientists there worked with a dedication to science I had barely glimpsed before. Their entire lives were absorbed by it—many hardly seemed to sleep. Everyone had incredibly high standards and expectations: they were in a race with the rest of the world to unlock the secrets of life and they intended to get there first!

And what an amazing set of role models: Francis Crick, flamboyant and urbane, always locked in intense intellectual discussion; Sydney Brenner, brilliant and sardonic, who



LLOYD FINCH



JIM PITTRAD

held court in the media kitchen on Saturday mornings to gossip about the heroic early days of molecular biology; Fred Sanger, the pioneer of protein sequencing, who had just published his RNA sequencing methodology and was now setting out to sequence DNA (for which he won his second Nobel prize); Max Perutz, the gentle and unassuming director, so deeply engrossed in the world of x-ray crystallography and proteins and yet still able to find the time at a Christmas party to introduce me to a newly arrived American post-doc, Jerry Adams, who was to become my scientific and life partner.

My PhD project with Brian Clark was to purify and sequence a transfer RNA, one of the adaptor molecules that decode the language of DNA into the language of proteins. This task seems trivial by today's standards, but the first such molecule had only just been sequenced and it had taken a marathon effort over several years by a team of very experienced biochemists. I had some rocky times but eventually succeeded, using Sanger's powerful new approach.

Geneva

After our period at Cambridge, Jerry and I went to the University of Geneva where we had a wonderful sojourn—exciting science, interspersed with memorable food, wine and travel! We were typical products of the late sixties!

We were studying RNA from a small bacteriophage as a surrogate for messenger RNA, the molecular go-between that enables DNA recipes to be converted into proteins, the working molecules of our cells. Being so much bigger than transfer RNA, sequencing a messenger RNA had been regarded as out of reach. But Jerry had found in Cambridge that R17 RNA could be reproducibly chopped by ribonucleases into transfer RNA-sized pieces that could be purified on polyacrylamide gels. In Geneva, we were able to sequence several of the pieces and found, very surprisingly at the time, that messenger RNA had a substantial amount of structure, due to the formation of base-paired loops.

Back to Melbourne and the Hall Institute

After Geneva came the big decision. Where would we set up our own lab? The obvious path was to go to the US, but we chose instead to come to the Walter and Eliza Hall Institute in Melbourne, where the visionary Gus Nossal had succeeded Nobel laureate Sir Macfarlane Burnet as director. We had visited the institute before going to Geneva, and had been very impressed. This was clearly a place where people were passionate about science, a place that played on the world stage!

And here, of course, we have a connection to the unveiling today of the portrait of Professor Harry Brookes Allen, the all-powerful dean of medicine at the University of Melbourne. Allen was critical to the establishment of the Hall Institute in 1915, together with RG Casey, who had persuaded Walter Hall's widow, Eliza, to set up the trust.

Allen's vision was for 'an Institute as the Southern Hemisphere has never known...', which 'shall above all things devote itself to medical research, in a broad and comprehensive spirit...', an institute that 'will be the birthplace of discoveries rendering signal service to mankind in the prevention and removal of disease and the mitigation of suffering'.

If Allen could see the Hall Institute today, I feel sure he would be very proud of what he



BRUCE HOLLOWAY

accomplished, and it is certain that generations of Australian scientists and patients are very grateful for his far-sighted vision.

Antibody genetics

Let us fast forward to 1971. Nossal was convinced by our argument that the time was ripe for immunology to embrace molecular biology. He welcomed us into his institute with great enthusiasm and we devoted the first ten years to the molecular genetics of antibody production.

We wanted to understand how the body generates the billions of antibodies it uses to fight infections and how a single antibody-producing cell can switch from making one type of antibody to another. We set about trying to isolate antibody messenger RNAs from mouse cell lines established by Hall Institute scientist Alan Harris during his post-doctoral years at

the Salk Institute. The first three years were a struggle, due to the relatively low abundance of these RNAs, but our early sequencing attempts revealed that eukaryotic messenger RNAs started with very bizarre structures, dubbed CAPS, which were later shown to act as landing pads for ribosomes to start protein synthesis.

Ultimately, the isolation of antibody RNAs (via a DNA copy or cDNA) depended upon the advent of recombinant DNA technology, pioneered by Boyer and Cohen in California in 1973, which lifted eukaryotic molecular biology to an entirely different plane. With this revolutionary technology, it became possible to clone a single gene sequence from the many thousands in a mammalian cell and use bacteria as factories to produce it in large amounts.

The early days of recombinant DNA were full of drama and controversy. Would it be possible to inadvertently create novel virulent bacteria? Scientists imposed a moratorium on themselves until appropriate guidelines had been worked out and containment laboratories designed and built. Despite this, or perhaps because of it, there was unprecedented interest by non-scientists and vigorous community protests took place in many places.

Melbourne University was no exception and the university assembly tried to block recombinant DNA experimentation. There was a memorable tense public meeting organised by the assembly in the public lecture theatre, at which Jerry nervously suggested that the Recombinant DNA Regulatory Committee should have *representatives* of the lay public rather than be comprised *totally* of lay people as proposed by the assembly. The vote was taken and Jerry's motion declared defeated. Then Kai Mauritz, from the Department of Biochemistry, sprang to his feet, incensed, demanding a recount—and Jerry's motion was carried!

With Nossal's strong support we went ahead and set up containment labs at the Hall Institute. This was a slow process because the Australian guidelines were literally being developed around us. But eventually, in mid 1977, our CII and CIII labs, the first in Australia, were finished and approved.

The time was now right to unlock the secrets of antibody genetics, and laboratories around the world raced to reach the answer first. Susumu Tonegawa at the Basel Institute of Immunology won the race. He found, amazingly, that the variable regions of antibodies (the parts that interact with antigens) are encoded in the germline in bits and pieces (as arrays of V, D and J elements), and that individual

PORTRAIT OF VIKTOR TRIKOJUS
BY LOUIS KAHAN

elements, selected at random, are assembled by lymphocytes into a complete V gene. Thus, antibody diversity was found to result both from diversity in the genome and diversity generated somatically, by recombinatorial processes and subsequent somatic mutation. Ora Bernard, then in Geneva as a post-doc from the Hall Institute, played a significant part in this work.

Our major role in this hugely exciting scientific chapter was to help enumerate the V element repertoire (several hundred) and to show that antibody class switching also involves DNA cutting and pasting: the DNA between the first and second C genes is deleted, to bring the second C gene in proximity to the V gene.

Cancer genetics

In 1976, Harold Varmus and Michael Bishop and their colleagues in California published their astounding discovery that normal cells contain genes homologous to the cancer-provoking genes carried by acute leukemia viruses of rodents and cats. The implication was that we harbour the seeds of our own cancers, genes that can turn rogue if mutated or expressed in the wrong cell type at the wrong time. Jerry and I began reading voraciously in the new 'oncogene' field, keen to become part of it.

We were aware that tumors of antibody producing cells (plasmacytomas in mice and Burkitt's lymphoma in man) carried translocations produced by the breakage of two chromosomes followed by rejoining the wrong pieces together. In the early 1980s, it became clear that one of the participating chromosomes harboured antibody genes. We were electrified. Could it be that the antibody gene rearrangement process had gone awry, linking an antibody gene with an oncogene? We set out to look, using an antibody gene as a tag.

Sure enough, as several other labs also discovered at essentially the same time, the tumours each had an antibody gene linked to *myc*, the normal mammalian counterpart of an avian viral oncogene. Expression of *myc* is normally very carefully controlled, because it plays a vital role in triggering cell division. After linkage to the antibody gene locus, however, this control is lost and *myc* is always on. The consequence for the cell is rather like having the accelerator in a car jammed on.

It seemed highly likely from these experiments that *myc* activation was the root cause of Burkitt's lymphomas and mouse plasmacytomas. But it was only guilt by association and we wanted direct proof. We therefore turned to another powerful new technology being pioneered in the US by Richard Palmiter and Ralph Brinster. These scientists were injecting DNA into fertilised mouse eggs to create mice with an extra gene in their genome. Together we made mice carrying a *myc* gene linked to an antibody gene regulator, just as in the *myc* chromosome translocation. The results were spectacular. Every transgenic *myc* mouse developed lymphoma before it was twelve months of age. The *myc* translocation became a paradigm for isolating other oncogenes and the *myc* mouse model has been used all around the world for studying lymphomagenesis. Many talented students and colleagues played a very significant part in this exciting work, particularly Steve Gerondakis, Lynn Corcoran, Alan Harris and Ora Bernard.



SUZANNE AND JERRY IN GENEVA

'The challenge to Australian universities and research institutes is to provide the environment in which these young people can pursue their scientific dreams.'

