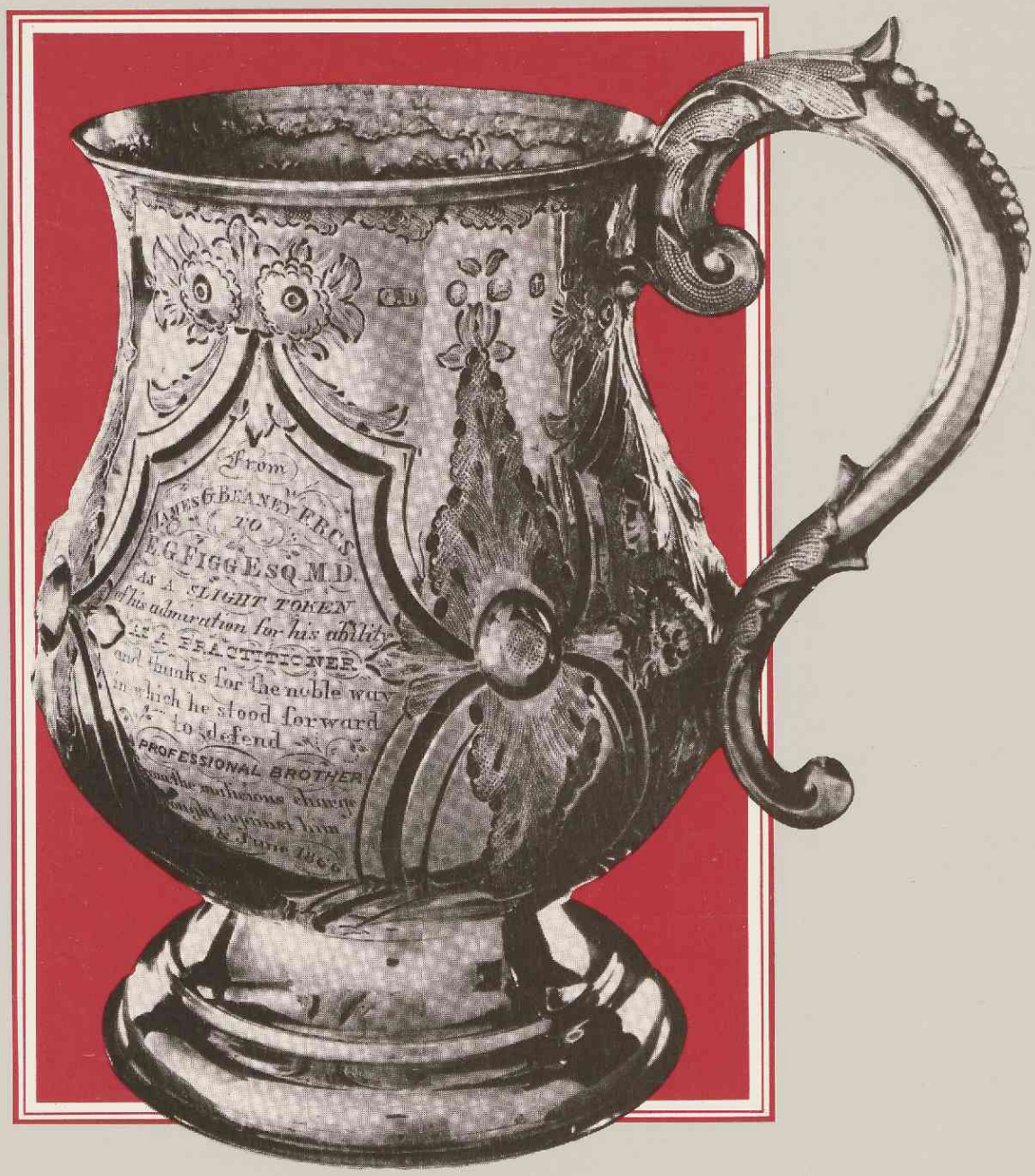

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UMMS

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As at 1 March 1989

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Further copies of *Chiron* may be purchased at $10 each, plus postage.

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Guest Editorial

H.E. Dr Davis McCaughey
Governor of Victoria

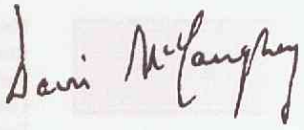
It is frequently said, and widely assumed, that the effect of university education is to train the minds of men and women in such specialist studies that they no longer can speak to each other. Each area of study has its own technical terms or jargon if you are being abusive. There is some truth in this, but the assumption conveys some dangerous half-truths.

One danger is that we cease to try to convey one to the other what we are interested in, and why we think it important. In practice I find that where medical scientists or practitioners take the trouble to do so they are rather better than most specialists in informing other people on at least the outline of their diagnostic methods, research or procedures. It is, of course, equally dangerous when we who are not medically educated stop listening. Then the purveyors of nostrums in popular newspapers and magazines have a field day.

Some factors are however bringing people together again, for serious conversation. Amongst these factors is the awareness of ethical questions, some of them old some of them new, in the practice of medicine. It is now apparent that the definition and solution of such questions is not to be left to medical scientists and practitioners on their own. Lawyers, philosophers, theologians, students of society, all have something to contribute — once they have learned to listen.

The university is, perhaps above any other institution in our society, the place where such conversation should take place. It has a tradition of lucid exposition through teaching, of critical thought, of informed discussion to maintain. University educated men and women should know the difference between propaganda and the reasoned exposition of distinctive viewpoints. No thought can be undertaken without emotion, but data can be presented and points of view expressed without emotionalism.

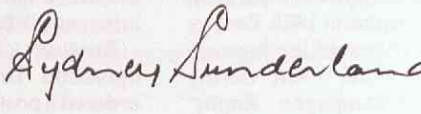
These are some of the virtuous ways of conducting a discussion. The Faculty of Medicine in The University of Melbourne is to be thanked and congratulated on providing us with an example of such a debate in the Seminar papers published in this journal.



Special Announcement

It is a great pleasure to announce that, beginning with this issue, the Medical Defence Association of Victoria has become the sole sponsor of *Chiron*. The role of the Journal of the University of Melbourne Medical Society has become an important part of the Medical Faculty's aim to encourage increasing contact between our alma mater and its graduates. Equally significant is publication of some of the papers from the Dean's Lecture Series and Symposia as one of the many facets of the Faculty's activities in continuing education of medical graduates.

UMMS is grateful that MDAV sponsorship will ensure that the Society will be able to maintain the quality and standing of *Chiron*.



Prof. Em. Sir Sydney Sunderland
President, UMMS

From the Editor

In the first issue of *Chiron,* the gentle centaur was identified as a hunter-gatherer, not a bellicose cavalry-archer. With the growing volume of excellent material available to us from the Faculty and the membership, we find that we 'hunt' less and 'gather' more, and the outcome is a journal reflecting wide-ranging contemporary and historical interests. For example, this issue includes such topics as medical ethics, émigrés in Mildura, medical students in the First World War, and a selection from the increasingly popular Dean's Lecture Series, as well as our regular columns. However, such fecundity requires some changes in the interests of economy: the membership list is now too long and will be published at regular intervals rather than in every issue, and the news columns and NH&MRC list have been pruned. At the end of 1988, members received the first edition of the Faculty's sprightly newsletter *Medicine,* which will, in part, take the place of the latter columns, and will be circulated twice-yearly to all graduates and students.

It will be no surprise to UMMS members that Melbourne medical students and graduates have demonstrated their skills and sense of humour on a number of occasions when Australians went to war. As students or residents we listened to moving or light-hearted personal accounts of danger, horrifying hardship and devotion. The participants have their own memories, sharpened or dimmed by Time. They are part of the tradition of the nation, the profession, and the Faculty, and should, like all traditions, be re-examined from time to time, and re-counted both for those with their own recollections but especially for the larger number of younger graduates who were not involved. There were Australian doctors at war in South Africa, as well as in Korea, Vietnam and elsewhere. Thanks to John Trinca, we begin, in what might become a series, with the First World War.

The aftermath of war also brings recollections, as in Bill Lawrence's 'The Mildura Experience'. *Homo sapiens* is essentially gregarious, possibly a reflection of the first nomadic kinships who roamed the land together. Certainly, whenever circumstances (not necessarily adverse) and residential life are shared, at school, in college, or in camp, enduring friendships — sometimes marriages — and a kind of group identity are likely to flourish. The University of Melbourne Mildura Branch is obviously one such example, not just as a name or a place, but also a concept, an era, and an idiosyncratic part of the Faculty's history: the first 'off-shore' pre-clinical collegiate campus, at a time of relief, optimism, even elation, uncertainty and change, warmed by the flickering fireside flames of nostalgia.

This is a time of change for UMMS, too, with committee elections approaching. As a fitting gift at the end of six years as Honorary Secretary, Dr Jeannine (Jenny) Paton, B.Sc. (1957), MBBS (Melb.1962) has generously donated a handsome leather and cloth bound, gold tooled Minute Book to the Society. As is customary, the paper of 'archive' quality is made to last five hundred years. May UMMS and *Chiron* live as long!

We (including the Editorial Board) wish to thank the Medical Defence Association of Victoria for offering to sponsor *Chiron* and thereby ensure that the journal will continue into the future as a symbol of the Faculty's commitment to its students and graduates.

Peter G. Jones

Cover Story

The silver cup illustrated on the front cover belonged to Dr E.G. Figg (c. 1815-1902) the grandfather of Dr Margaret Henderson, a physician and graduate of this University. The donor was James George Beaney who inscribed it to Dr Figg as a professional brother who stood forward to defend Beaney from 'malicious charges brought against him in May and June 1866'. What were these malicious charges? The charge was one of murder. The victim was a barmaid, Mary Lewis.

James George Beaney (1831-1891) was a flamboyant, controversial Senior Surgeon at the Melbourne Hospital in 1866. Beaney was also known as 'Diamond Jim' because of the rings he wore, even during operations; and 'Champagne Jimmy' because of the champagne he dispensed freely. Although other legal battles were to come, Beaney is best known in this University from his benefactions, including the Beaney Scholarship in Pathology which has given early assistance to the careers of such notables as Leonard Cox, Carl de Gruchy, John Clarebrough and our present Dean, Graeme Ryan.

On 12 March 1866, Mary Lewis, barmaid at the Terminus Hotel, St Kilda, consulted Beaney having already consulted two other doctors, one of whom thought she was pregnant. She was certainly unwell before coming to Beaney who visited her at her lodgings three times, during one of which he was with her for a quarter of an hour and, on the last occasion, administered chloroform 'to give her a sleep'. Mary Lewis died the following day with what would appear to be an established pelvic infection. Beaney certified death as due to 'malignant disease of the uterus', by which he did not infer cancer but 'a malignant pustule'.

Because of rumours of an illegal operation Dr Chandler, the Coroner, ordered a post-mortem which was carried out by Dr James Rudall, later to become a well-known surgeon. Beaney was unconcerned and did not attend. The findings as reported are confusing. The genitalia were swollen. Although there was no blood in the peritoneal cavity, vaginal and uterine fundal tears were described. The ovaries were never reported on and, indeed, appear to have been lost. The presence of a *corpus luteum* could not be determined — an important point if the woman had indeed been pregnant.

Beaney was tried on two occasions. The Crown gave the diagnosis as illegal abortion and uterine rupture and tried to prove Beaney to be the perpetrator of the illegal operation. The defence averred that death was due to septicaemia and the uterus was subinvoluted from a previous pregnancy. At the first trial the jury failed to agree. At the second, because of devastating cross examination of Rudall by Beaney's lawyer, a verdict of 'not guilty' was achieved.

The trials created much public interest and because of Beaney's nonchalant attitude, much animosity. Although Dr Figg's name does not appear in the readily available records of the trial, the cup is good evidence of his support for Beaney during that eventful year.

Harold Attwood

Contemporary Issues in Medical Ethics — A Review

Dean's Lecture Series
Seminar
The University of Melbourne
24 June 1988

Chairman
Professor Emeritus R.R.H. Lovell

Identification of Issues

In Medical Practice
Mr Peter Jones, paediatric surgeon; Councillor, The Royal Australasian College of Surgeons; Member of the Council of the Medical Defence Association of Victoria.

In Forensic Medicine
Professor Stephen Cordner, Professor of Forensic Medicine, Monash University; Director, Victorian Institute of Forensic Pathology.

In Medical Research
Dr Helga Kuhse, Deputy Director, Centre for Human Bioethics, Monash University.

Comment

A Moral Theologian
Reverend Father William Uren, The Rector, Newman College, The University of Melbourne.