Today our laboratory is still preoccupied with the genetic accidents underlying cancer. Our major focus now is how cells decide whether to live or die. This program started in 1988 with a seminal finding by David Vaux in our laboratory that *bcl-2*, the gene activated by chromosome translocation in human follicular lymphoma, enables cells to survive in the absence of growth factors. Indeed, together with Andreas Strasser and Alan Harris, we found that *bcl-2* enabled cells to withstand a variety of cytotoxic conditions, including irradiation and chemotherapeutic agents, and that co-expression of *bcl-2* and *myc* is profoundly lymphomagenic. These discoveries opened an entirely new way of thinking about cancer development—one of the critical steps is to block the normal process of cell death (apoptosis). It is now known that *bcl-2* is a member of a family of genes whose combined actions determine whether cells live or die—some promote cell death (apoptosis) while others oppose it. Together with several other laboratories at the Hall Institute, particularly those of Strasser, Huang and Colman, we are dissecting the underlying biochemistry and attempting to use this knowledge to develop more effective therapeutics for cancer and degenerative diseases.

Opportunities and challenges ahead

Like AB Facy, I believe I have had a fortunate life. I have been part of a truly remarkable scientific era, and the era now upon us will be even more remarkable. Enormous opportunities lie ahead for starting their careers now—they will be able to draw on the immense treasure troves in the genome databases to guide them in their quest to understand the miracle of life at the molecular level.

The challenge to Australian universities and research institutes is to provide the environment in which these young people can pursue their scientific dreams. And we need to recruit *all* the best young minds we can—not just fifty per cent of them!

It concerns me greatly that insufficient young women are staying in science. Things have improved greatly since I was a student and the number of women doing PhDs now approximates the number of men. But the numbers drop off precipitously in the post-doctoral years and far too few hang in for the long haul.

The reason for this is clear. It is tough to run a scientific career at the same time as raising a family. What should society be doing to help? Some things are obvious, such as providing adequate numbers of high quality, affordable childcare facilities and increased work hour flexibility. Others are perhaps less obvious, such as building confidence in young women, both during their training and the early years of lab leadership; and modifying the criteria for success for promotion and grants to allow for somewhat reduced scientific productivity during early child-rearing years.

My message to young women, drawn from my own experience and that of many friends and colleagues around the world, is that it is possible to have both wonderful children and a satisfying scientific career. It is not easy but it is certainly worth the effort—in any case, as Malcolm Fraser knows, 'life wasn't meant to be easy'!

WITNESSES TO PAEDIATRICS IN THE HISTORY OF AUSTRALIAN MEDICINE

by Ann Westmore and Glenn Bowes

The Witness to the History of Australian Medicine seminar program was inaugurated in Australia by the university's Johnstone-Need Unit for the History of Medicine. It provides an opportunity to reflect on the history of a department, school or centre, or a disciplinary area of medicine, through a process of 'group oral history' and to publish that history on the worldwide web. For further information contact Dr Ann Westmore at afwest@unimelb.edu.au The following article focuses on the second seminar of the series—the development of the university Department of Paediatrics at the Royal Children's Hospital.

The transcript of the seminar can be found at <http://www.cshs.unimelb.edu.au/programs/jnmhu/witness/>

UNTIL THE EARLY 1950s, sick children admitted to the Children's Hospital in Melbourne were not permitted visits from their parents except on Sunday afternoons.

'It was a dreadful hardship and a practice that now seems barbaric', Bernard 'Bunny' Neal told the seminar on the evolution of the University of Melbourne Department of Paediatrics at the Royal Children's Hospital.

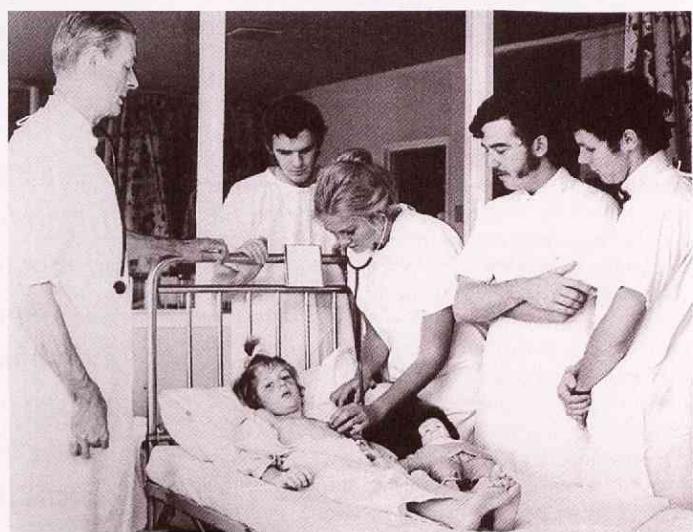
Visiting hours at the hospital were liberalised under the leadership of its medical director, Vernon Collins (1909-78) and post-war matron, Lucy Sechiari (1906-76), so that by the time Neal was lecturing in child health at Liverpool University in 1954, visiting arrangements were actually superior in Melbourne.

Hand-in-hand with this change, the hospital set aside a time each day when parents could discuss with clinicians the care and treatment of their child. Slowly but surely, parents were brought into the decision-making process, where they have remained, albeit with some uncertainty about how best to accommodate them.

An emerging discipline

The shift in attitudes to parental involvement in the management of sick children was a feature of paediatrics, a discipline that emerged from beneath the umbrella of mother's and children's health. One of its first battles was to convince the medical hierarchy that children should not be regarded merely as 'little adults'.

Doctors like James Spence, in England, argued that assumptions based on what worked for adults were not a satisfactory basis for treating children. Research was needed to clarify the most effective ways of caring for sick children,



VERNON COLLINS TEACHING A GROUP OF FIFTH OR SIXTH YEAR STUDENTS 1965/66.
(If you believe you can identify any of the students in this photo please contact Ms Bronwyn Hewitt, RCH Archives, on (+61 3) 9345 5112.)

and doctors specialising in child health were ideally placed to do it. Spence also favoured an approach that considered youngsters in the context of their family dynamics. A clinical research unit, established in 1948 at the Children's Hospital under the leadership of Howard Williams (1910-1999), who had worked with Spence and visited innovative paediatric research laboratories in the USA, embodied these principles.

Another tenet of the emerging discipline was collaboration with colleagues. Arthur Clark, who started working at the Children's Hospital in 1954 and later became foundation professor of paediatrics at Monash University, reminded Witness participants that Collins' adoption of less restrictive visiting hours stemmed from a lengthy study at Melbourne's Queen Victoria Hospital. Implementation of this research-based practice at the Children's Hospital, prior to its publication in *The Lancet* in 1955, illustrated the cross-fertilisation of ideas among Melbourne child health specialists at the time.

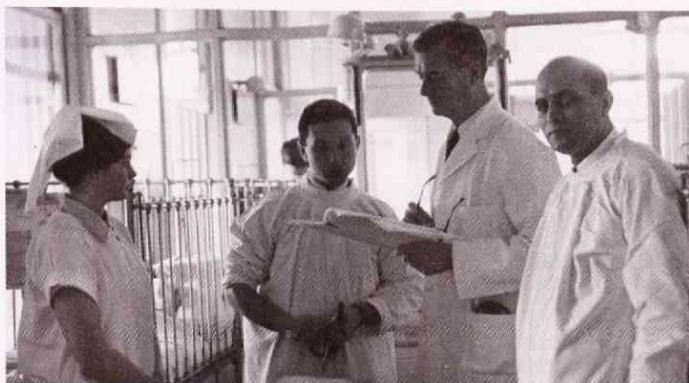
Establishment of the University of Melbourne Department of Paediatrics

The creation, by Spence, of an academic base for paediatrics at the University of Newcastle-upon-Tyne in 1928 kick-started a host of similar initiatives. In Australia the first equivalent academic department opened at the University of Sydney in 1949.

It took a further decade for the University of Melbourne to do likewise, the move being opposed by non-medical faculties fearing domination by medical professors who were potentially both numerous and powerful within the university structure. In the mid-to late-1950s, this resistance started to break down when the university agreed to establish several chairs in medicine and surgery within various Melbourne teaching hospitals.



HOWARD WILLIAMS' LAST WARD ROUND IN 1975. BACK L-R: MAX ROBINSON?, FRANK OBERKLAID AND PETER JONES. MIDDLE L-R: CRAIG MELLIS, DAVID MCCREDIE AND HOWARD WILLIAMS. FRONT L-R: PATIENT'S MOTHER, THORACIC PATIENT AND MICHAEL O'CALLAGHAN



VERNON COLLINS TEACHING IN 1962. L-R: A NURSE (NAME UNKNOWN), HENRY EKERT (THEN AN RMO), VERNON COLLINS AND FJ VAJDA (ALSO THEN AN RMO)

The university was galvanised to approve a chair in child health by a large endowment from Mrs (later Dame) Hilda Stevenson. As vice-president of the Royal Children's Hospital committee of management, Stevenson believed that the chair would lift the status of the hospital. Both Vernon Collins and Howard Williams were considered for the position, with Collins appointed in 1959.

Notwithstanding opposition from some quarters to the establishment of the Stevenson Chair in Child Health (renamed the Stevenson Chair in Paediatrics in 1965), the university gained in Collins a professor who inspired staff and students, and who was a public intellectual well-respected by the community, his colleagues and the government. His diplomatic skills smoothed the way for the later establishment of additional chairs at the hospital.



PETER PHELAN 1991

youngsters with leukaemia; the possibility of organ transplants for children; surgical treatments for spina bifida; and new techniques of genetic screening that could be used to clarify the likelihood of conceiving children with severe birth defects. Over time, approaches to using these technologies within strict protocols were devised. But early on, their legitimacy was fiercely contested.

David McCredie, who joined the hospital in 1951 and served as second assistant and associate professor (1963-91) and hospital nephrologist (1973-79), recalled the angst surrounding new methods of treating children with serious kidney problems. 'We were criticised in some quarters for prolonging the life of children with kidney disease by using unpleasant procedures [for example, kidney transplantation and renal dialysis]', he told the seminar. 'Perhaps it's inevitable that whenever a treatment is pioneered for a condition that is universally fatal, you are bound to get some criticism.'

John Colebatch also provoked contention when, in the early 1950s, he started working with new chemical treatments that attacked the abnormal white blood cells characteristic of childhood leukaemia. The chemicals were difficult treatments for all concerned and involved numerous blood tests, the ever-present threat of serious side-effects arising from severe bone marrow damage, and meticulous record keeping and data handling.

Bernard Neal vividly recalled the debate over Colebatch's work. Some clinicians believed it was preferable to continue the existing approach of providing symptom relief for children with leukaemia and allowing nature to take its course. Others favoured using chemotherapy in an attempt to prolong life with the ultimate aim of cure, even though, until that goal was reached, many patients would die after a short reprieve and substantial discomfort.

'There were these two camps about whether to stop the John Colebatch work', he said. 'All sorts of people, including the vivisectionists, were set against him. What we were really doing was beginning to realise that there was an important ethical aspect to what went on at the Children's Hospital.'

In an effort to determine the way ahead, a process of informal brainstorming took place within the hospital. Other organisations, such as the Anti-Cancer Council of Victoria and the Clinical Oncological Society of Australia, both of which saw merit in Colebatch's approach, also played critical roles. 'Their support enabled his work to flourish and attract [further] support', Henry Ekert said. 'From that beginning, the results improved and the support of colleagues followed, to the point where ethics was no longer an issue.'

Peter Phelan noticed a different attitude to research-based treatment at the hospital compared with what he had experienced while undertaking paediatric training in Queensland. There, it was regarded as regrettable if a child died of leukaemia within twenty-four hours of diagnosis, and with cystic fibrosis 'you didn't try' to treat the condition.

Coming to Melbourne (in the mid-1960s) he observed 'a different attitude, already starting to treat children humanely but to do all that's possible...There were many people who were criticised...but that was the only way we made progress. And at the Children's there was a supportive environment and, I suspect, Vernon [Collins] was the key person in providing that supportive environment for people to try something new.'

Others remarked on Collins' willingness to take discussion on difficult ethical issues into the wider community where he had a long track record of commenting on matters of public interest. He exerted a profound influence in the hospital, the university and the community through the strength of his arguments rather than through any system of hierarchical control.

The changing role of the department

Time has obscured what was cause and what effect, but when David Danks (1931-2003) succeeded Collins as Stevenson Professor of Paediatrics in 1975, becoming the hospital's co-



LADY SUPERINTENDANT LUCY DE NEEVE AND HOWARD BARRETT MID-1950s. WHEN LUCY STARTED AT THE HOSPITAL IN 1947 SHE WAS LUCY SECHIARI BUT SHE BECAME DE NEEVE IN 1953. BARRETT HELD VARIOUS POSITIONS AS MANAGER AND SECRETARY OF THE HOSPITAL BETWEEN 1923-57



DAVID M DANKS, 1991

saying to him on one occasion, "You're the boss, David," and he said, "No, I don't want you to think like that". So it was a very different style of leadership.'

The sense of egalitarianism spilled over into the undergraduate teaching role, Danks delegating most of the organisation to John Court and Max Robinson. 'David was good at delegating', Robinson said. 'If he gave you a job to do, he said "I don't want to interfere, but if you've got a problem, I want to know about it".'

Having established a genetic research unit at the hospital in 1967, Danks spent as much time as possible, while professor of paediatrics, continuing his pioneering research into the causes and treatments of inborn errors of metabolism. He developed community screening for genetic conditions via a network of clinics, together with a series of electronic visual aid systems to help doctors diagnose genetic syndromes more reliably.

Perhaps as a result of the reliance of his research on laboratory science, he appreciated what the basic scientist could bring to the research effort. Ruth Bishop, who led ground-breaking work on identifying a major cause of childhood gastroenteritis, recalled the professionalism that came with Danks' research approach and his encouragement to compete at a national level for research funding.

In 1983, when the university established a chair in paediatric research, Danks became its foundation professor and Phelan took over as professor of paediatrics. With more time for his beloved research and for using his entrepreneurial flair, Danks promptly established the Murdoch Institute for Research into Birth Defects (in 1984), which became the premier centre for clinical genetics research and training in Australia and the Asia-Pacific region.



JOHN H COLEBATCH, 1967

ordinator of research in the same year, he altered the priorities of the university department.

Compared to Collins, he was much less concerned about the need to demarcate paediatrics from adult medicine and among his peers he also seemed more of an equal. 'Vernon was a god-like figure and we were all the young ones,' McCredie recalled. 'Under David it was much more egalitarian. Don't regard me as the head, we're all equal, was the way he looked at it. I remember

progressively reduced the number of formal teaching sessions, increased bedside teaching, and gave students more time to pursue independent research', Phelan recalled.

The curriculum covered the full spectrum from paediatric medicine, paediatric surgery and child psychiatry to community paediatrics and adolescent health. It was an 'holistic approach—to some extent the Vernon Collins idea', Phelan said. 'I think one of the tragedies in the adult hospitals is that the teaching of medicine, surgery and psychiatry is not integrated. They are still taught as distinct disciplines. I raised this issue a number of times recently and people just laughed.'

He welcomed the higher profile for the Stevenson professor in learning activities. 'We generally got the best reports of any of the teaching programs in the clinical years... We started to rotate students to country hospitals, in effect we had a rural clinical school before they became popular. And we had many overseas elective students.' The result was an outstanding group of trainees entering paediatrics.

He also encouraged members of his department to view research as part and parcel of the everyday work, rather than being an optional extra or something done only by designated research workers. The expectation grew that part of the training of academic paediatricians involved taking a higher degree and, to encourage this, a number of scholarships were established to assist trainees.

Twenty years on those research scholarships continue, with support totalling \$250 000 a year. They are an investment in hospital clinicians, enrolled through the university department of paediatrics, doing higher degrees by research as a prelude to becoming the outstanding leaders in paediatrics.

The vision, promoted by Collins, Danks and Phelan, of a university department strongly linked with the community, hospital clinical services and the Murdoch Childrens Research Institute, continues today. As a result, the survival of core paediatric principles seems assured.

Photographs courtesy of Royal Children's Hospital Archives.

Ann Westmore holds a PhD in the history and philosophy of science. She co-ordinated and moderated the Witness seminar and prepared the transcript for publication online.

Glenn Bowes, Stevenson Professor of Paediatrics, Head of the Department of Paediatrics and Director of Postgraduate Education and Training at the Royal Children's Hospital, convened the Witness seminar.

A Witness seminar, 'The History of Iodine Deficient Diseases in Tasmania 1804-2006' will be held in Launceston, Tasmania, on Saturday 8 July 2006. It is part of a medical history symposium to be held in Launceston, 7-9 July, jointly organised by Tasmanian members of the Australian Society for the History of Medicine, and the Health and Medicine Museums Special Interest Group. For further details contact Paul Richards at pacrichards1@bigpond.com or phone 0418 461 547 or 6344 4241, or contact Ann Westmore at afwest@unimelb.edu.au



RUTH F BISHOP, 1980s?

MEMORIES OF THE MELBOURNE MEDICAL SCHOOL

James Guest AM, OBE, VRD, BSc, MB BS 1941

WHEN JAMES GUEST entered the University of Melbourne it was to study science, not medicine. Two years into his science course, however, he wanted to study some comparative anatomy and Professor Agar referred him to Professor Wood Jones.

He had already joined the McCoy Society, which brought him into contact with Wood Jones, and later travelled with them on several expeditions. His strongest memory of these expeditions is of the one taken to the Sir Joseph Banks group of islands in Spencer Gulf. 'Wood Jones always chose an island because then you had a circumscribed area to work on. He took zoologists, geologists, botanists and they did an ecological survey over, usually, three or four weeks.' He remembers that there would be a 'good back up of senior scientists on the trip'. 'In 1937 we had Raymond Priestley, Wood Jones and Dan Mahony, who was director of the museum. We had quite a big marquee set up on the island, with trestle-top tables. At night, having worked in the field all day and then having had a good meal, people would sit down with microscopes and specimens they had brought in and dissect them and write them up. The senior staff would be helping all the time and it was a very good discipline as well as a very good holiday.'