A Lawyer
Mr Russell Scott, [then] Deputy Chairman, Law Reform Commission; returning to private practice with Mallesons, Sydney.

A Biomedical Scientist
Dr Graham Brown, Senior Research Fellow, The Walter and Eliza Hall Institute of Medical Research; physician, The Royal Melbourne Hospital.

Discussion
Audience and speakers

Introduction

This seminar reflects the growing awareness within the Faculty and the University of the need to show leadership in the discussion of issues of contemporary community concern. The audience of over three hundred people who filled the Sunderland Theatre enjoyed excellent presentations on a range of controversial ethical issues. Professor Richard Lovell convened the seminar with great skill.

In view of the success of this seminar, Professor Lovell has agreed to convene another on a similarly controversial topic — 'Resource constraints and the practice of medicine: Everything that might be done can't be done.' As the finale to the Dean's Lecture Series for 1989, this will be held on Friday 21 July 1989 from 2 pm to 5 pm in the Sunderland Theatre, The University of Melbourne.

The following is a modestly abridged account of the Ethics seminar, taken from the transcript of the proceedings.

Graeme Ryan

The Dean, Professor Graeme Ryan

Your Excellency, Chancellor, Vice-Chancellor, ladies and gentlemen. Welcome to this seminar, in particular to the Governor, who is here informally. There is a common perspective that universities are ivory towers that deal with little that is relevant to the community, that we are isolated from reality. There is clearly a lot more that we can and should do to show that this is not so. We have an excellent panel of speakers to identify and to comment on major medical ethical issues that concern us and the rest of the community. This seminar will be chaired by Professor Emeritus Richard Lovell, who retired in 1983 from his position as the Foundation James Stewart Professor of Medicine at The University of Melbourne. He was an ideal choice by the National Health and Medical Research Council to become the Foundation Chairman of the National Medical Research Ethics Committee.

Professor Lovell, Chairman

Thank you Mr Dean. The thought behind today's session was that we might try to identify some issues that three people with widely differing interests see as important not only in research but across the whole field of medicine. Then we will have comments on their topics by the three other invited speakers. I will then report on what you, members of the invited audience, suggested were important questions — a gratifyingly large number of you sent in questions and we'll ask the panel to comment on some of them.

We are not going to decide anything today. This is the last way in which to set about deciding ethical questions. But we can identify questions thoughtful people have put forward, and we can be better informed about, and reflect on, the relative importance of some of the issues that have been raised.

Identification of Issues

In Medical Practice

Mr Peter Jones:

Mr Peter Jones

Among the great and significant advances in medical science and technology of the last decade, two aspects of medical practice have directly or indirectly come to influence the making of decisions in the management of patients. The first of these is the cost of treatment of the individual patient, to the community, to governments faced with the ultimate ethical dilemma: the allocation of resources with the implications for life and death inherent in those allocations. The second is the increasing complexity of new ethical issues, now added to those of longer standing, in the day-to-day practice of medicine.

Only three of these issues can be mentioned here, and the task is made easier, for me, by simply posing the questions without any responsibility to provide the answers. Of the three matters selected, one is ancient: the confidentiality of personal medical information. The second: 'informed consent', is an American transplant from the 1970s, almost a hardy perennial, certainly an annual, currently under active review by the Law Reform Commission of Victoria. The third: decisions regarding the management of premature and new-born infants with serious developmental anomalies, often multiple, and frequently requiring respiratory ventilation and parenteral feeding, have created a number of critical ethical issues.

The precepts governing the confidentiality of a patient's medical history and diagnosis are as old as Hippocrates and as new as AIDS. This kind of information requires careful protection, with something close to the dedication of the confessional. Theoretically nothing can or should be released or revealed without the patient's written permission, except in very particular circumstances, such as compulsory reporting of a gunshot wound or a serious communicable disease, or at the clear direction of the presiding officer in a court of law, or the implicit permission in the context of a medical examination for entry into a superannuation scheme or to obtain a life insurance policy. Maintaining confidentiality can, on occasions, become highly problematical. For example — and this is one from my own personal knowledge — a doctor attending a child of separated or divorced parents, or a *de facto* relationship. Each of the biological or putative parents separately demands a medical certificate which could or might favorably influence their application for a custody order. The best interests of the child-patient, in the light of the as yet undetermined guardianship, are not always clear when bruises, perhaps quite innocently and naturally acquired, are presented by one party as evidence of at least over-zealous punishment, even maltreatment, by the other, while the bruised psyche may be all too obvious but not visible. What does the doctor certify and to whom?

As contentious as this issue is, one far more sinister in both its motivations and its consequences, is medical information taken from the Health Insurance Commission's computer in Canberra. A program was written for termination of pregnancy, unmarried, underage female, and provider number. This produced eleven names and addresses supplied officially, not 'leaked', to a department of public prosecutions and onward to the police who interviewed the patients who, on subpoena in the witness box on oath, were compelled to breach their own confidentiality; and this in a fruitless prosecution, because in each case (and it was already known) the procedure had been properly initiated by a formal referral from a medical officer of a family planning clinic. This particular episode must surely be of the greatest concern to the medical profession, and equally to the community at large. Who will identify the culprits and what remedy can or might be applied?

The matter of 'informed consent' to medical or surgical treatment goes to the heart of communication between doctor and patient. The phrase 'informed request' is in some respect a better description of the process in which the patient's diagnosis is explained and the various available treatments outlined, along with their various advantages and disadvantages; risks are discussed and the patient's questions fully answered. With all the relevant information, the patient should then be in a position to request (or decline) the medication or operation offered. Informed 'consent' has overtones of a licenced assault. Informed 'request' emphasises the patient's continuing autonomy in making the decision, given that all the necessary information was presented frankly and truthfully, and to the patient's full satisfaction. From the ethical point of view it is not 'what the doctor thinks the patient should know', it is 'what the patient feels he or she needs to know' which is the measure of the quality of the communication. But as the *Law Reform Commission Report No. 7* observes: 'The duty to give more information may be overridden by the doctor's belief that it is not in the patient's best interest.' This, as you or many of you will know, has been held and reaffirmed in a recent appeal to the Law Lords of England.

The ethical management of very low birth weight infants is one of the most difficult areas of medical practice today. There was a time when an infant less than a 1,000g in weight was not expected to live, but neonatology has progressed to the point where 10 per cent of babies with a birth weight less than 600g can now be expected to survive, though often with severe, multiple, and permanent handicaps. Experience indicates that 800g is a critical point for very premature infants, and there is not infrequently an associated major developmental abnormality. Modern technology can maintain life, biological life, long after reasonable hope of recovery or normal survival, and with the prospect of what most people would not accept as a bearable life; I quote from a neonatologist: 'lack of consciousness and self-awareness, and no capacity for social or emotional interaction'. One solution is selective non-treatment for severely abnormal infants, at least in some circumstances. The opinions of the parents vary greatly, and so do the doctors' and nurses'. Who should make the decisions? Are the parents in a position to make logical choices unaffected by high emotions? Should the parents be asked to do so? Should advice be sought from an ethicist or from an advisory ethical committee? Much care and thought has been given to these matters and there are no certain answers, but evermore demanding questions.

Decisions for or against treatment are currently confined to the doctors, often with the advice of nurses and, of course, the parents. But lack of uniformity of criteria can lead to arbitrariness and inconsistency. The legal status of 'selective non-treatment' is far from clear, but would legislation provide the flexibility required to meet all the circumstances? Could even the most careful and precise parliamentary draughtsman devise paragraphs which would serve as consistently useful guidelines? What of the community at large, what of the law, and of the experts and interested parties attending this seminar?

In Forensic Medicine

Professor Stephen Cordner:

Prof. Stephen Cordner

I have been asked to outline some of the ethical issues in forensic medicine. Most of these issues will, in fact, be new to many of you because forensic medicine, hitherto, has had a very low profile. It may be useful, therefore, to be clear about what forensic medicine actually is: it is the application of the principles and practice of medicine to the needs of the law. It has four branches: forensic pathology, clinical forensic medicine, forensic psychiatry and a broad area which I call medico-legal studies. So in the interest of not overstaying my welcome, I will restrict my remarks in this seminar to the area of forensic pathology.

It can be inferred from what I have already said about forensic medicine that a forensic pathologist applies the knowledge and skills of anatomical pathology to the needs of the law. In brief, this means the provision of autopsy services for the coroner. The first issue then concerns a basic conflict between the forensic pathologist's legal duty of confidentiality to the coroner and a medical duty of care extending via the deceased person to the relatives. To acknowledge this conflict actually represents a substantial change, because hitherto I think forensic pathologists have seen themselves simply as servants of a particular legal process. I believe one should picture the pathologist as standing between the coroner, representing the judiciary and the public interest on the one side, and the deceased person and the relatives on the other. Existing as it does in the context of involuntary autopsy, there is a responsibility on the coronal service to treat relatives with respect and sensitivity. However, the coroner himself has responsibilities which have a significant judicial component, and he cannot risk compromising his impartiality by dealing with the relatives as other than interested parties to the legal issues to be determined.

The forensic pathologist has performed, possibly against the relatives' expressed wishes, the most detailed examination of a deceased person that is possible. It is only proper that the forensic pathologist be available for consultation with the relatives, if that is what they wish. The purpose of the consultation would simply be to increase the likelihood of the relatives having a reasonable understanding of the autopsy findings, and while forensic pathologists are not specialist counsellors this may have a positive effect on the resolution of some of the personal and family issues which commonly arise after a death. A related and important responsibility here is communication with the treating doctor, who really should be in the front line, conveying the autopsy information to the relatives.

The second issue concerns medical confidentiality in the coronal context, particularly as regards medical records and, inevitably, AIDS. By way of introduction, under the Coroner's regulations, and I quote: 'After the completion of an inquest into a death the coroner's record and file is to be open to public access unless the coroner orders otherwise.' And in a section of the Coroner's Act, I quote: 'A coroner must order that no report of an inquest or any evidence given at an inquest be published if the coroner reasonably believes that it would be contrary to the public interest.' If the deceased's medical record becomes part of the coroner's file, then it becomes a public document, unless he orders otherwise on the grounds of public interest. I am unclear as to the rationale for such a record being publicly available simply because of the death of that person, where its confidentiality would have been vehemently defended during that person's life. Any matters of public health importance can be dealt with while preserving anonymity, and other information can still be available for epidemiological or statistical purposes. My own view is that the onus, as in life, should be on the person wishing to disclose the record, and that the duty of confidentiality should transfer to the relatives when death occurs rather than just evaporate.

As far as AIDS is concerned, there are a number of issues in forensic pathology. One of particular interest to me, in view of the duty I feel we have to relatives, is what responsibility, if any, does a forensic pathologist have in bringing the fact that HIV positivity — determined for the first time at the post-mortem examination — to the attention of relatives or intimate associates of the deceased? The Victorian Institute of Forensic Pathology will be determining the HIV antibody status of each body upon which an autopsy is requested. It was the Institute's intention that confirmed positive cases would be brought to the attention of the appropriate agency for contact tracing of intimate associates. However, no such agency exists and contact tracing is not envisaged by the Health Department. Whether or not non-intimate associates such as parents or children will be told, will be on a case-by-case assessment by the medical practitioner involved, using his or her judgement, in the same way as in other clinical situations.

The third issue relates to the use of autopsy tissues and organs for grafting. There is an enormous need for tissues and organs from deceased persons for therapeutic and research

purposes. In this context I am not talking about tissues removed from beating heart, brain dead donors. The Human Tissue Act (1982) only allows the use of tissues removed for the purposes of the autopsy for therapeutic and research purposes. This means that, without any reference to the relatives, the pathologist can remove, say, an aortic valve and give it to a cardiac surgeon for grafting. But pathologists can't remove corneas, skin, cartilage, ligaments, bone, and fascia, since these are not normally removed for the purpose of a post-mortem examination. Should relatives be involved in the decision to use the allowable tissues from deceased persons for therapeutic or research purposes? Where the deceased person made no comment on the matter during life, I think — yes — they should be involved, but mainly because I don't think that many people are aware of the provisions of the Human Tissue Act, and therefore never turn their mind to the issue in life. In the United States, many States have enacted 'opting out laws', in relation to corneas for example, whereby these may be removed from a body after death, unless the deceased has registered an objection during life. I personally agree with this, providing there is excellent publicity, and understanding in the community. This may, of course, be difficult to ensure. A possible alternative would be to require holders of a driver's license to answer a question on their willingness to donate organs and tissues after death for scientific and therapeutic purposes. Their responses could be computerised, and intensive care units and the Victorian Institute of Pathology could be granted access to the data to identify donors. The basic thrust of this is to get people to address the issue during life, rather than leaving it to relatives after death.