Professor of anatomy at the university from 1930 to 1937, Frederic Wood Jones was a charismatic figure who attracted a wide range of followers. 'He loved teaching and his teaching was not aimed at passing exams...His lectures were in the old anatomy school which is now the Berry building. There was a big theatre there and it would be absolutely packed every time he lectured—not just with the people he was lecturing to, which might be second or third year medicine, but science students, and a lot of doctors would come...and sit on the steps up the aisles. He would give a series of lectures, and they might be on the bony skeleton or the alimentary canal, but on all aspects of it—some anatomy, some physiology, some things that he'd found when he was digging up mummies in Nubia...an extremely entertaining and fascinating lecturer.'

Wood Jones' advice was to switch to medicine as 'the only sort of career in comparative anatomy is in an anatomy school'

and at that time, in the English-speaking world, a medical degree was necessary to get into an anatomy school.

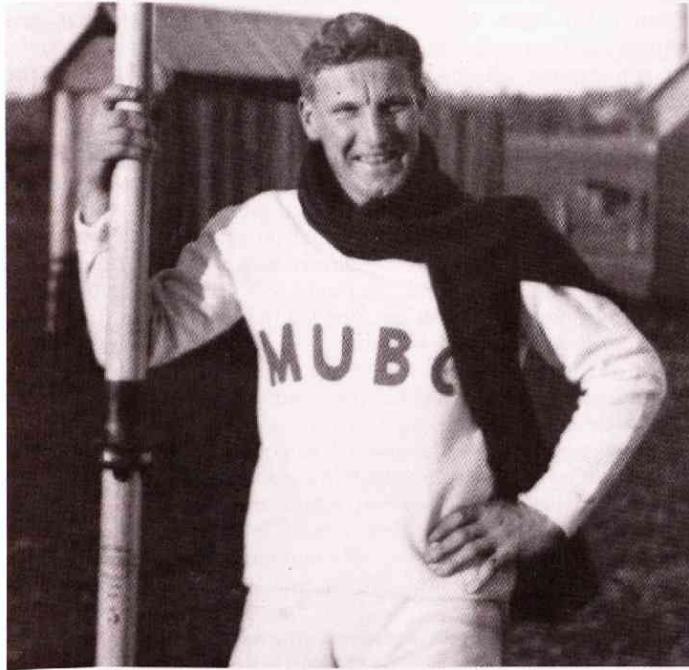
The Second World War began when James Guest was in the fourth year of the medical course. Students in years four and above were classified as being in a reserved occupation until graduation. The course was shortened: 'over a period of three years or so they took a whole year off so it became five instead of six'. Although, 'it was the holidays that were cut out so that instead of having a couple of months over Christmas we had a week or two...there wasn't actually much shortening of the instruction times'.

Another effect of the war on the medical course was that 'the younger physicians and surgeons of the staff of the hospital went off to the war' and 'a lot of the surgeons and physicians who had retired were brought back just to teach at the hospitals. They taught well but it did have quite a big effect on the teaching' which he felt was often haphazard and lacking in structure.

During his clinical years, the surgical teachers had the greatest effect on him: John Turner, tutor in anatomy and surgery at Trinity, and, in particular, Sir Alan Newton, who 'was a superb teacher...He was didactic...but he was always amusing and he kept you very much on your toes by asking questions, with a lot of anecdotes and surgical history interspersed.' It was at this stage that James Guest first became interested in surgery, which seemed to him 'a nice, precise sort of discipline'. Like all medical students, those in the 1930s were keen to meet a 'real patient'. 'You just felt you wanted to get on with some real medicine. You'd done three years of theory and then fourth year—more theory and only seeing patients part-time, so I think a lot of us felt it was high time to get into the real job' which 'was terrific once you started'.

After a year at the Melbourne Hospital, James Guest joined the navy, doing landings round New Guinea, the Philippines and Borneo, and a considerable amount of emergency surgery, which further sparked his interest in becoming a surgeon after the war. Perhaps the most interesting careers are those that start out with a different path in mind. Certainly, James Guest did not expect his first year of a science course to be the beginning of a distinguished surgical career and such a long association with the University of Melbourne.

James Guest talked to Liz Brentnall



JAMES GUEST AT UNIVERSITY



JAMES GUEST DURING HIS TIME IN THE NAVY

June Danks, MB BS 1954

Everybody gets slightly nostalgic when they talk of the Mildura days. There was apparently a spirit at Mildura that wasn't in any other academic institution. There was a relationship with the staff which was quite exceptional.

Professor Emeritus Sir Roy Wright, Chancellor, quoted in *The University of Melbourne Mildura Branch 1947-1949; A Short History* by JS Rogers, p xvii

IN EARLY 1949, June McMullin was one of about twenty women and 142 men who boarded the special train from Melbourne to Mildura to start their medical training at the 'campus in the bush'.

That she was on the train at all was largely the result of the persuasive powers of her father, a pharmacist, who convinced his daughter to enroll in medicine rather than pursue the nursing career she was considering.

The bush campus was a former RAAF training base, about ten km from Mildura. In a bold initiative, the University of Melbourne, besieged by a flood of returned service personnel after the Second World War, re-vamped the site, creating lecture theatres in aircraft hangers and fashioning laboratories from flight rooms. Starting in 1947 it was a branch residential campus of the University of Melbourne for students undertaking their first year of medicine, engineering, architecture and dental science.

With the arrival of the train, the campus mushroomed into a small town of about 1500, complete with its own post office and shop, cinema, hospital, playing fields and annual magazine, appropriately named *Dust*.

McMullin, a sports-loving seventeen-year-old, quickly settled into campus life and began what she considers in retrospect to have been 'the best year of our course'. She also developed strong bonds with the local community, both as a participant in the local tennis competition and as a member of a Mildura church congregation.

A 'fairly diligent' student, she found most of the curriculum, other than laboratory work, enthralling and rewarding. But what made the year so special was 'the relaxed and happy atmosphere, the helpful and accessible staff, and the enthusiasm of the students'. It was an environment where you 'formed a lot of friendships...not only among the students from your own and other courses, but among the tutors, lecturers, demonstrators and administrative staff'.

Most of the students were living away from home for the first time in their lives but, having spent their formative years in a war-time atmosphere, 'they were used to self-discipline and collaboration'. They were also capable of pranks such as occurred at the end of the year when pandemonium erupted as some sheep borrowed from a local farmer careered down the tiered steps of a lecture theatre.

The cohort included David Danks (1931-2003) whom McMullin married in 1956 and who became University of Melbourne professor of paediatrics (1975-83) and professor of paediatric research (1983-95) at the Royal Children's Hospital. As well as becoming co-ordinator of hospital research, David Danks established the Murdoch Institute for Research into Birth Defects, the premier centre for clinical genetics training and research in Australia and the Asia-Pacific region.

June McMullin found the contrast between the bush campus and the Parkville campus, where training for students resumed in 1950, to be 'quite overwhelming'. Students who had lived, worked and played together for the best part of a year were suddenly scattered across a sprawl of suburbs and the friendliness of the rural campus was replaced by a less personal, more competitive environment.

Highlights of her Parkville years included Professor Roy Wright's lectures in physiology. 'I enjoyed his lectures, but they

were a bit beyond me,' she reflects. 'Pansy was such a clever man that no-one could keep up with him. There were no notes handed out and he rambled on. You didn't quite know what he was lecturing about.'

At one stage he set the class an essay on the topic of efficiency in the physiological sense. 'I spent hours thinking about what to write,' she says, 'then, the night before it was due in, I completely changed the whole thing. I don't quite recall how my contention evolved, but he called me up to explain what I'd written. We had quite a long chat. He was very calm and nice, and it all worked out well.'

Obstetrics and gynaecology were taught in terms of organ structure and function, with areas like contraception and menopause barely rating a mention. 'We were given the basics, which enabled us to build our understanding later, a bit like being given the alphabet so we could read.' At the same time the practicalities of establishing a general medical practice were somewhat neglected with the focus of two weeks spent with a GP being the art of conducting a consultation.

By the time fourth year arrived, June McMullin was eager for contact with patients. At the Royal Melbourne Hospital, where she did her clinical training, she came under the influence of Dr (later Sir) Ian Wood (MB BS 1927), the tall, well-built head of the clinical research unit. She recalls Wood as a friendly man whose dominant intellect gave him an aura of authority. 'He invited our group to his home for a meal...and we tried to make intelligent conversation.'

Another impressive character was Ernest ('Drev') Drevermann (MB BS 1936), a surgeon who had been a prisoner of war at Changi, Sandakan and Kuching. Says McMullin, 'He was one of the first to introduce intravenous therapy, and he used to run around all the hospitals in Melbourne adjusting the saline drips'.

It was during her fifth and sixth years that her friendship with Danks blossomed, although they had been acquaintances since their secondary school years. 'He was always a bright and enthusiastic student who had a photographic memory and grasped the essential bits of information which he tried to teach me', she says. 'His father, an engineer, was into plant breeding at their large suburban block. So David was absorbing genetics as he was growing up, and it became his hobby.'

After completing her resident years, McMullin started training as an anaesthetist, married Danks, had the first of their five children and accompanied her husband to London and Baltimore, where he gained experience in the rapidly developing field of medical genetics. She decided not to continue with anaesthetics because it meant being available from the crack of dawn and, in those days, carrying all her own equipment around.

She resumed her medical career in the early 1970s as a specialist in family planning and women's health at the Royal Women's Hospital, continuing in this and similar roles until her retirement.

'It's been a long and rewarding journey, she says. And it all started with that train ride to Mildura.'

Ann Westmore



JUNE DANKS (LEFT), 1949, JOINING IN A SATURDAY NIGHT FOLK-SINGING SESSION IN THE UNION BUILDING ON THE MILDURA CAMPUS. Photograph Norman H Oliver, from *The University of Melbourne Mildura Branch 1947-1949; A Short History* by JS Rogers

Geoff Kenny

Department of Anatomy

NEUROANATOMIST, GEOFF KENNY (MB BS Qld 1949), served under four deans of medicine at Melbourne, taught through two major curriculum overhauls and took part in the shift of the medical complex from the east of the campus to its south-west corner. He was a staff member of the anatomy department continuously from mid-1959 until 1990 and has been an honorary senior associate or an honorary senior fellow ever since.

Team this unusually long association with an interest in the history of medicine and the faculty has in Kenny a remarkable resource that recently came into its own when trying to establish certain biographical details of Sir Sydney Sunderland (MB BS 1935), professor of anatomy (1940-61), professor of experimental neurology (1961-75) and dean of the faculty of medicine (1953-71).

Publicly available sources suggested that Sunderland studied science for a year at the University of Queensland before coming to Melbourne to undertake a medical course. Kenny thought the story might be more convoluted as he had an inkling that Sunderland attended secondary school in Melbourne. He suggested checking the validity of this matter with his son, Ian Sunderland (MB BS 1973), who revealed that, in the mid-1920s, 'Syd' Sunderland completed two years of secondary schooling at Scotch College, Melbourne, when his newspaper journalist father was posted to Victoria. Syd then returned to Brisbane High School for his final year of schooling before enrolling in science at the University of Queensland. After topping first year he gained a scholarship to study medicine at the University of Melbourne.

Geoff Kenny's knowledge of Sunderland, who was some fifteen years older, stems from the numerous occasions on which their paths crossed. The first was in 1953, when he was on a year's leave of absence from the University of Queensland investigating the nerve supply of the pineal gland at Oxford University, under the doyen of primate neuroanatomy, Sir Wilfrid Le Gros Clark.

'Out of the blue one day I had a call from Le Gros asking if I could come to his office to meet some other Australians', says Kenny. 'There I met Syd together with Keith Bradley.'

It turned out that Sunderland, too, had worked with Le Gros Clark in the late 1930s and decided to drop in on him while travelling. His companion, Bradley (BCE 1934, MB BS 1941), was in England on a scholarship to study the pain experienced after amputation, research on which he and Sunderland later collaborated extensively.

After completing the year at Oxford, Kenny returned to the University of Queensland, having gained an impression of Sunderland as likeable and approachable despite being extremely busy. Their chance meeting was a factor in his decision, five years later, to apply for the position of senior lecturer in the Melbourne anatomy department.

'The attraction of the department was the reputation of Sunderland and his associates, together with the better research facilities located within the red brick anatomy building', he says. 'At the time, the University of Queensland anatomy department was housed in fibro-cement buildings that had been constructed speedily for the US army during the Second World War; the department had moved into them as a post-war emergency measure to meet the need for increased accommodation that resulted from expanding student numbers.'



GEOFF KENNY

Geoff Kenny's application succeeded and from mid-1959 he taught gross anatomy, including neuroanatomy, histology and embryology to Melbourne medical, science, physiotherapy, occupational therapy and dental students. Additionally, from 1974, he taught a new course on human neuroanatomy to psychology students.

His teaching load was heavy, at times amounting to over 150 lectures and associated practical classes a year. Yet his commitment to research saw him continue his pineal gland studies. 'Doing research unquestionably adds sensitivity to your teaching', Kenny says. 'It gives you an awareness of the difficulty of establishing the truth of certain matters in the experimental situation and it's important to convey this to students.'

After completing several solo research papers using material he had accumulated in Brisbane, he formed a close friendship

and a productive working relationship with senior lecturer in neuropathology, Ross Anderson (MB BS 1950) who had access to an electron microscope. 'We were friends from the first,' Kenny says. 'With Ross, what you saw was what you got...He was tremendously helpful and friendly.'

In addition to collaborating, the pair regularly attended lectures on neuropathology at Royal Park (psychiatric hospital) given by Jacob Mackiewicz, a Polish émigré neuropsychiatrist who joined the Victorian Mental Hygiene Authority in the early 1950s. Mackiewicz was part of a contingent of European medical graduates who brought a richness of skills and knowledge to Melbourne in the post-war period, and who assisted the university in providing a large range of postgraduate diploma courses, such as the Diploma of Psychological Medicine (DPM), which many university staff members attended.

'There was a great deal of activity in the mental health field in Victoria at the time,' he says, 'and close links were established between the anatomy department and the Mental Hygiene Authority (MHA).' As well as the Mackiewicz connection, Sunderland was deputy chairman of the MHA advisory committee for over a decade, and Bradley worked as a consulting neurosurgeon to the organisation.

In 1962, the centenary year of the Melbourne medical school, Geoff Kenny had his first intimation that a new centre for the medical school was envisaged. It would house the faculty administration together with the departments of anatomy, pathology and physiology, and a competition was held for its design. 'After the winner was chosen, Les Ray, chairman of the anatomy department, involved all the staff in putting forward ideas about how to ensure the building met their particular needs', he says. 'It was a comprehensive team effort.'

In May 1968, as the new Y-shaped building with its three wings neared completion, the anatomy department moved into the east wing. 'We weren't throwing our hats into the air but we were keen to get in and see how the building worked', he recalls. 'Over the years, I'd say the answer is, very well.'

Geoff Kenny has watched with interest the way that computerisation has increasingly entered neuroanatomical training and replaced, to some extent, hands-on study of the brain and nervous system. He believes it remains important for students to examine three dimensional dissections. Nevertheless, he is full of praise for computerised programs such as *An@tomedia*, which help students build up an understanding of body structures as a composite of bone, muscles, nerves and blood supply.

'It's a case of *mutatis mutandis*—time moves on, things change and we must all adjust', he says. 'In the end, lecturers who are keen about research must aim to stimulate the students' curiosity.'

Ann Westmore

INTERESTING TIMES

The Medical Curriculum in its First Fifty Years

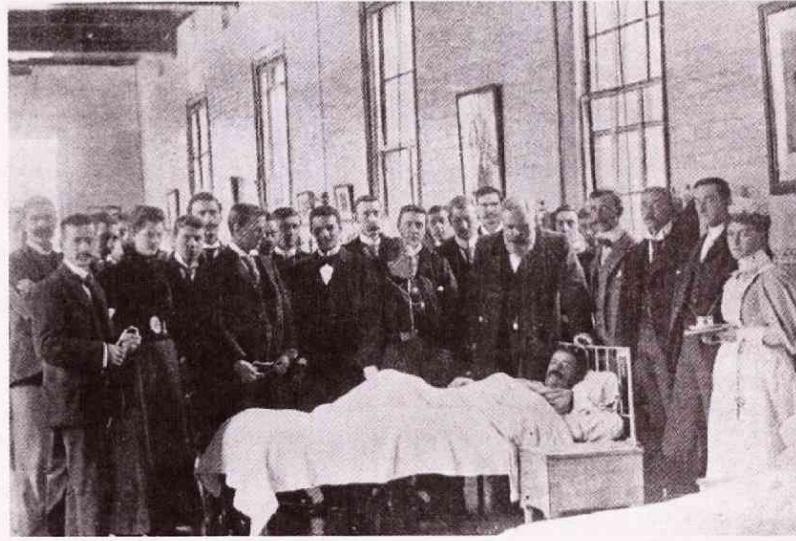
BY ANN BROTHERS AND JOHN WALLER

THE DOMAIN OF the physician in the 1700s was said to be limited to as far as his finger could reach. Physicians tended to see their role as intuiting the nature of a malady on the basis of observing externally visible symptoms, for instance the odour and consistency of stools and the colour of the skin beneath the eyelid. Physic was a cerebral more than a practical activity and both treatment and medical training reflected this fact. Most therapies, bleeding and cupping in particular, were carried out by the lowlier surgeons, and most medical students spent their time pouring over texts based on Galen's theories of ill-health, leavened with insights about the working of the body that had arisen out of the scientific revolution. Only during the late 1700s did this start to change as, especially in France after 1789, medical education became practical. Time once spent pouring over old texts was increasingly reassigned to walking the wards, examining patients and dissecting corpses. Pathological anatomy emerged as central to medical education in France and a new breed of hospital-trained physician learned to look deeper into the nature of malady. This approach, pioneered in revolutionary Paris, spread far, but did not happen overnight.

The rich documentary history of Melbourne's medical school allows us to chart the evolution of its medical curriculum during the 1800s as, in line with earlier developments in France, it became less bookish and more hands-on.