The fourth issue is in the area of relationships with specialist colleagues and there is a very specific application of this issue in forensic pathology. Very commonly in criminal trials the defence will instruct a pathologist to comment on the report of the pathologist being relied upon for the prosecution. In the United Kingdom half of my own work was for the defence and half for the prosecution. The defence may occasionally request a pathologist not to communicate with the other pathologist; this is not a request that can be enforced (except that instructions may be withdrawn) and, in my view, it is a request that should be firmly refused. Pathologists appearing for both parties should communicate and discuss the relevant medical issues so that any differences they have may be refined and clear. The reason for refusing such a request and the reason for actually communicating with the other pathologist, perhaps against the express wishes of the instructing lawyers is that there is no property in a witness, particularly when he has been instructed as an independent expert. He must be able to act independently if his differing opinion is to have any credibility. If the defence expert has a different view, then he may be able to convince the prosecution pathologist of that view; if so, an unnecessary prosecution maybe avoided. Alternatively, the prosecution pathologist may be able to convince the defence pathologist the error of his ways, thus avoiding the confusion that would almost certainly have arisen at the trial. Finally, if after discussion disagreements remain, these may be resolved following further tests or they can be taken to court and be subject, quite properly to the adversarial process.

The medical profession in general, and forensic pathologists in particular, should be active in asserting the responsibility to present the best possible evidence to the courts by discussing the issues with the experts for the other side. The alternative is to run the risk of being simply passive agents for one side or other in a legal proceeding.

In Medical Research

Dr Helga Kuhse:

Dr Helga Kuhse

I had great trouble in choosing between the various problems that I found are raised in medical research. I picked three of them in the end, somewhat randomly. I picked the first, non-therapeutic research on human embryos, because it is one of great importance to us at the moment. The second is therapeutic clinical research involving a baby and a baboon; and the third is the problem of randomisation where the duty of the doctor to act in the patient's best interest is in conflict with her or his duties to patients as a whole.

Research on early human embryos offers the prospect of important medical advances in the diagnosis and treatment of infertility, in genetic diseases and congenital malformations, in understanding the development of cells, including cancer cells, and in improved methods of contraception. The use of embryos could also provide an alternative to present methods of safety testing which involves considerable suffering to animals and, as far as clinical applications are concerned, the cultivation of blood stem cells could provide a cure for diseases such as sickle cell anemia and leukemia. Eventually it may also be possible to cultivate isolated tissues or organs *in vitro*, to use them to replace diseased organs and tissues in children and adults.

Some people believe that it is seriously wrong to use early human embryos in destructive research to achieve these benefits for others. They believe that early human embryos have a right to life, that they are human beings and as such must never be treated as mere means to the ends of others. All destructive embryo experimentation, they believe, should therefore be prohibited. But what is it that gives anyone a 'right to life'? Mature human beings, beings like you or me, are said to have a right to life, but not cats, dogs, rats, cabbages or lettuces. The question can be put differently: what makes killing wrong? Why do we think it wrong to cut short the life of a person who wants to go on living, but not wrong to cut short the life of a cabbage?

Where do early human embryos, insentient, devoid of a central nervous system, and incapable of any experiences at all, figure in the scheme of things? If we accord them a right to life do we have to accord cabbages and lettuces a right to life too?

There is a difference, though; embryos, but not cabbages, have the potential to become sentient, autonomous and rational beings, beings like you or me. Does potential make a moral difference to the wrongness of taking life? If the answer is yes, we must consider this: the egg and sperm, considered jointly, and the pre-syngamy embryo, (pre-syngamy being once the sperm has entered the egg but the two nuclei have not yet fused) also have the potential to become a person. Does it make sense (in these terms) for the Victorian Infertility (Medical Procedures) (Amendment) Act 1987, to allow the destruction of especially created pre-syngamy embryos but not the destruction of especially created post-syngamy embryos? After all, if the reason for objection to embryo experimentation is that a person who could have existed will now not exist, then we would, in consistency, have to object to all other practices preventing the existence of such persons as well — the wasting of eggs and sperm, celibacy, contraception, the use of IUD's and so

on. Since most people do not regard these practices as wrong, does this mean that in prohibiting embryo experimentation, we are prohibiting potentially very beneficial research for no good reason?

And now I come to Baby Fae. In 1984, Baby Fae was given a baboon heart in an attempt to save her life. She died some two weeks later. It has been suggested that baboon colonies should be set up, where primates can be raised to supply a variety of organs for human use including hearts for xenografts. What should we think of the use of animals in such therapeutic medical research? Should healthy baboons and other non-human animals be sacrificed in our attempts to save or improve human lives? What is the value of human life and what, if anything, makes it different and more valuable than non-human animal life? It is reasonable to assume that human life is more valuable than non-human animal life because paradigmatically 'human' life is characterised by such capacities as complex cognition, self-awareness, rationality, a moral sense and so on?

It is a fundamental principle of morality that like cases ought to be treated alike. If it is permissible to use non-human animals in research and as providers of spare parts for humans because these animals do not have, or do not have to the same degree, the specific 'human' characteristics listed above, what does this say about those human beings who also lack those characteristics — anencephalic infants (infants born without a brain), the severely mentally retarded, and those in a permanent vegetative state? Would it also be morally permissible to use these humans in research, and if not, why not? And if all this is terribly shocking, does reflection on the possible use of these human beings raise questions about our use of non-human animals in research?

A final question often left out in the debate, is that of Baby Fae herself. She could not, of course, consent to this kind of clinical research which was, on the face of it, intended to secure her survival. Does it make a difference, to how much suffering, pain and distress and discomfort we can inflict on a human being in our endeavors to keep it alive, that this human being cannot consent to it, can have no say in the matter?

This brings me to a completely different issue, and that is the issue of randomisation, an important element in many clinical trials. The argument is often made that comparisons of multiple treatment methods (or of treatment versus no treatment or a placebo), are legitimately undertaken only when the superiority of one treatment over the other is unknown. If correct, this would mean that the physician treating a patient in one of these trials does not abandon her or his commitment to the individual patient, but merely allows chance to determine the assignment of treatments, each of which has an equal chance of meeting the patient's needs.

But it is unlikely that two treatments in a clinical trial will be identically desirable *for a particular patient,* and a physician may sometimes — for a variety of reasons — believe that one treatment is more suitable for this particular patient than another. Ordinarily the doctor's therapeutic approach would be guided by this. But in a randomised study doctors cannot allow these factors to influence the treatment decision. Does this mean that randomisation represents an unavoidable compromise of personal care in the service of obtaining valid results?

This dilemma is sometimes exacerbated when, as the trial proceeds, there is increasing evidence that one treatment is more effective than another. What is the physician's, rather than the researcher's, obligation in the face of such accumulating evidence, and at what point should trials be stopped?

The physician's responsibility is towards the individual patient. The researcher's responsibility is to patients as a collective, where the welfare of these (future) patients depends on scrupulous adherence to trial design and on the physician **not** giving in to her or his natural inclinations as far as individual patients are concerned. In other words, physicians in their role as researchers may sometimes feel compelled to act against an individual patient's best interests. This is a real dilemma and I have no answer as to how it can be resolved.

. . . . . .

Professor Lovell: Summaries of what the three openers intended to say were passed to the next three speakers, each of whom was invited to pick aspects of the notes that they would like to comment on. We will now hear their comments.

Comment

A Moral Theologian

Reverend Father William Uren:

Rev. Fr. William Uren

I must confess that when I had the opportunity to read in summary form the papers presented in greater detail at today's seminar, the issue that caught my eye — running, as it were, like a golden thread through all three papers — was that of confidentiality/privacy. Not that the other issues raised are not important and stimulating. On the contrary, they have most wide-reaching consequences and implications. Perhaps it is because only recently I've had a surfeit of the more biological of these bioethical issues, for instance, IVF, embryo experimentation, defective neonates and the use of animals in experimental situations, that the more immediately personal and humane issue of confidentiality/privacy attracted my attention. I will therefore confine my remarks to this theme.

The confidentiality of patient records was, of course, an issue raised centrally in Mr Jones' paper. Professor Cordner, too, has spoken at length about the difficulty of balancing the forensic pathologist's legal duty of confidentiality to the coroner with the medical duty of extending care and sympathy to the relatives of the deceased. The question of how to reconcile the more private and confidential interests of scientists and, for instance, the infertile, with concern at least with some parts of the community about the status and protection of human embryos and of animals, arises at least indirectly from Dr Kuhse's paper. And if we look at the closely related issues raised, for example, the duty in both life and death to maintain or forego confidentiality in HIV testing, the centrality of this golden thread of confidentiality/privacy in at least some of the aspects of these papers is apparent.

Not that, of course, confidentiality and privacy are the same thing. Some people, for instance, aspiring movie stars, media moguls and gossip columnists, may have a vested interest in seeing that what is normally private should **not** remain confidential. But confidentiality and privacy usually go hand in hand, even if the concepts may be distinct. We feel, prima facie, that confidentiality concerning certain aspects of our lives, that is, their disclosure to some selected members of the community along with immunity from public review, is justified because we believe that basically

these aspects are our own private concern, and are subject, unless delegated by us, to our own personal control and autonomy. Why then do we value confidentiality?

There are at least two possible lines of justification, each of which complements the other. The first is in the classic deontological mode, that is, it is concerned with basic rights. Confidentiality is part of our basic right to privacy and to autonomy. This right is basic because, it is argued, details of our lives which are private are protected by the same inviolability we accord to our integrity as persons. And something the same way as limitations on personal freedom and autonomy erode our personal integrity, so do publicity-oriented intrusions into the private aspects of our lives. Even if they are not altogether private, we wish these intimate details of our lives to remain at least confidential, that is, we disclose them only to our friends or professionals who we feel may be able to assist us in handling them. If they become public, we may become open to manipulation through them, and our personal liberty, autonomy, dignity and integrity are threatened. Confidentiality then, in the deontological mode, is usually seen as a fairly basic right. It is only when what is normally private in our lives comes to assume public ramifications that this right may have to be balanced against equal or more basic rights of others, for example, their right to life, liberty and autonomy. It is not usually then conceived as an absolute right that is necessarily taking precedence over the rights of others.

The other mode of justification of confidentiality is utilitarian. It looks to balancing the beneficial against the harmful consequences of confidentiality in any particular circumstance, both for the individual and society. Those who maintain, on utilitarian grounds, that confidentiality should normally be preserved, argue that if confidential disclosures were not accorded a strong immunity against countervailing reasons for a more public revelation, the balance of the benefits that characteristically arise from such confidential disclosures would not be maintained. Clients prepared to make disclosures in confidence to friends, to selected professionals, and to advisers, would refrain from doing so if they suspected that in certain circumstances those associates might be willing, or even legally obliged, to reveal their confidences more widely. Their apprehension of the liability and the embarrassment more universal disclosure would occasion would in many circumstances be so distressing that most potential clients would forego the benefits of the disclosure. Thus it is argued, on utilitarian grounds, that confidentiality should be normally maintained in professional and intimate settings. In exceptional circumstances however, for example, highly contagious communicable diseases, these benefits of confidentiality, both to the individual client and even for a particular section of the community, might have to be foregone to protect more general interests. Utilitarianism would then dictate that these more universal interests, for instance, the interest of public health, take precedence.

How this utilitarian calculus will operate in particular circumstances is often very difficult to determine. Take, for instance, the case that has been raised, of confidentiality in HIV testing. If prospective clients thought that the results of these tests would not be confidential, and that they would be made available, for example, to spouses or to 'intimate associates' — a term used by Professor Cordner in his summary — they might well not seek to be tested, especially as there is presently no remedy available when the diagnosis is positive. Thus, although non-confidentiality and notifiability may be effective in alerting and tracing the communication of a contagion in the cases where clients do come forward and tests are actually conducted, it may overall be less effective than confidentiality. This is because a lack of such a guarantee may inhibit the majority of potential clients presenting. Even if in these cases, speaking in the deontological mode, the 'right' to confidentiality is a very questionable right, utilitarian grounds may, nonetheless, dictate that such a status should be accorded. The emphasis would then be to promote confidentiality in order to attract as wide a potential clientele as possible for testing. Subsequent to diagnosis, in those cases where the tests were positive, the medical practitioner would build on the trust the confidential relationship had established, to persuade his client, again in strict confidence, to notify his contacts personally, and to encourage them to present for testing and treatment. In this way, at least in the long run, on utilitarian grounds, confidentiality may be more effective than notifiability.

On the other hand, however, in the case envisaged by Professor Cordner, where HIV positivity is determined by the pathologist only subsequent to death, the utilitarian calculus would seem more likely to dictate that the intimate associates of the deceased should be notified. It would only be deontological considerations, that is, the right of the deceased to privacy and to his good reputation, which might inhibit the pathologist, at least temporarily, from communicating this information and instituting further testing.

I must confess, in conclusion, that I was shocked (and I do not think that is too strong a word) by Professor Cordner's remarks concerning the public accessibility of medical records subsequent to coronial autopsy. I note with some relief that the coroner may suppress publication of these records either by not including them in his file or by exempting them from publication in the public interest. Like Professor Cordner, however, I feel that the present onus towards public accessibility should be reversed. The onus should lie with maintaining confidentiality rather than with making such medical records public. This will mean that the coroner may only make public those details which are agreed to be manifestly relevant to the inquiry. I appreciate of course, that such autopsies are presumably instituted, even in routine cases, only because there is a prima facie public interest. But once instituted, this presumption will need to be constantly under review to ensure that justice will be done not only to the public interest but also to the presumed interests of the deceased and his relatives in continuing confidentiality. The privacy of the deceased has been compromised by instituting the autopsy. Subsequent to that no effort should be spared to remedy the breach unless there is a manifest judicial interest in continuing public accessibility.

A Lawyer

Mr Russell Scott:

Mr Russell Scott

When I first saw the issues identified by Peter Jones, Stephen Cordner and Helga Kuhse for today's discussion I felt rather like a small child let loose in a candy shop. I experienced a strong desire to become involved in every issue raised by every speaker and I fear I might have ended up as a kind of ethico-legal bower bird trying to collect too many glittering objects. However, I'm going first to the third issue identified by Peter Jones — defective neonates — and comment that there is no current biomedical dilemma that is more difficult. Recent publicity given to anencephalic

babies and their potential to save the lives of other defective babies and serve as sources of tissues to save those lives highlights the problem. The law in this area is hopelessly inappropriate and out-dated. But make no mistake, it is also draconian and dangerous. We are dealing here with homicide, and the law's responses to homicide are the crimes of murder and manslaughter, guilty or innocent, black or white; there are no shades of grey as far as the law is concerned.

If I were now to turn to the familiar kind of double talk that you would normally receive from lawyers, I would say that the medical practitioner who withholds treatment from a grossly defective or abnormal neonate could in some circumstances be guilty of murder. We have seen the case of Dr Arthur in England, that very sad case in recent years, and other cases in England in the last year or so. The fact is that although the criminal law is wide enough to extend to some of these cases in the way that I've mentioned, it would seem that some common sense does prevail, and that a prosecution would have difficulties in the way of success when the doctor has acted after consultation with parents, members of the family, medical colleagues, and in accordance with his or her genuine assessment of the circumstances. It has been suggested recently by a scholarly legal writer that, in many cases: 'A prosecution would be unable to show a strong enough link between lack of treatment with the infant's death', and accordingly prosecutions are likely to be few and convictions rare in this area. But still, the human difficulties, apart from the inappropriateness of the law, were illustrated by a survey of some two hundred Victorian doctors completed by Dr Kuhse's Centre for Human Bioethics at Monash in 1983, which found that 98 per cent of the paediatricians and obstetricians surveyed had at least once directed that less than maximum effort be given to sustain life in relation to defective neonates. Despite the fact that some experts favour enactment of specific regulatory legislation in this area, for example Mr Justice Michael Kirby, my erstwhile colleague on the Law Reform Commission, my own belief is that such legislation, no matter how clearly written — and one of the earlier speakers made a similar comment — is unlikely to be able to do any better than those persons who are directly involved with these tragic and difficult cases. On the other hand, legislation that allows for proper defenses or excuses would be a different matter in my view.

A great deal, of course, in all of this area, and in our regulatory approach, will depend upon the calibre and ethics of the medical profession, the confidence and trust that flows between the public and its doctors, and the co-operation of all those involved. A telling comment was recently made in an article published in the *American Journal of Law and Medicine:*

> If government coerces treatment in the name of valuing life and then demonstrates only a negligible interest in the development in that life afterwards the public may see the action as hypocritical and reject it entirely.

Peter Jones has also raised what he calls 'informed request'. I assume, of course, that he refers to what is often called 'informed consent'. I agree that the expression 'informed consent' can be misleading, and is arguably a misnomer. It carries an inherent bias which tends to cause the matter of adequate medical disclosure, which is what we're talking about, to be considered in the context of law and legal liability, and that is not desirable. Far better expressions to describe this subject matter would be 'medical disclosure', 'informed decision-making', 'informed choice' and Peter Jones' expression 'informed request'.

The principal question at the moment in Australia is this: Does the clinical relationship today call for careful medical disclosure and advice to patients about the risks and dangers of proposed treatment, and for informed decision-making by patients? Accepting that the law, for example the law of negligence, is never all that far away, the matter of informed decision-making and informed request in the clinical context has been firmly described by leading authorities as essentially an ethical matter and I support that. One of the best summaries was recently produced by Lord Scarman, the English lawyer, in the following words:

> Medical paternalism is no longer acceptable as a matter of English law. The patient's right to make the ultimate decision is completely consistent with the common law. It is also consistent with the medical ethic because the duty of the doctor has always been recognised to conduct himself in his relationship with his patient in a way which, in his judgement, conduces to further the interests or the best interests of the patient.

And finally, let the doctors, he says:

> . . . work out the ethical implications, let them face the problems in the context of ethics, if they do there will be no problems of patient distrust . . . I think that courts have given the medical profession the opportunity to get their ethical house in order . . . if they do, the common law will follow the guidance of the ethical solutions reached.

So what this eminent law lord is saying, is that the age of medical disclosure or, if you like, 'informed consent' is upon us; that the medical profession should accept the duty of careful disclosure and should put it into effect by developing sound rules within an ethical framework. If doctors accept this opportunity for self-regulation, the courts in turn are likely to follow their rules when called upon to judge a particular dispute between a doctor and a patient.

Secondly, of the issues identified by Stephen Cordner, I intend to confine myself to his extremely interesting questions concerning autopsy. The first is the transplantation or grafting of pieces of tissue severed or removed for the purpose of autopsy, as well as tissues not usually removed for this purpose. The second issue is the basis upon which human body tissue or material should be obtained for therapeutic purposes, that is whether they should be obtained by a system of opting in or a system of opting out. Opting in or 'contracting in' means that a person's body parts will not be available without consent. In other words, you're 'out' and not available unless you, or your relatives, after death consent to be 'in'. On the other hand, opting out means that all body parts of all dead persons should be automatically available unless the deceased has recorded an objection while alive. Now most western nations have not adopted this latter principle. Under an opting out system you would be 'in' unless you record an objection during your lifetime and decide to be 'out'. The Australian Law Reform Commission wrote in its 1977 report on transplantation:

> We are unable to recommend the introduction into the law of Australia of contracting out. We have found a clear divergence of views on the subject, many people taking very positive attitudes. It is plain that there is a strong body of opinion in Australia in favour of contracting out; on the other hand, many people oppose contracting out. We have concluded that it should not be recommended at this stage, and the Australian system today, in force across the continent, follows that recommendation.

We have a legislative statutory opting in system; that, I must say, is as close to opting out as the Commission felt it could safely go.

I'm afraid that I have no time to deal with another interesting matter Dr Cordner raised, that is the impact of this opting in system on the taking of tissues from autopsy cadavers.

Thirdly, the issues identified by Dr Kuhse. Despite her tantalising questions concerning research on the early

human embryo, and the use of animal organs and tissues for human therapy, I have decided to ignore her siren call and look quickly at her third point entitled 'in whose interest?' and further, my comments here are more to do with ethics than with law.

Dr Kuhse raises the extremely interesting question of clinical trials of new drugs involving patients whose diseases have not responded to normal medical treatment. She raises questions in relation to trials where randomisation is a necessary ingredient in the selection of subjects, and where the trial might be double-blind or something of that kind, involving the administration to some of the human subjects of a placebo and to others the new drug, all done on the basis of chance selection. As one of the two treatments is likely to be less beneficial than the other, the question arises whether a participating physician is in a conflict of interest in relation to those patients who may suffer from the particular disease to which the drug is directed. Dr Kuhse points out that the dilemma can be exacerbated as the trial proceeds and evidence possibly accumulates that one treatment is more effective than the other. This very problem has been dramatically illustrated, a year or two ago, in an American trial of the drug AZT in relation to AIDS, when a significant number of deaths began to occur among trial subjects. It was not known which particular treatment drug or placebo was being received by the group suffering this significant mortality. It was decided that the trial should be brought to a premature end in the face of such alarming consequences because it would be ethically wrong to carry it to its planned conclusion, some time ahead. It was therefore terminated. I must indicate my agreement with Dr Kuhse here — there can be a conflict of interest in such circumstances. On the other hand, I do not think it surprising that such conflicts can and do arise. Ethical and moral principles are not necessarily mutually exclusive, nor do they present when seen together a seamless web that lacks internal contradiction. Attention was drawn to this by the 1987 report of the Pond Working Party in the United Kingdom, which reported on the teaching of medical ethics. The Pond Report stated that in present day medical practice the major recurring themes of consent, confidentiality, communication and priorities of treatment, continually raise ethical problems which lead to conflict between basic ethical principles. Many moral philosophers believe that the most important basic ethical principles applicable to medical practice today are those commonly referred to as beneficence, respect for autonomy, and justice. And the report went on to point out that the demands of beneficence and autonomy sometimes conflict. And the difficulty in resolving the conflict can be further compounded by the principle of justice. I have nothing more to add at this point, except to congratulate those who formulated and identified the issues for their clear mindedness and accuracy, and I hope that I have not increased the problems of the audience for our later discussion.

A Biomedical Scientist

Dr Graham Brown:

I have been asked to speak this afternoon from a personal view point as a biomedical scientist, for I have no special expertise in the field of ethics. From the beginning I have to acknowledge that for me, and for other practising clinicians, it is impossible to discuss ethical issues without being influenced by one's prime duty as a clinician who provides patient care. It might be right and proper, and possible, for ethicists, philosophers and theologians to discuss these issues in abstract terms, but I for one cannot separate them from the very real world of the one-to-one personal relationship between doctor and patient. This special relationship between doctor and patient obviously requires mutual trust and shared decision-making, and in practice a successful relationship helps to prevent many of the potential problems alluded to earlier.


Dr Graham Brown

As practising clinicians and scientists, we also see at first hand the uncertainty in our predictions of clinical outcome or research results. We are always aware that we are working with probabilities that have to be taken into account in any discussion with patients – or with the patients' relatives – and we are also aware of the critical environment in which difficult decisions have to be made. It is very easy for ethicists and lay people to raise questions about how to manage brain-dead patients on respirators, or anencephalic children, but at 3am tomorrow morning, one of the clinicians in this room may be rung for immediate advice about one of these patients. So in the last analysis we are the ones who are responsible for weighing up the implications of all the discussions of the ethical issues and taking responsibility for the course of action that follows, and that is a very difficult thing to do.

Another point that lay people frequently do not understand is that in medical research, particularly basic research, we see things that are unexpected. We anticipate that unexpected things will occur and when faced with unexpected results of research we need to look at the new information and convey that to our colleagues and to the community at large. In the past the scientific community has, I believe, acted responsibly, in spreading information both to the scientific and to the lay community and has taken the leading role in raising ethical issues. For example, in the early days of genetic engineering molecular biologists called a halt to research when they realised the possible implications of some of the work that they were doing, so they could discuss the issues and decide about future guidelines. It would have been impossible to make 'laws of ethics' to guide scientists before they made the basic discoveries.

In this discussion I have been asked to comment on some of the issues raised by earlier speakers, and I shall concentrate on three: consent to testing for HIV; clinical trials, and informed decision-making by subjects participating in medical research.

First, with respect to testing for HIV, I believe that in general one requires specific informed consent before testing for HIV. The reasons are as follows: I believe that there may be very good reasons why a patient does not want to know his HIV status, but if I have that information I am obliged to pass it on. Given therefore that a patient has a right *not to know*, I believe we need to ask before going ahead to test the patient's blood sample.