In 1858 Sir James Paget, lecturer in general anatomy and physiology at St Bartholomew's College and surgeon-in-ordinary to his Royal Highness the Prince of Wales, received a request from the Hon HCE Childers, first vice-chancellor of Melbourne University, for advice on setting up Melbourne's medical course. Sir James' pages of spidery writing conveyed his view that, at the time of embarking on medical study, preference should be given to students who showed a fair knowledge of English, as well as having the rudiments of one other modern language or any one area of science. He also felt that entrants should have sufficient knowledge of arithmetic to be able to keep accounts accurately, enough Latin to read prescriptions, and to be able to translate passages from at least one classical author. This emphasis on the classics sounds quaint, but Paget was anything but a reactionary. An ardent believer in the importance of anatomical investigation—he nearly died in 1838 after contracting typhus following a postmortem—but, like most of his peers, he also felt that physicians should have the well-rounded educations of gentlemen. They were to be more than just healers.

Paget also recommended that students receive a medical diploma after three years of study, a proposal not adopted by the University Council. Vice-Chancellor AC Brownless wanted to create higher standards than at any other school in the English-speaking world. So Melbourne students had to pass a rigorous five year curriculum. It was a gruelling course and



CLINIC IN THE MEDICAL WARD OF DR JOHN WILLIAMS AT THE MELBOURNE HOSPITAL, (c.1890s). DR WILLIAMS IS STANDING AT THE HEAD OF THE BED. Photo courtesy RMH archives

the students were vocal in complaining about their over long academic year and lack of term breaks. In a letter a few of them sent to the vice-chancellor and council in February 1865 they pointed out that: '...we have no rest from our studies from Easter till December, during which other students have two months vacation'.

Paget's advice on the duration of the course had been ignored, but he would have been gratified by the emphasis placed on dead tongues. Melbourne matriculants needed a high standard in Greek, Latin, English, arithmetic, algebra and Euclid and,

once at the medical school, they spent the first year studying still more Greek and Latin, plus chemistry and practical chemistry.

The professorial board did call for a strengthening of the course's science component, but all change was resisted until 1874. It would seem that in the early years, the University Council, and Redmond Barry in particular, were reluctant to venture too far from the traditional classical foundation studies of a 'proper' university education.

They relented somewhat under pressure from Professor Halford, a new appointment. The omission of natural philosophy, Halford observed, might diminish the Melbourne degree in British eyes. It was artfully done, and first year medical students were then exposed to more science.

Reflecting the trend of Paris medicine, after the first year there was some exposure to the body itself. Students received anatomy lectures six days a week as well as three courses on dissection. The quality of teaching and demonstration left much to be desired, but bookish learning had to some degree made way for the practical study of the body. Melbourne's students also spent time observing and diagnosing the living patient. Medicine was being relocated from the library to the hospital ward but not without some teething problems. In July 1865 the students had the temerity to make yet another complaint: that they weren't being given an opportunity to conduct ward rounds because of conflicting demands on their time.

Prof. Halford requires our attendance in the Dissection Room from 9.30-12.30am,...[o]ur lectures in Physiology commence at 3pm, thus leaving an interval of three hours between our work in which to attend Hospital Practice. But the physicians and surgeons in the Melbourne Hospital visit their wards at all hours of the day. Dr Robertson attends at 11.30 am, Dr Eades at 8am, Dr Cutts at 9am and Dr Brownless has no fixed time put down. Dr Barker attends at 9am and Dr Thomas at 11am some days and 3pm other days.

The students implored the board to make things more coherent. But there was no simple solution.

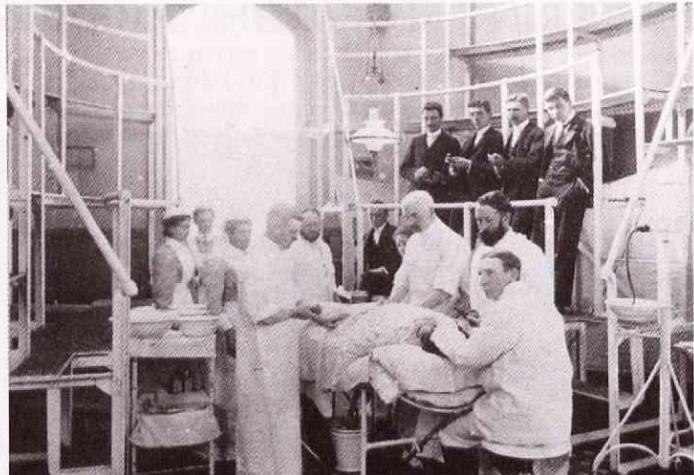
Until clinical teachers were appointed and paid through the university, it would prove difficult for either standards to be maintained or student needs to be properly met. In 1876

however, an outstanding new graduate, Harry Allen, was appointed demonstrator of anatomy and sub-conservator of the museum of anatomy and pathology and, later in the year, pathologist to the Melbourne Hospital. As Kenneth Russell notes in his *History of the Melbourne Medical School 1862-1962*: 'systematic teaching of pathology commenced with Allen's appointment, for he immediately set about building up the collection of specimens and, at the same time, establishing regular instruction for the students in the post mortem room'. Reflecting on the state of the curriculum when he started the course in 1871, Allen later recalled: 'There was no proper first year of Science. There was no students' laboratory for the first year chemistry which barely accommodated the unusually large class of thirteen freshmen in 1871. There was no practical class in Histology or Physiology. Pathology was only represented by some scattered teaching in the courses of Physiology, Medicine and Surgery, and there was no organised pathological teaching even in the post mortem room.' Allen rightly observed that in some areas Melbourne risked falling behind. Laboratory medicine, flourishing in some German universities since the 1830s, had led to significant progress in the understanding of disease and in the knowledge of physiology and biochemistry. Diagnostics were also being advanced by the use of laboratory techniques of analysis and calibration. By the late 1800s, other countries were playing catch-up and, under Allen, Melbourne followed suit.

During the 1880s, the old dissecting room was converted into a laboratory for practical physiology, physiological chemistry and histology. A curriculum review also saw sweeping changes—chiefly, the establishment of a proper first year of science, involving laboratory work in both biology and chemistry. Students benefited from the appointments of Baldwin Spencer to the new professorial chair of biology and DO Masson to a professorship of chemistry. Soon after his arrival in 1886,

Spencer drew up plans for a biology building. Construction began in 1887 and laboratory classes began in 1889.

Important, too, was the ever greater emphasis placed on clinical medicine and surgery, especially with the appointment of John Williams and Thomas Fitzgerald, respectively, as lecturers in these subjects at the Melbourne Hospital. Students now gained clinical experience in both inpatient and outpatient clinics, and this component was extended over four years, initially at the Melbourne



SURGERY AT THE MELBOURNE HOSPITAL (c.1903). MR ROBERT STIRLING, SECOND FROM RIGHT, IS OPERATING. Photo courtesy RMH archives

Hospital, but from 1888, also at the Alfred Hospital. Greek and Latin, algebra and Euclid were being pushed aside as medicine became scientific.

By the 1880s another revolution in medical science was underway. In 1889 Professor Allen took twelve months leave to visit Europe to study developments in medical education, especially the great advances being made in pathology, and in the areas of histology, histopathology and bacteriology. An exciting time for a pathologist like Allen to be in Europe, this was the decade in which scientists in the laboratories of Pasteur and Koch provided the first

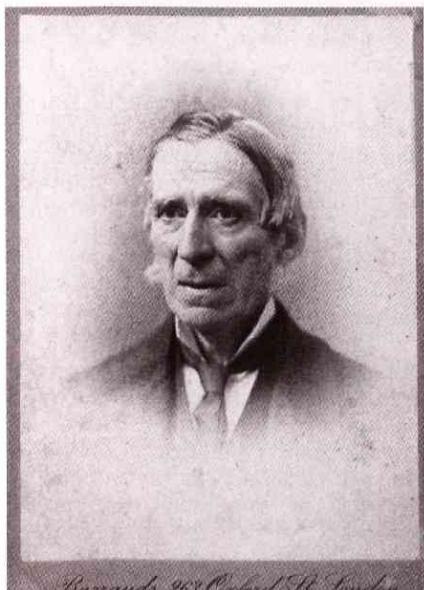
unambiguous evidence that micro-organisms were responsible for many infectious diseases. The germ causing tuberculosis had already been identified, and there was good evidence that bacteria caused cholera, typhoid and anthrax as well. Allen immediately recognised the significance of this work and was keen that Melbourne move with the times. On his return from Europe, Allen sent Thomas Cherry, a promising young graduate, abroad to receive training in pathological histology and bacteriology. Back in Melbourne in 1892, Cherry took practical classes in these cutting-edge subjects and by 1900 there was a purpose built bacteriology building.