Following guidelines about patient confidentiality leads to some difficult moments in clinical practice. For example, the clinician faces a difficult problem when a patient dying of severe pneumonia secondary to AIDS has specifically requested that the family not be told the diagnosis. The relatives are at the door demanding to know what is wrong with the patient, questioning our competence, and asking why a young man should be dying of pneumonia. We are not able to tell them, so we just have to accept this criticism. The problem remains after the patient has died, when we ask

again what our responsibilities should be. I think Father Uren's comments are very useful in discussing this question.

The normal doctor-patient relationship ensures that in a relationship of mutual trust, HIV-positive patients usually understand the reasons why they should tell people who could be affected by their HIV status, but sometimes they do not. If the patient says 'No, I refuse to tell my dentist that I'm positive', what should the clinician's response be? The problem is confidentiality with the patient versus the public peril if the virus is passed on. And once again Father Uren's comments were very useful.

My second point relates to issues that Dr Kuhse raised about clinical trials. The non-scientific community may have difficulty understanding the methods we must use in clinical trials. Let me say first that as a clinician one has a responsibility to an individual patient and therefore it would be unethical to deny treatment to someone who could benefit from it; and, if there is known proven effective treatment for a particular condition, a patient suffering from that condition would not participate in a trial, unless we were assessing additional therapy. In that case, one trial group would receive treatment A (known to be useful) and the other would have A plus B (the treatment being assessed). In that way we do not compromise patient care. If for some reason we decide that a patient needs a particular drug or some other form of therapy, that patient receives the treatment, even if it means leaving the trial. I think the ethical issue is really quite clear and there is no question of the patient being denied the best treatment.

The issue of placebo treatment is important, and often confusing for lay people. In scientific design we start with a null hypothesis, that is, that the therapy has no effect or may even be harmful. (There have been many examples of new forms of therapy which in fact have been harmful. Some potential vaccines and drugs have made patients worse.) Therefore, it is critical that one compares groups of individuals who differ only in the treatment being assessed. The best trials include a control group receiving placebo (this must be explained to subjects before they enter any trials) and neither the subject nor the investigator knows what the patient is receiving ('a double blind trial'). Occasionally there would be experimental situations in which we can compare groups in different ways, for example if one clinician is convinced that one form of therapy is better, and another favours a different form of therapy, we may be able to compare the results of different regimens to help formulate a hypothesis. Then we need to test the hypothesis with a clinical trial. Once again, if we believe a particular form of therapy is beneficial, we are not justified in arranging the trial so that the patient has a chance of missing out on that therapy. As an additional safeguard for patients, ethical requirements for performing clinical trials include the formation of an independent committee to review the data as it comes in. If benefit is perceived in one or other group, it is appropriate that the trial should be stopped. It is inappropriate that the trial be stopped too early, before an appropriate (statistically significant) decision can be made. Premature interruptions of trials with inconclusive results can lead to unscientific decisions about the value of the new form of therapy. We have the same problem if drug companies present incomplete advertising information about new therapeutic substances. Evidence that the new substance should be used for certain patients may be incomplete or frankly misleading. In that case, there is not an 'option' to perform clinical trials, but an obligation for us to carry out a clinical trial to decide whether a new product is better than the established forms of therapy.

The third point follows Mr Jones' remarks about 'informed consent'. A research setting has many similarities with the doctor-patient relationship, but of course in research there must be full disclosure, so that patients need to know the risks, however trivial they may appear to be. I quite agree that the term 'informed decision-making' is better than 'informed consent', for this implies in the clinical setting that the patient is involved, so that a decision not to accept treatment is indeed as important as a decision to accept it. Informed decision-making can also be difficult for clinicians because we know that if patients have our trust, they generally take our advice. How can we be sure that our advice is unbiased and correct, and that patients truly understand the implications of their decisions?

I am convinced of the need for the highest ethical standards for medical research and find it interesting that in this respect the community demands a much higher standard of the researcher than of a medical practitioner who may be able to carry out a particularly controversial form of therapy without the safeguards we apply in medical research. In the same way, I am told that iridologists, naturopaths and practitioners of 'holistic medicine' can act without plain language statements before making diagnoses or prescribing radical forms of therapy. One hopes that standards applied to medical research will flow on to other parts of the community.

As scientists we spend a lot of time discussing the ethical implications of our work and we believe the issues should be aired and discussed widely. Our work is supported by the community, and is for the benefit of the community, so we have a duty to inform the community and to work in accordance with the guidelines that are provided. Over and above the legal obligations, our ethical decisions operate with extra guidelines. As scientists we see the added benefits of informed community discussions and we value the input of institutional ethics committees. Having said that, I think we have to be careful that there is no unnecessary duplication and proliferation of committees and paperwork. We hear frequent accusations of medical over-servicing, but it could be argued perhaps that we have had ethical and philosophical over-servicing recently, and some would say that in some cases it has hindered research. No two committees are certain to agree on all issues. For example, a recent proposal went to two separate committees and in reviewing part of the explanation given to a patient known as 'the plain language statement', the first committee said that the statement was far too optimistic, and failed to convey to the patient that there were associated risks. The second committee said it was far too pessimistic, and that no-one would ever agree to take the new therapy! There is nothing wrong with this outcome but it highlights the fact that there are no absolutes in ethical decisions. Not only may different committees come to different decisions, but different communities and different societies may work with different guidelines. I think it demonstrates, as the previous speaker has said, the difficulty of framing laws to cover the variety of current situations as well as those that may arise in the future.

I was interested to see which topics were nominated as issues by the first three speakers. I certainly agree that these are very important to me, both as a medical research scientist and as a practising clinician. However, I believe that medical ethics in fact has a far wider agenda than we have talked about today. To me, in a global sense, there is an ethical problem in our inactivity in the face of 15 million childhood deaths per year in developing countries. In the time that we have been talking, two thousand children have died in the developing countries. Of children under five, 400 have died from diseases we could have prevented with vaccines

currently available. In Australia, we have children in poverty, unacceptably high death rates in Aboriginal communities, and perhaps the greatest potential health hazard of all is nuclear war. I would like to finish with a question raised by the International Physicians for the Prevention of Nuclear War: Has our community given informed consent to the mining of uranium for weapon development research, or for nuclear testing in the Pacific?

Discussion

Professor Lovell: I thought you would be interested to see what issues were nominated by you, the audience, in response to our invitation to send in questions.

NUMBERS OF QUESTIONS
* from students

I.E.C.s (non-research functions)	9
Consent (in dependent relationships)	6
Stopping treatment (patient's wishes)*	4
Economics and ethics*	2
Others	10

The most common issue was institutional ethics committees and particularly their non-research functions. Perhaps this reflects a bias, because the majority of people invited to submit questions were from institutional ethics committees. The next most frequent issue was consent, particularly consent from people in dependent relationships.

The question of stopping treatment was raised by four people, including students, in the context of a patient wishing to stop treatment. And there were a couple of questions, again one from students, on the extent to which economic factors should come into ethical discussions. I find both of those from the students very refreshing and enlightening.

There was only one comment or question made about reproductive technology. It was: I haven't any comments to make other than the advisability of avoiding any legislation by parliament!

Now for the panel:

1. ***Should ethics committees in hospitals have a role in clinical decision-making?***

The background to this is that ethics committees have mostly been set up to deal with the ethics related to medical research and not with a primary intent that they should deal with anything else.

Mr Scott: I can see no reason in principle why they should not have a role, without getting into questions such as compulsory reference of questions or problems to an ethics committee. It seems to me to be a perfectly reasonable thing to envisage the ethics committees being available to assist in some of the dilemmas that continually crop up under modern medical and bio-medical circumstances.

Dr Brown: I think, in an informal way, that members of ethics committees should contribute their thoughts and, if requested, they might be asked in general to discuss in ethical terms issues such as whether the hospital expands their outpatient department or spends all their resources on liver transplantation. But that's really part of a wider debate. In fact, what may happen in the real world of clinical decision-making is that an informal committee develops — including the patient, the patient's relatives, the attending doctors, nurses, chaplains, social workers and others — and each one has input into some of the difficult ethical decisions. Maybe there could be a role for individual members of committees to provide advice on request, but I would hate to have to consult the ethics committee at 3 am to decide on this hypothetical patient who's about to have his respirator turned off. Guidelines rather than laws often tend to be more useful, at least in the way I have seen our ethics committees working.

Father Uren: I agree with both speakers. I think there is a role for input from a more specialised and experienced committee in the extreme cases that Graham has just suggested. On the other hand, I would have thought in the more routine cases, that there should not be such an expectation.

Professor Cordner: My initial reaction was to think of statements on ethics by bodies such as the World Medical Association which emphasised the clinical independence of doctors. And that doctors shouldn't be associated with any compromise of their clinical independence. I'm just putting that as the balancing view to that of having committees looking over doctors' ethical judgements.

Dr Brown: I wasn't implying that a committee should be constantly looking over the shoulder, but its advice and input could be sought on specific issues.

Dr Kuhse: I am pretty much in agreement with what has already been said. I would think it would be good if the **advice** of an ethics committee were available. I do not think it would be good at all if an ethics committee had to be consulted as is the case in the United States regarding the treatment of handicapped infants. That is something for the parents and the doctor to decide.

Another role that I could envisage for an ethics committee would be to act as a **review** committee. Some difficult situations that had already been dealt with could be put to an ethics committee to reflect upon and to have some input in that way. But I do not think it would be a good idea for a committee to make decisions regarding the treatment or non-treatment of severely handicapped infants.

Mr Jones: I'm in the favourable position of having encountered the entire spectrum of opinion in my own hospital. At one end are those desperately keen to have an ethicist appointed and an ethical committee meeting monthly. At the other end are those not so old ones, some quite young, who are dead scared of having decision-making powers taken out of their hands. The younger ones have no real cause for concern, because ethicists are not primarily decision-makers — they help people come to conclusions, and they have an opportunity to collect information which can then be shared, to become collective experience — which would be helpful.

The concept of the other disciplines being available for consultation I first learned of many years ago, at a famous paediatric oncology clinic, in Paris, which saw three hundred new child patients per annum with a solid tumour. The extraordinarily charismatic and caring woman director, had arranged for two psychoanalysts to be available to the staff and to nobody else, not the parents, not the children — but for the treating staff to abreact, to debrief. I can see why informed, experienced, trained people could be of considerable value in helping clinicians to form and cope with decisions.

Father Uren: I just want to comment that in this morning's *Age*, there was a cutting from the *New York Times* on precisely this point. They were indicating that the value of

ethics committees is to expose and, as it were, enable people to think through the issues that are involved, without taking away their decision-making capacity.

Professor Lovell:

2. ***How can the problems of consent to participation in clinical research be overcome in patients who are psychiatrically ill, involuntary patients who are confused or demented and the extremely sick in intensive care units and coronary care units?***

Mr Scott: What's been going through my mind is this. It seems that the law and even the ethical regulations we've seen have been able to construct a kind of system that logically deals with the problem. In the United States, the notion of substituted consent is very firmly embedded in the law. For example it allows kidneys to be taken from four year old children for transplant purposes to their siblings. The notion of substituted consent is well accepted there and we've transferred it into our law in various ways, non-medical and otherwise, in this country.

Turning to research, we have in the *NHMRC Supplementary Note 2,* addressed this very problem and in relation to children we've provided what appears to be perfectly sound provision that says the consent to research should be obtained from the parents or guardian in all but exceptional circumstances, for example, emergencies, and from the child when he or she is of sufficient maturity/intelligence to make it practicable. Then turning to the mentally ill, we say consent should also be obtained in the case of those people who lack legal capacity due to mental illness, and consent should also be obtained from the person who stands in the legal position as guardian, friend or the like; and we even deal with an anomalous exception to this, that is, the case of the unconscious patient, but I think that's a different matter. Assuming for the moment that those provisions cover, to some extent, the question according to some notion of fairness or logic, I'm always worried about the individual case, the hard case. It's all very well to say that someone can give a substituted consent in relation to this research project or whatever the procedure is, but are there some cases where there just should not be substituted consent? If you have the case where a person is incapable of giving an appropriate response should it just not be done at all?

Professor Cordner: I wonder whether I can draw an analogy with transplantation between siblings. Am I right that the law in this situation is that under-age siblings under no circumstances can be allowed to give kidneys to other siblings?

Mr Scott: Certainly in Australia.

Professor Cordner: Why doesn't that translate to the research situation?

Mr Scott: This is getting a little esoteric. That's a freak situation which was placed in our recent transplant statutes because of the dissent, originally, on the part of Sir Zelman Cowan and the Hon. Mr Justice Gerard Brennan in the Australian Law Reform Commission's Report, *Human Tissue Transplants:* their dissent ended up being embedded in the legislation. It's an anomaly and doesn't really transfer over in logic to the research situation.

Mr Jones: It is more than an anomaly, it was the outcome of a specific submission, from the Australian College of Paediatrics to the Law Reform Commission, that while non-regenerative tissues, (e.g. kidneys) should be excluded, regenerative tissues (e.g. bone marrow and skin) should be permitted to be transplanted from one sibling to another, ideally with the parent's consent.

Professor Lovell: We've come back to the old concept of the 'next friend' when you're in difficulties. Does it follow then that if there isn't a relative, a close personal or next friend, that the answer must always be no?

Mr Jones: I am unable to answer the last question. Why I asked about the clinical or research aspects of the incompetent patient is because, as a paediatric surgeon, all my patients are legally 'incompetent'; it's said that pediatricians and paediatric surgeons have three patients for every 'case' they see: we don't do anything without full consultation with and the knowledge of the parents. Very similar situations arise in adult practice in which the patient's wife, daughter, son, or who's ever in charge of the management of someone of questionable competence is involved; there is no problem in discussing all aspects with them, as with parents. Crucial decisions which have to be made in the first few days of life in a very premature small weight baby, do not always have to be reached in an hour or two. It is possible to buy at least one to three days to confer with parents on more than one occasion, for them to reflect in private, to have further consultations, and ask more questions. There may be up to three days before a major decision needs to be made, time for everyone concerned to have second and even third thoughts.

Father Uren: I think in the psychiatric patient, which was the case we started with, what we're trying to do is to act in the patient's best interests. Now that's an amalgam really, that concept, that needs to be unpacked. It's what the medical interests in the patients are, but also what his or her reaction might be to being presented with appropriate medical information. In the case of the psychiatrically disturbed patient who is incompetent in that sense, you've got to ask yourself what would this patient, if he or she had been mentally competent but was in this situation, what would their reaction have been to being presented with this information. Now, it's very difficult to determine. That's why we look, in the case of a child, for instance, to the parent. We look to the parent, but we should remember that it's not, as it were, that we take the consent of the child and give the consent to the parent. What we're saying is we believe the parent is the person because parents are so close to the child as to be likely to act in the perceived best interests of the child.

Professor Lovell: The next question also bears on consent:

3. ***In relation to consent, what is the extent of information that should be given to patients and relatives?*** The questioner added: 'It seems to me that there's a tendency to demand too much. My own practice is generally to give the truth but not necessarily the whole truth.'

Mr Scott: I think the expression that is used in America is 'medical privilege', meaning that there's a recognised exception to the obligation to supply comprehensive information in cases where the medical practitioner is genuinely convinced that it could be harmful to the interests of the patient. My understanding of the American law is that that is recognised despite the complexity and harshness of their informed consent principles. One of the speakers earlier today, mentioned the fact that it had been recognised also in the House of Lords in a case in recent years. So that medical

privilege is an exception to the general obligation that we're talking about. Of course, like many of these things it's easier to say than to define. There is clearly the finest of lines to be drawn and I suppose we all have to pussy-foot down the dividing line.

Mr Jones: A classic example from the past was 'stealing the thyroid', in which the thyrotoxic patient was not informed of the day, the date and the time of the operation. It was thought that the preparation should be completed without further distressing the patient by telling him or her when he was going to have his thyroid taken out. Of course, with better preparation that's not such a problem, but Denning CR recently held that it is entirely the prerogative of the doctor to withhold information if he feels that is in the patient's best interests, a kind of a paternalism which would not be tolerated for one moment on the other side of the Atlantic, but I think might well have some influence on decisions here.

Professor Cordner: I don't know how relevant it is, but I think that when doctors, or anyone else for that matter, get in a witness box they actually swear to tell the truth and the whole truth, and all I can say is it's always a matter of judgement about where the truth and the whole truth stops. Otherwise you would keep on going through your whole six years of medical course in the courtroom. So what ever rule you make there will always be a judgement about where it stops.

Mr Jones: It has been said in discussions of 'informed consent' that to satisfy some unrealistic criteria, patients should be sent to do medicine, and then come back to discuss the operation.

Mr Scott: Surely we are now once again in the area of the relationship of confidence that exists between the community and the medical profession, and the amount of trust that exists or doesn't exist, assuming that we've got a medical profession of reasonable calibre, of high ethical standards and that there is some ebb and flow of proper exchange of trust and confidence. You might have a better way of identifying that dividing line.

Dr Brown: I would like to support that. The doctor-patient relationship relies on mutual trust and the build up of that trust is the most important thing. It is virtually impossible to give every aspect of the whole truth if you have to spend an hour with the patient talking about the side effects of an aspirin. It would be totally inappropriate I think, so it's a matter of trust. Of course, there will be a variation from patient to patient as to how much each one would like to know and how much each one wants to be involved in the decision-making, so it is up to us to meet those needs.

Professor Lovell: The question we might take next is one that the students, among others, raised.

4a. ***They presented the picture of a conscious, virtually paralysed 72 year old with motorneurone disease and this patient was, and had been for a long time, totally dependent on nursing. The nursing home situation despite best efforts was not coping and the patient said that she would rather be dead. And the first question that they asked was: should the patient's wishes be taken heed of?***

Dr Kuhse: I think there is little doubt that the patient's wishes should be taken heed of. As to how they can be taken heed of in our present situation will to a large extent depend on what kind of treatment the patient requires to be kept alive. For example, if a patient in a situation like this is 'lucky' enough to require a respirator, she could ask that this be turned off. Most people would agree that she has the moral and legal right to do so. As a consequence, she would probably die within a few hours. On the other hand if the patient has not reached that stage of motorneurone disease, and does not require what's often called an extraordinary means of life support, she may have no way of implementing her wish to die. There would be some circumstances where the only way in which an incurably ill patient can bring about her death is by refusing food and water. But there is a problem: we've had a situation in Victoria where such a patient has been declared incompetent. If that's the case, force-feeding becomes an option. So there is no clear answer, the moral answer, I think . . .

Professor Lovell: The moral answer, you are saying is very clearly, yes.

Dr Kuhse: Very clearly, yes. Whether or not it will always be taken heed of is a different question.

Professor Lovell: The second question from the students was:

4b. ***Does euthanasia have a place in this case?***

Mr Scott: I suppose if you say 'if the patient's wish were taken heed of' to the extent of someone wanting to act upon it, without dealing with that word 'place', you are obviously in the area of euthanasia. And with euthanasia, as we no doubt all know, you're back in that area of homicide that I was talking about earlier. You have this confrontation between the law as it has been for centuries and the desire, assuming the best of motives, to do what the patient wants to be done. But it's not, I suppose, just a juxtaposition between the law and what the patient wants to be done. There's also an enormous amount of moral and ethical principle in there as well. I guess all one can do is to nibble around the edges of this and feel terribly sorry for any medical student, nurse or medical practitioner who's plunged into this kind of situation. They're virtually insoluble in terms of the legal and social implements we have available to us at the present time.

Professor Lovell: Well, one of the important things about students in Melbourne University is they always ask the right and insoluble questions.

Mr Jones: As I'm going out of practice on the 30th of this month, perhaps if falls to me to say that I believe in euthanasia, in the appropriate circumstances, not in the hard cold light of economics, or in hysterical voices which we've heard in this State, which more often than not inhibit useful debate, but in the warm, compassionate and caring situation we've heard of recently in Holland. If that's a model we can follow, with appropriate safeguards, then I would certainly be in favour of it, at least for myself.

Father Uren: I would like to say that it depends really what the students mean by euthanasia in this context. I would have no problems at all with what Dr Kuhse described as withdrawing disproportionate treatment. Certainly, I'd agree to that. Secondly, if the patient insisted that she not only didn't want treatment but also she did not want food or water, I would feel that you would have to respect that. I would feel that she was wrong, in effect, in committing suicide, but she has the right in that situation, as in any other medical

situation the patient has the right to refuse treatment. But I would not countenance giving her a lethal injection.

Professor Lovell: The third question from the students brings us into quite a new dimension for today.

4c. ***To what extent should cost-benefit analysis be used to determine the nature and the extent of health care provided for people with terminal illnesses?***

Dr Kuhse: I think that when we speak about economic evaluations of health care it is important to think about two levels at which that question can be raised. One level is the level of the health care provider, the other level is the level of the clinician. I do think that cost-benefit analysis has a role to play at the first level, where governments or health care providers make decisions. There are not enough funds, even in societies like ours, to provide all possible health care. Therefore we need a means of evaluating how best to allocate health care, how best to stretch our dollar. This is where cost-benefit analysis does have a place. We decide between different treatments on the basis of which treatment provides the most benefits. When it comes to clinical decision-making, I think it would be best for doctors to continue to practice on the basis of what's best for their particular patients.

Dr Brown: I would agree that one has a one-to-one relationship with a patient which is very important, but inevitably doing the best for a single patient can compromise the community. If for example, we put every patient who could possibly benefit from the new drug AZT on that drug, inevitably the money would have to be found somewhere. In an international context, to give the most expensive, fancy antibiotic to an individual patient, in a country whose total health budget is one dollar per head per year, is to use the health budget for a hundred people in one prescription. So, inevitably, we have to balance responsibility to the individual with the public good. Maybe in those situations, the decision has to be taken out of clinicians' hands, so that the expensive form of therapy is not made available because the community has decided that the cost is too high.

Dr Kuhse: Something like that is happening in the treatment of very premature infants. The facilities to treat them all are not available and, in that sense, the decision has been taken out of the hands of at least some clinicians. A clinician might say: 'there is no neo-natal intensive care beds available so therefore I cannot provide all the care that might benefit this five or six hundred gram infant'.

Dr Brown: Yes, I think that is true in our society in that, for example, it would benefit individual patients to have some very expensive pieces of equipment available in more places within our State. The government has decided that facilities cannot be made available for economic reasons and inevitably that affects our practice. The decision has to be taken out of the hands of the clinician because inevitably our responsibility is to the individual, and if that facility or service is there, we are obliged to provide it.

Mr Jones: Just to comment about money and morals which, as I've already said, don't mix. They don't mix with ethics very well either, and I don't believe that any clinician should be put in the position of considering whether there is enough money to save this patient, if the patient is salvageable. We're not talking about six months on a ventilator, we are talking about the acute situation, in which money should not ever become an issue. Perhaps a hospital may decide that such a patient just doesn't get admitted to that hospital, but I would hate to think that there was a Sir Humphrey in some little back room doing sums, equating seventy year old heads with forty year old coronaries, which at the Federal level, we may well come to. That's why at both the Federal and State level, the ultimate ethical dilemma is the 'allocation of resources'; the phrase is an anathema, but it looks as if it's something we're all going to have to live with.

Mr Scott: I agree with that. I agree with what Dr Kuhse said also. The difference between the macro-economic and the micro-economic circumstances is enormous in this area. It is perfectly obvious in a modern developed community that the amount of money that can be made available for health care is limited and is going to become more limited and that really hard decisions are going to have to be made by governments. On the other hand, the idea of sitting by the bedside of a sick patient and saying 'have we got the money to continue this treatment?' is quite unacceptable, I would imagine, to most of us. The idea of applying cost-benefit analysis to terminally ill individuals would, no doubt, be unacceptable. Yet, on the other hand, we have the situation I was thinking about recently of a society that has socialised medicine. Take the Netherlands, for example, where my reading indicates that an annual decision is made by the government that so many kidney transplants will take place in the following twelve months — a hundred or a hundred and fifty, or what ever it happens to be. The inevitable result of that decision will be that a number of people certainly will die, a bigger or smaller number depending on the amount of money. So you have unavoidable decisions that the community is going to have to make, and make in greater and greater numbers from now on. And I guess we have to seek the best of both worlds in our answer. I suggest that you couldn't at the moment think of applying cost-benefit analysis to individuals with terminal illnesses, but it's quite plain that we are going to have to have that kind of analysis applied on the national or macro-economic level.

Professor Lovell: Now, let's just have one final question.

5. ***Is medical care so burdensome and intrusive that there should be such intense media surveillance of the processes of medical care?***

Dr Kuhse: Because we have just spoken about resource allocation, I think this is one area where media involvement is quite undesirable. A couple of years ago there was a story of a premature infant on the front pages of our daily papers. It was reported that there were not enough resources available locally and that the infant had to be flown to Adelaide or Tasmania. The next thing was, because of media pressure, because of the emotional pull of innocent babies perhaps dying, that our government made a decision to provide additional neo-natal intensive care beds. Now, I am not saying that the provision of additional neo-natal intensive care beds is necessarily wrong, but it is wrong that they should be provided just because a baby appeared on the front page of our daily papers. Old people, needing hip replacements, don't have this emotional pull. If we have to choose between the provision of different services, as we must, then we should find a rational basis for our decisions and not make them by default.