As lecturer in physiology, CJ Martin, previously from King's College, London, enhanced the medical school's scientific profile. Often having to improvise and design his own apparatus, he advanced the study of experimental physiology setting great store by practical demonstrations, a commitment which the rest of the medical school began to share. In a *Speculum* editorial of 1889 there were complaints about some lecturers preferring to teach through lectures and bookwork than at the bedside of the patient. The editorial argued the need for 'more true clinics with cases before them, more instruction in diagnosis, in operations, in the great mass of knowledge that can not come out of books, but can only be gained in the wards'. There was still room in the course for modernisation and more of the senior faculty now acknowledged that the style of teaching needed an overhaul. Lectures were scaled back and some of the time freed up was assigned to new specialties. Instruction in gynaecology became compulsory, and optional classes were introduced on the diseases of children, the eye, the skin and the mind. There was stress on the practical throughout and, as a result, students received improved clinical instruction, especially after attendance at outpatient hospital departments became mandatory.

By the early years of the new century medical education at Melbourne University had come a very long way. Gone were the days of studying classics and parsing Latin verbs. Scientific medicine, informed by laboratory studies, had a firm footing in the curriculum. Students observed or performed experiments themselves rather than just taking notes in lectures and the time devoted to bedside learning had increased the students' contact with patients. It was a far, far better course than that in place at the school's inception, but medicine was constantly moving on and the following half-century would witness changes every bit as dramatic.

Ann Brothers is curator of the University of Melbourne Medical History Museum

John Waller PhD is a lecturer at the University of Melbourne Centre for the Study of Health and Society



Barrands, 863 Oxford St, London
Founted and at 99 Bold St, Liverpool
SIR JAMES PAGET. (c.1890)
Photo courtesy Medical History Museum collection

REMEMBERING MY FATHER'S MEMORIES

BY RON DOIG, MB BS 1944



UNIVERSITY OF MELBOURNE FIFTH YEAR MEDICAL STUDENTS, 1914

L-R BACK ROW: H HALLORAN, ER WELCH, ST APPLETON, RG WOODS, KMCK DOIG, AS ANDERSON... L-R FOURTH ROW: M SOROKIEWICH, F COLAHAN, SC FITZPATRICK, JC HARPER, JE SHELLEY, J HUGHTON, K MOORE, WHH BIRRELL, A SLEEMAN, MR HUGHES. L-R THIRD ROW: HB GRAHAM, GC SCANTLEBURY, R BURNIE, KB ALEXANDER, JEM WIGLEY, AN DICKSON, AEV HARTKOPF, PN WHITEHEAD, LL MCMAHON, HM JAMES. L-R SECOND ROW: MISS G WISEWOULD, MISS M LANE, NL PRICHARD, WS NEWTON, TA WRIGHT, W HOGG, MISS EM BALAAM, MISS AL BENNETT, MISS EJ DAVIES. L-R FRONT ROW: W ROGERSON, GC BURY, W O'SHAUGHNESSY, S GLASSFORD, J SHANASY. INDIVIDUAL PORTRAITS: DC PIGDEN, HP BROWNELL, WL HENDERSON, C MCADAM, FL TRINCA, KA MCLEAN, AW BRETHERTON, TG FETHERSTONHAUGH

NINETY YEARS AGO my father, Keith McKeddie Doig, was a junior resident at the Melbourne Hospital on what is now called the Queen Victoria site. Born in Nathalia in 1891, he moved in 1901, with his mother and two brothers, to Geelong, six years after his father's death. After a short period at the Flinders state school he won a scholarship to Geelong College, then entered medicine at the University of Melbourne. His stay at Ormond College was supported at first by Norman Morrison, headmaster of Geelong College. That help ended, however, with Morrison's sudden death from a shooting accident and holiday work picking grapes in Mildura provided the income to help him through his course.

My father entered into university life to the full. He was captain of cricket and football for Ormond and the university, and president of the students' representative council.

The professors of his preclinical years were well known figures—Baldwin Spencer, Masson and Harry Brookes Allen (who apparently saw all aortic lesions as manifestations of syphilis). Alan Newton was appointed surgeon to outpatients at the Melbourne Hospital in 1913, and my father was one of his early resident medical officers. Several years later, about to operate on a wounded soldier at No 1 AGH in France, he looked up to see that his anaesthetist was Newton.

After the war and a short period of locum work, he started in general practice in Colac with Dr WH Brown, and his son, Arthur, whom he had met in France. His interests lay in the direction of medicine and midwifery and Arthur was the surgeon of the practice. On one occasion he was called up to help WH Brown deliver a baby. He found the old doctor up on the bed with his boots off, pulling hard on the forceps. A generation later, when the baby was a grown woman, my father delivered her and she had an easier time.

As was the custom, the partnership ran a small private hospital which had a large operating theatre with an open fire despite the use of ether for anaesthetics. There was also an x-ray and, a first for a country practice, a laboratory with a full-time technician. In 1933 my father bought an electrocardiograph and I was at one time the subject while he learnt the technique. It was a large affair of three cabinets—the power supply, the camera and the electrical apparatus.

In 1934, with the opening of the Colac Community Hospital, this hospital closed. Here all private, intermediate and public beds were in the one building, as well as consulting rooms for the doctors of the town. Colac was the medical centre for people

down to Apollo Bay, Beech Forest, east to Winchelsea, west to the Stoney Rises and north west to the onion and potato areas of Cororooke and Coragulac.

During 1943, my final year of medical school, my father wrote weekly. His letters provide an insight to the variety of his general practice and also illustrate some aspects which would change so dramatically with the introduction of antibiotics. Between 1920 and 1944 two major therapeutic changes were made to the treatment of pernicious anaemia and of diabetes. One regular patient had been on raw liver, changing to the more refined forms of B12 as the years went by. Another patient joined the second AIF. After two trips on the *Queen Mary* as a troopship officer, he was referred for surgery for his goitre. He sought leave before the operation so as to ask whether he should tell the medical officer that he was a diabetic on insulin, a fact he had hitherto concealed.

In one week my father referred to Dr Brown for surgery a gall bladder, goitre, facial cyst, acute appendicitis, ruptured duodenal ulcer and intestinal obstruction. Large goitres were common, probably related to the absence of iodine in the Otways area. The disappearance of goitres by iodination of common salt is one of the changes in two generations.

Paediatrics was a major part of general practice. Several brief reports illustrate how management has changed in fifty years. A young boy was referred to Dr Les Hurley. He had a white count of 63 000 which fell to 16 000, and the blood film showed cells with a solitary nucleus. Some resembled monocytes, others had granules. Although initially diagnosed as glandular fever the presence of fever and falling haemoglobin led to the diagnosis of acute leukaemia. He died in Dr Hurley's ward a short time later.

About this time the Royal Children's Hospital was developing the means of rapid diagnosis of meningococcal septicaemia so that treatment could begin within minutes of seeing the child. He asked for my comments on a patient: a woman, aged forty, came home from the seaside on Sunday. Although feeling well she did not sleep soundly. On Monday she complained of general pains with severe pain in the lumbar region in the evening but no urinary symptoms. Temperature was 97°F and pulse 110—she looked ill. No signs on examination and the cerebrospinal fluid was clear. No neck stiffness. Pain required morphine. White cell count was 7000, with shift to the left. In the afternoon of the next day she was conscious but clearly dying with a spreading purpuric rash and hypotension and she died within twelve hours. Despite the lack of a positive culture he felt this was a typical meningococcal septicaemia.

REVIEWS

Reading Doctors' Writing

RACE, POLITICS AND POWER IN INDIGENOUS
HEALTH RESEARCH 1870-1969

BY DAVID PIERS THOMAS

Aboriginal Studies Press, 2004
Sbk, pp 209, rrp \$29.95, illustrated, appendix, notes, index

THIS BOOK IS a welcome addition to the Indigenous health literature, particularly the relationship between health and history. *Reading Doctors' Writing* is an adaptation of David Thomas' PhD, and an interesting and engaging read.

Thomas describes his work thus: '*Reading Doctors' Writing* describes how doctors in Australia wrote about Aboriginal and Torres Strait Islander peoples' and his work focuses on the published articles in the *Medical Journal of Australia*. Whilst I found the connecting thread of the published writings of doctors primarily through the *MJA* a little shallow towards the end of the book, it does, nevertheless, provide an avenue to illustrate part of the history of the relationship between Aboriginal people and various parts of the medical profession in Australia between 1870 and 1969. It is essentially a book about, 'representation of Indigenous people, politics and power'.

Reading Doctors' Writing sits comfortably with another recent publication, *The Cultivation of Whiteness: Science, Health and Racial Destiny in Australia* by Warwick Anderson (see Chiron 2003, Vol 5, No 1, p58). Together, the two books provide a fascinating insight into the history of a racialised Australia: Thomas' book focusing particularly on the doctors who wrote to the *MJA*. The legacy of the White Australia Policy, and how professionals, particularly doctors, carried out their tasks, expressed their interests, and in turn implicitly and explicitly supported the dominant racist policy of post-federation Australia is a message not to be lost on today's health professionals and scientists.