Mr Jones: A small point which was not made clear then, and as far as I know has not been made clear since, is that it is good economics (if poor for family-relationships) for the occasional baby to be flown from one city to another where there happens to be a vacancy. The alternative is multi-million dollars worth of empty incubators. It's a very

pragmatic solution, but it's better than spending more millions.

Professor Lovell: Our time is up. We'll draw this to a close and I'll hand over to the Dean.

Professor Graeme Ryan: During the afternoon, I've learnt a great deal about a range of things of which we hear just too much in the media but that are rarely discussed in this kind of forum. I'm very grateful to each of the speakers who've joined us today — Peter Jones, Stephen Cordner, Helga Kuhse, Bill Uren, Russell Scott who's come from interstate, and Graham Brown. Their comments have been extraordinarily interesting and valuable to all of us. I would also like to thank Professor Lovell for his guidance, his wise counsel in preparing the program and the skill with which he's been able to guide us through the afternoon. We also must thank Robin Orams who's put in a very great deal of work in preparing for this seminar. I'm very pleased with the attendance, and I thank the many people who provided the questions for discussion. I would also like to thank the Governor for attending in his informal role. Thank you all.

UMMS Membership
1 April 1989—31 March 1990

A membership renewal form is enclosed for those whose membership expires on 1 April 1989. Those who have been graduates for 50 years or more will become honorary members. The membership donation in 1989 is $35. A special donation of $10 for each of the first three years of membership will apply to first-year graduates who join in their internship year.

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Besides MBBS (Melb.) graduates, persons with a substantial association with the Faculty or the University's affiliated institutions, for example past and present academic staff, may become members. In addition, legally qualified medical practitioners registered or eligible to be registered in the State of Victoria, who do not qualify for automatic membership of UMMS, may be considered for membership on nomination by two members of the Society.

We would like to urge members to propose membership of persons who would be interested in being associated with the Society. All that is required is a joint letter together with the consenting signature of the recommended person.

1989 Highlights

Seminar

Resource constraints and the practice of medicine: Everything that might be done can't be done
Convener: Professor Emeritus Richard Lovell
Friday 21 July 1989
2.00 pm to 5.00 pm
Sunderland Theatre, Medical Building,
The University of Melbourne

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(to be announced)

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For details see inside back cover

Alumni Association Annual Dinner

Friday 19 May 1989
Ormond College
Speaker: His Excellency, the Governor of Victoria, Dr Davis McCaughey
Further information, telephone Christine McKay (03) 344 7804

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MUCS Grand Reunion

Singers with the Choral Society between 1959 and 1965

Saturday 5 August 1989
Ormond College
Further information, telephone Susan Patterson (053) 34 7549

Old and New Vistas in Schizophrenia*

David L. Copolov

Dean's Lecture Series
The University of Melbourne
12 April 1988

Fig. 1. This stark portrait of a patient with what would now be called schizophrenia, comes from Esquirol's 1838 atlas (ref. 54).

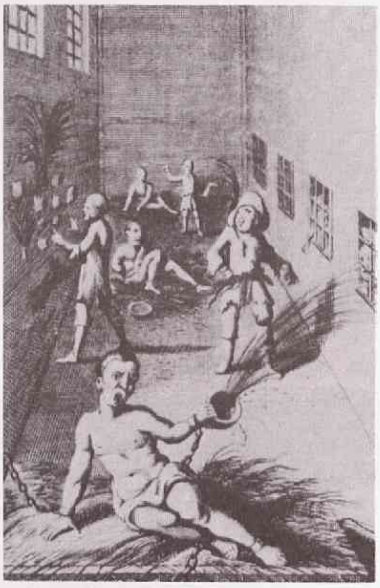

Fig. 2. Visitors observing the inmates of Bedlam. An engraving from Swift's *A Tale of a Tub* (1710).

Schizophrenia presents biomedical research with one of its greatest intellectual challenges and although it is very interesting to focus on the manner in which these challenges are currently being pursued, it is particularly important to contemplate the interpersonal and emotional costs of the disorder — for it is the depleting, constraining and destructive nature of schizophrenia (Fig. 1) that makes it one of the cruellest illnesses to strike people in the prime of their lives.

Schizophrenia is a serious, non-transient disorder of unknown aetiology comprising the major subset of the psychoses. Characteristic symptoms include delusions which are often persecutory, hallucinations — usually auditory, thought disorder, unusual or bizarre behaviour, emotional and social withdrawal and loss of motivation. It is easily the most expensive type of mental illness and is six times more costly to treat per person than myocardial infarction. Extrapolating from the 1985 data of Andrews et al. (1985)[1], schizophrenia currently costs Australia $1.5 billion per annum. The bulk of these costs are indirect costs associated with loss of productivity of schizophrenia sufferers, but the direct costs are substantial as would be expected from an illness which is responsible for the hospitalisation of more Australian patients than any other single illness. In Victoria, approximately half of our 3,000 pychiatric beds are occupied by patients with the disease.

A glimpse at the past

At best, the prevailing attitude in contemporary society towards people suffering from schizophrenia is one of apathy. In the past the prevailing attitudes seem to have been far worse. For example, until 1770 the general public were admitted to look at the patients at Bethlehem Royal Hospital in London — more generally known as Bedlam. Many written accounts of such visits exist[2]. One visitor wrote in 1725:

> On holidays, numerous persons of both sexes, but generally belonging to the lower classes, visited the hospital and amused themselves watching these unfortunate wretches who often would give them cause for laughter. On leaving this melancholy abode, you were expected by the porter to give him a penny.

Fig. 3. A group of schizophrenic patients, from Kraepelin's textbook on the disorder (Ref. 3).

Many of the patients were chained to cells in galleries like caged animals in a menagerie (Fig. 2). Even Emil Kraepelin, the great classifier of psychiatric illness and the man who introduced the distinction between dementia praecox (later renamed schizophrenia) and manic-depressive illness included a photograph in his book of schizophrenic patients sitting and standing in bizarre postures — seemingly as much to amuse as to inform[3] (Fig. 3).

*This article is an amplification of Dr Copolov's lecture at which he spoke to an extensive set of slides, and has been prepared by him for publication in *Chiron*.

Fig. 4. Dr Walter Freeman performing a transorbital lobotomy in 1949 at the Western State Hospital in Washington.

Fig. 5. The orbitoclasts in place.

It was the seriously mentally ill who were also the subjects of the cavalier psychosurgical era of the middle of this century. Moniz, a Portugese neurologist, was awarded the Nobel Prize in 1949 for introducing the lobotomy into the therapeutic armamentarium. Moniz and his colleagues recommended that standard neurosurgical precautions be taken in the conduct of lobotomies, but the great expansionist of lobotomies — Walter Freeman — believed that such precautions could not afford to be taken because they slowed down the rate of conducting these operations in the face of what he perceived to be the great need for them to be done on large numbers of State psychiatric hospital in-patients[4]. He popularised the procedure of transorbital lobotomy whereby an instrument called an orbitoclast (an ice-pick like intrument) was hammered through the orbital plate of the frontal bone into the frontal lobes of the brain and moved from side to side to sever the connections between the frontal lobes and the rest of the brain. The operation was performed without general anaesthesia — the orbitoclast was hammered home in the period of unconsciousness following the delivery of unmodified electroconvulsive therapy (Figs. 4 and 5). It was recognised that certain areas of the posterior portion of the prefrontal region of the brain were traversed by blood vessels liable to be severed by the orbitoclast. Freeman therefore injected the patient's own blood into these regions through the orbitoclast puncture site in order to cause lysis of tissue in these areas.

The use of such brutal neurosurgical exorcism contrasts markedly with the precise and highly localised stereotactic operations which are nowadays used with appropriate rarity for intractably ill psychiatric patients — usually those with profound affective and obsessional disorders. Although the extensive use of 'Rambo-style' treatments such as transorbital lobotomy reflects foolhardy lack of restraint, it does underline the fact that over the centuries, caregivers have been desperate to improve the outlook of people suffering from an illness which brought such havoc to their lives.

Areas of contemporary research interest

1. *Diagnostics*

There has been a most noticeable increase in the momentum with which both the biological and psychosocial aspects of schizophrenia are being explored. However, at present we do not know the cause of the disorder; we don't know the mechanisms that result in its characteristic symptoms and we don't have any biological markers which could aid clinicians in reaching a diagnosis.

In order to make a dent in the wall of ignorance surrounding the disorder, a prerequisite has been the establishment of guidelines which can bring some uniformity into diagnostic practices. In earlier decades psychiatrists, especially those of a psychoanalytic persuasion, eschewed the diagnostic process because of concerns that in making a diagnosis the individuality of the patient was being forsaken. In contrast, from the early 1970s a keystone in the development of research in schizophrenia began consolidating in the form of operationalised diagnostic schemes. Such diagnostic systems incorporate specific inclusion and exclusion critieria for reaching diagnoses. The most widely system is the *Diagnostic and Statistical Manual of the American Psychiatric Association*, 3rd edn, (DSM-III). Using systems such as DSM-III, psychiatry has established high interater reliabilities[5] — reliabilites which are better than any other medical sub-specialty which relies on symptom-based diagnoses.

The introduction of operationalised diagnostic systems does not overcome the critical problem that there is no 'gold standard' for the diagnosis of schizophrenia. Numerous diagnostic schemes have been developed, many emphasising a different aspect of the disorder such as the presence of specific psychotic symptoms, the duration of the illness and the presence or absence of affective symptoms. Although two or more raters using a particular diagnostic system will agree with one another in the vast majority of instances, raters using different diagnostic systems will have low diagnostic concordance. The lack of concordance of diagnostic systems is illustrated by the fact that the percentage of patients diagnosed to be schizophrenic in our research ward (which admits only patients suffering psychotic illnesses) varied from 32 per cent — using Langfeldt's criteria, to 64 per cent — using World Health Organisation criteria.

It is apparent that until some independent validator of schizophrenia comes to light, the researcher should remain in a state of relative agnosticism about the value of different methods of diagnosing schizophrenia. To assist in comparing the validity of these different methods we have developed the Royal Park Multi-diagnostic Instrument for Psychosis (MIP), which allows schizophrenia to be diagnosed according to fourteen different schemata. Instruments such as the MIP can be used, for example, in biological studies to determine which of the various diagnostic schemata identify a population of patients in which a given biological variable is maximally different between schizophrenic and control populations.

2. *Genetics*

It has long been known that schizophrenia tends to run in families. It has been shown, for example, that the lifetime risk of developing schizophrenia is 1 per cent in the general population. In contrast, second degree and first degree relatives of patients with schizophrenia have lifetime risks of, respectively, 3 per cent and 10 per cent for developing the disorder[6]. There have been many important studies which have demonstrated that in affected families the increased prevalence of the disorder is the result of the transmission of genes rather than family environment characteristics. Two of the most compelling research strategies used to provide this evidence have involved the study of twins and the study of adoptees. Although most of these studies date from the 1960s and 1970s, they provided an extremely important platform from which contemporary molecular biological studies on the genetics of schizophrenia have sprung.

Studies of the concordance rates of schizophrenia between monozygotic and dizygotic twins have indicated that the concordance rate for schizophrenia between monozygotic twins is 3 to 4 times greater than the concordance between dizygotic twins[7]. The fact that monozygotic twins share identical genes whilst dizygotic twins do not, highlights the important role that genes play in the development of the disorder, whilst the fact that the monozygotic concordance rate for schizophrenia is only 40-60 per cent underlines the fact that alone, a genetic predisposition for the disorder is not the unique and universal determinant of its expression.

The excellent records which are kept in Scandinavia have allowed some very valuable adoption studies to be undertaken there. Heston (1966)[8] and Rosenthal et al. (1971)[9] studied the adopted-away children of schizophrenic patients. They found that the prevalence of schizophrenia amongst such children was considerably higher that the prevalence of schizophrenia amongst the adopted-away children of non-schizophrenic parents. Kety et al. (1968)[10] used a mirror image strategy in that they studied the parents of the biological and adoptive parents of adoptees who developed schizophrenic illnesses. They found that the biological parents of such individuals had a considerably higher incidence of schizophrenia than the adoptive parents. Whilst there is fairly compelling evidence that schizophrenia has a genetic basis, it is important to highlight the fact that schizophrenia is only found in the first degree relatives of 20 per cent of schizophrenia sufferers[11], although the prevalence of all psychiatric disorders in such relatives may be as high as 50 per cent[12].