A significant character in the book is John Burton Cleland of the University of Adelaide, probably better known to people from Adelaide for having a conservation park in the Adelaide hills named after him. Interestingly, in a similar vein to the book, whilst the park is named the Cleland Conservation Park, *Yurridla*

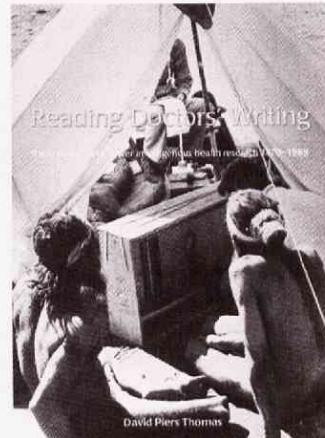
is the name that the Kaurna people call the area in which the park is located. Upon his death Cleland was described in the local newspaper as a 'pathologist, anthropologist, zoologist and botanist'. It is not reported how some of his Aboriginal 'subjects' may have described him.

In the current medical education climate, the Committee of Deans of Australian Medical Schools has auspiced the development and implementation of a national framework for the inclusion of Indigenous health curriculum into medical curricula. One of the key objectives of the curriculum is to, 'Explain the connection between history and present health outcomes, including the forms and impacts of racism'. *Reading Doctors' Writing* provides a detailed insight into the historical relationship between some doctors and some Aboriginal people, and some of the forms and impacts of racism. This is not to suggest that Aboriginal health will be improved only through the process of medical practice in a post-colonial context, but rather, that doctors have an important role to play through medical practice and influencing policy and public perception.

Reading Doctors' Writing provides an insight into the always-evolving climate of ethical practice, both clinical and research. *Values and Ethics—guidelines for research in Aboriginal and Torres Strait Islander health research*, (NHMRC 2003) would be an interesting companion volume, in terms of analysing the research and research practices that Thomas describes.

This book, or chapters of it, would add to most reading lists of subjects engaged in Aboriginal health, Australian history, and research ethics and practice across a range of disciplines.

Shaun Ewen, Lecturer in Aboriginal health,
University of Melbourne VicHealth Koori Health
Research and Community Development Unit



David Piers Thomas

Blood Matters

A SOCIAL HISTORY OF THE VICTORIAN RED CROSS BLOOD TRANSFUSION SERVICE

BY MATTHEW KLUGMAN

Australian Scholarly Publishing, 2004. Rrp \$39.95, 236 pp, illustrated

BLOOD, AS MATTHEW Klugman tells us, is both vital to life and infused with notions of risk, danger and death. Prior to the 1980s, and the identification of HIV in the Australian blood supply, the Victorian Red Cross Blood Service was constructed as a triumph of volunteerism and community service. Now a more business like, state regulated, national blood service manufactures a range of 'therapeutic goods' from blood donated by a restricted and closely monitored group of donors.

Blood Matters charts a history of the Victorian Red Cross Blood Transfusion Service from its inception in 1929 to the formation of a national service, in 1996. It is a social history of the first major Australian blood transfusion service, and who better to write this narrative than Mathew Klugman. Klugman has for some time written and spoken engagingly and informatively on the social history and philosophy of blood and blood donation for both academic and general audiences. *Blood Matters* maintains a critical, investigative edge but is a measured, well mannered and sympathetic history.

The early years of the Victorian Red Cross Blood Transfusion Service were dominated by women's stories. In the late 1920s Dr Lucy Bryce sought volunteer donors to turn out at all hours of the day and night to provide blood donations directly to sick people in hospital wards. These direct transfusions are vividly described and illustrated in the book. As the service grew and developed we hear about women—often migrant women, doctors, scientists, nurses and laywomen taking a key role in a marginalised area of medicine. These capable and inspiring women ran a blood service situated within a charitable agency led by influential men that, like most other health related charities, depended on government support to survive.

Technological developments that enabled blood to be stored for longer periods changed the nature of donations and the organisation of the blood 'bank'. The Spanish Civil War and the impending Second World War advanced the development of manufactured blood products that would enable blood to be shipped overseas and provided to military hospitals and the front. The war provided the incentive and the need for larger scale, more professional blood services across Australia. Following the war the Red Cross offered the blood service to the Commonwealth Government, providing political leaders with the opportunity for many wonderful jokes about taxes and blood suckers but resulting in a polite refusal from the Commonwealth. Peace brought financial problems for the service and repeated requests for Commonwealth financial assistance.

Post war surgery, transplantation technology, blood product treatments and the increase in the number and speed of motor vehicles massively increased the need for a reliable blood supply. As demand increased blood banking slowly became a core medical activity. At this point in the story men took over leadership roles. Bigger buildings were required and a more secure funding environment was sought and eventually won. Despite fears that doctors were starting to regard 'the gift of life' as just another therapeutic commodity to be bought or sold, the volunteer donor system was retained and continues to meet needs for blood and blood products.

Although medical practitioners using blood products were aware of health dangers to recipients, it was the health and safety of donors that principally concerned blood service staff. Litigation by blood recipients in the aftermath of the HIV and hepatitis crises reportedly came as a shock to a blood service that had a 'special and personal relationship' with its donors, volunteers, the medical community and the wider Victorian community.

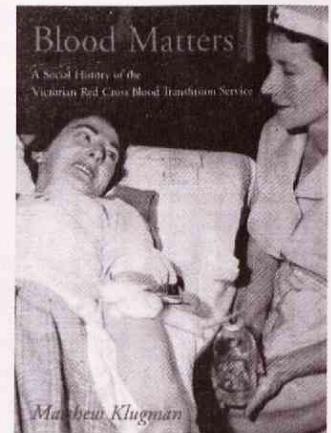
Klugman's chapters entitled 'Tragedy of the Gift' and 'Risky Products' provide an insider's view of the HIV and Hepatitis scares. Public confidence in the safety of receiving blood

has been severely challenged. Klugman describes the scientific, institutional and political responses to these challenges. It is a fascinating story not to be missed. Insiders already knew the dangers associated with blood transfusions and the problems associated with designing and implementing blood screening tests. But they also were able to weigh the value of blood transfusions against these risks.

The final events described in *Blood Matters* come as no surprise. The service environment shifted towards both external and internal risk management, regulation and the establishment of a national blood service. While blood tests were developed, implemented and refined, donor screening questionnaires and processes were tightened. The close relationship between the blood service and its donors—the very basis of the Red Cross run service—changed. Many categories of donors were excluded from donation. The impact of this important cultural change on donations is only briefly discussed in *Blood Matters*. These cultural impacts on the supply side of blood services will surely have an impact on the demand for blood and blood products by medical practitioners. The demand side story of blood use awaits an historian of Klugman's ability and insight.

Blood Matters is a must read for anyone interested in the history, science, economics and philosophy of blood donation and blood services. It also makes a very strong contribution to the small field of social histories of health institutions other than public hospitals. The book is well produced and generously illustrated.

Janice Chesters, Deputy Director, Monash University Centre for Multi-Disciplinary Studies in Rural Health



Matthew Klugman

Being Patient

Care and Convalescence as a Practice of the Past

This exhibition showcases the equipment used by physicians, family members and nurses who cared for the ill on their often long road to recovery. The exhibition also provides an opportunity to display many of the items that have come to the museum in recent years, which will not have been seen previously by visitors. In so doing, the exhibition acknowledges the generosity of a number of donors who have enriched the collection with their gifts and contributed to the tangible evidence of the history of medicine.

on display at the
Medical History Museum

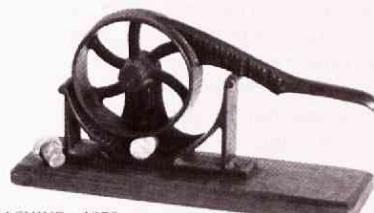
Level 2, Brownless Biomedical Library

The University of Melbourne

For further details please contact Ann Brothers, curator

Tel: (+61 3) 8344 5719;

Email: brothers@unimelb.edu.au



CORK ROLLING MACHINE c.1850

**IF YOU'RE SUED,
FACE THE MEDICAL BOARD
OR GO OVERSEAS**

WHO'LL DEFEND YOU?

**Protect your medical career
with FREE MDAV Student
Membership and \$20 Insurance.**

As a member you'll receive free:

- Personal support services
- 24 Hour medico-legal advice
- Access to a clinical risk management programme
- Publications and on-line resources

And our \$20 Insurance policy will cover you against:

- Claims for compensation including elective or scholarship placements worldwide (ex USA and its territories)
- Costs of legal representation at the medical board, coroners court or other disciplinary boards
- Good Samaritan acts, worldwide

Call your defence force on 13 MDAV.

The Medical Defence Association of Victoria Ltd. ABN 59 004 046 379. Insurance Policies are underwritten by Professional Indemnity Insurance Company Australia Pty Ltd (PIICA) ABN 53 007 383 137 AFS Licence No 238509. This material does not take into account your personal needs or financial circumstances and you should consider the relevant Product Disclosure Statement (PDS) before acquiring any products. You can obtain a copy by visiting our website at www.m dav.org



MDAV

YOUR DEFENCE FORCE

Fifth Year 1904



Rural Clinical School 2004



Royal Melbourne Hospital and Western Health Clinical



THE UNIVERSITY OF
MELBOURNE

 CHIRON

JOURNAL OF THE UNIVERSITY OF MELBOURNE

MEDICAL SOCIETY VOL 5 NO 3 JUNE 2005