Undoubtedly, the findings which have aroused the greatest interest in the genetics of schizophrenia were the findings from Sherrington et al.'s (1988)[13] study of Icelandic and British psychiatric patients and their families which suggests that there is a strong association between the inheritance of schizophrenia and a marker segment on the long arm of chromosome 5. This study depended on the use of restriction fragment length polymorphisms (RFLPs) which are generated when human chromosomes are digested by bacterial enzymes into fragments which are then sized by running them on electrophetic gels. Interest in chromosome 5 arose from the fact that Basset et al. (1988)[14], using cytogenetic techniques, found that a man and his nephew, who shared a history of unequivocal schizophrenia and unusual facial and soft tissue abnormalities, both had an extra copy of a segment of chromosome 5. Although the findings of Sherrington et al. have aroused great interest, a companion article in *Nature*[15] found that in a sample of Northern Swedish families there was no association between putative markers on chromosome 5 and schizophrenia.

3. *Neurochemistry*

Neurochemistry research in schizophrenia continues to focus on dopamine neurobiology. Interest in the dopamine excess theory of schizophrenia arose from the fact that all effective antipsychotic drugs have dopamine blocking activity. The theory has received considerable support from many post-mortem studies which have consistently revealed that the number of D_2 receptors in the basal ganglia and the nucleus accumbens of the brains of schizophrenics is greater than that found in control subjects[16]. Most of these studies were conducted on patients who were on antipsychotic medication and therefore may have represented changes secondary to the use of such drugs. However, studies on patients who had been drug free for a considerable period before death also revealed increased D_2 receptors in these brain regions[17 18].

Of great interest has been the development of methods which can allow the measurement of dopamine receptors in

the brains of living patients. This technology involves positron emission tomography (PET). Following injection into an antecubital vein, positron containing dopamine antagonists attach to dopamine binding sites in the brain. Using an array of detectors which enable cross-sectional brain mapping to be carried out, the site and concentration of these binding sites can be determined by measuring photons (which form by the collision of the emitted positrons with surrounding electrons). Using PET technology, Wong and colleagues[19] have suggested that there is an increased D_2 receptor density in the basal ganglia of schizophrenic patients. In contrast, Farde et al. (1987)[20] using a different radio-nuclide compound, failed to detect a difference between D_2 receptor densities in schizophrenic patients and control subjects.

Our own studies have involved the indirect study of dopamine function by an examination of prolactin release from the pituitary gland after challenge with low doses of the dopamine antagonist drug haloperidol. Dopamine is the main neurotransmitter involved in inhibiting the release of prolactin into the peripheral circulation. We have shown that neuroleptic-free male schizophrenic patients release less prolactin after haloperidol challenge than control subjects[21]. Haloperidol antagonises the inhibitory 'brake' on prolactin release and a blunted prolactin response to haloperidol is consistent with a greater inhibitory neurotransmitter influence on the pituitary, either as a result of increased dopamine release from the hypothalamus or of an increased dopamine receptor number or affinity in the pituitary.

The coalescence of findings from post-mortem and PET studies have led investigators to consider the mechanisms which might lead to up-regulation of dopamine receptors in the striatum. Weinberger (1987)[22] has focused on the control of striatal dopamine by pre-frontal cortex structures, citing an informative study[23] which demonstrated that lesions to the pre-frontal cortex will result in up-regulation of dopamine receptors in the rat striatum one month after lesioning. This has led Weinberger to postulate that schizophrenia may involve hypo-function of the pre-frontal cortex together with hyper-function of striatal and limbic dopamine systems. On the basis that hypofunction of the pre-frontal cortex may involve the D_1 dopamine system, psychopharmacologists are now investigating the combined use of D_1 receptor agonists together with D_2 receptor antagonists in the treatment of schizophrenia.

4. *Structural and functional studies of the brain*

One of the most studied biological variables in schizophrenia has been lateral ventricular size, as determined by computerised tomography (CT). More than 100 CT studies have been performed and laterial ventricular enlargement has been found in 20-35 per cent of schizophrenic patients[24]. The consensus is that such CT changes are not specific to schizophrenia and that the enlargement is apparently static. A number of studies have indicated that there are correlations between lateral ventricular enlargement and poor premorbid adjustment, decreased response to antipsychotic drugs, poor outcome and the number of negative symptoms.

Many (but not all) studies which have examined different aspects of brain function, have identified decreased frontal lobe activity in schizophrenic patients. For example, relative hypofrontality has been identified in topographic electroencephalographic investigations[25 26 27], cerebral blood flow studies[28 29 30] and PET brain metabolism measurements.[31 32 33] Of particular interest has been a number of studies[34 35 36] conducted at the National Institute of Mental Health which have revealed a markedly reduced regional cerebral blood flow to the frontal lobes during the Wisconsin card sort — a neuropsychological test specifically designed to activate the frontal lobes.

The attention given to the frontal lobe by neurophysiologically orientated researchers has been complemented by the studies of developmental neurobiologists who have unearthed very interesting findings on the dorsolateral prefrontal cortex (DLPFC). For example, myelination of the DLPFC is not completed until after the myelination of all other brain regions has taken place[37] and as Alexander and Goldman (1978)[38] have shown, lesions of this brain region do not impair psychomotor performance in monkeys until after sexual maturity. Weinberger (1986)[34] has argued, from these findings, that the symptoms of schizophrenia may not come on until adolescence because, as in Alexander and Goldman's study, the malfunctioning brain region may not reveal a disturbance of its function until a certain level of maturation enables the region to come 'on line'.

5. *Drug abuse and schizophrenia*

There has been considerable interest in exploring possible links between drug abuse and schizophrenia. Intoxication with the recreational drug phencyclidine results in symptoms reminiscent of schizophrenia including hallucinations, thought disorder, agitation and catatonia. Specific high affinity binding sites for phencyclidine have been found in the human brain[39 40], and studies by Quirion et al. (1984)[41] have demonstrated the existence of substances in brain homogenates which displace labelled phencyclidine from its binding site. The search is now on to try to further characterise the endogenous ligand with a view to sequencing it and eventually developing assays for measuring its concentration in the brain and plasma of patients with schizophrenia.

There has been a long-standing debate as to whether heavy marijuana use predisposes to the development of schizophrenic symptoms. While it is clear that patients who become marijuana intoxicated can develop symptoms reminiscent of schizophrenia, a more contentious point is whether individuals who have large cumulative usage are more predisposed to develop schizophrenia than the general population. A fundamental flaw in most of the studies which have so far been undertaken is that they rely on retrospective assessment of marijuana use. In contrast, a recent prospective study from Sweden[42] involved the investigation of nearly 46,000 Swedish men in the fifteen year period following their conscription into the Swedish National Service. The risk of developing schizophrenia in those who had smoked marijuana was significantly greater than for non-users and there was a dosage effect on this risk with those who had used marijuana on more than fifty occasions at the time of conscription having a six-fold increased risk of subsequently developing schizophrenia than those who had denied marijuana use.

To put these findings in context, only 10 per cent of the schizophrenics identified in the study had used marijuana frequently and only 3 per cent of frequent marijuana users developed schizophrenia. Thus, if marijuana is an aetiological factor in schizophrenia it is only so in a comparatively small sub-group. Nevertheless, clinical wisdom dictates that patients should be advised of the fact that marijuana may exacerbate schizophrenic symptoms and therefore should be dissuaded against heavy marijuana use.

6. *Therapy*

The last major advance in the drug treatment of schizophrenia research occurred more than thirty years ago with

the introduction of phenothiazines. These antipsychotic drugs have led to a major revolution in the management of the disorder.[43] However, further drug research is a high priority, because 20-30 per cent of patients have symptoms which prove drug resistant and furthermore, the medication is associated with significant neurological side-effects — the most troubling of which is tardive dyskinesia, a condition which tends to be permanent.

Research into new drugs[44 45] has involved the examination of atypical neuroleptics (e.g., clozapine and sulpiride) dopamine agonists (e.g., L-Dopa and bromocriptine), sigma receptor antagonists (e.g., rimcazole) peptides (e.g., des-Tyr gamma endorphin and ceruletide) and calcium channel blockers (e.g., verapamil). Of particular interest in the United States has been the drug clozapine. A recent study[46] has suggested that this drug has superior efficacy over chlorpromazine in the management of treatment resistant schizophrenia. The problem with clozapine is that it induces agranulocytosis and was responsible for a cluster of deaths in Finland in 1975.[47] The fact that the drug seems useful in treatment-resistant patients and apparently has minimal extrapyramidal side effects suggests that it may become the 'chloramphenicol of psychiatry'. It may find an important niche despite its significant haematological side effects.

Although drug therapy is a key component in the treatment of patients, it is imperative that such therapy be combined with psychosocial interventions. Excessive reliance by the clinician on the use of neuroleptic drugs means that the adverse effects of schizophrenia on important areas of function such as interpersonal skills and social role adaptation are likely to remain untempered. Increasing attention is being paid to the involvement of family members in the therapeutic process. The use of family psycho-educational treatments in which families are taught about schizophrenia and about methods which can improve communication and cope with persistent symptoms in the affected family member have been shown to significantly reduce relapse rates.[48 49]

The role of hospitalisation in the treatment of certain groups of schizophrenic patients needs to be remembered, especially at a time when advocates for radical deinstitutionalisation have teamed up with fiscal conservatives to dramatically under-fund psychiatric hospitals in some Australian States — New South Wales being a notable example. In that State, proposals to close a large number of State hospitals resulted as much from a major concern about the cost of making good the chronic state of disrepair of the hospitals as from policy-driven considerations about the need to transfer resources from the hospital to the community sector. In contrast, in Victoria, there is a much better balance between community and hospital facilities. Between 1982 and 1988 the capital works funding for the Office of Psychiatric Services increased from $6 million to $36 million per annum. Whilst in New South Wales no psychiatric hospital has been considered suitable for accreditation by the Australian Council on Hospital Standards, Royal Park Hospital was accredited by the Council for the second time in 1988, and South Australia has two accredited public psychiatric hospitals. The role of psychiatric hospitals in treating floridly psychotic and treatment-resistant patients, as well as those who are a danger either to themselves or to others in the community, should receive appropriate recognition.

7. *Outcome*

The father of modern psychiatric diagnostics, Emil Kraepelin, followed 127 patients over twenty-nine years and observed that fewer than 3 per cent had a lasting recovery.[3] Because of Kraepelin's standing and of similar early findings, many clinicians have held particularly pessimistic attitudes towards the likely recovery of their patients. Such attitudes need to be modified in the light of a number of large, well-conducted, long duration follow-up studies which have indicated that complete remission occurs in between 20 and 30 per cent of patients and, overall, 50 per cent or more patients significally improved when assessed at 20, 30 and 40-year follow-up periods.[50]

Two studies[51 52] have suggested that early treatment with neuroleptic medication may not only control symptoms at the time of the acute psychotic episode, but may positively affect long term prognosis. Whether such protection might occur through neurochemical mechanisms or by making patients more accessible to psychosocial interventions, remains an unanswered question.

Unexpectedly, a major prospective World Health Organisation-sponsored cross-cultural study[53] has demonstrated that schizophrenic patients from developing countries including Nigeria, India and Columbia had better prognoses than patients from developed countries. A favoured explanation for this finding is that in developing countries, family members play a much more active role in caring for patients, both in hospital and at home. Hypotheses such as this one must be explored in depth in order to identify the factors facilitating recovery in these countries and to ensure that social structures which encourage recovery are not jettisoned as a consequence of increasing industrialisation and development.

Conclusion

It is really quite astounding that an illness of such profound impact and broad reach as schizophrenia received such meagre attention from researchers until about twenty years ago. Perhaps this lack of interest has been due to the dissociation of State psychiatric hospitals from university departments of psychiatry, to the lack of technologies which would encourage researchers to apply themselves to the problems presented by the disorder, to the difficulty in studying neuroleptic-free patients, to the past tendency for psychiatry to recruit 'research-shy' individuals, and to the lack of funding incentives. Whatever the reasons, the research landscape in schizophrenia is changing in a most reassuring manner.

Public advocacy for an increased funding allocation to schizophrenia research is being effectively carried out by The National Alliance for the Mentally Ill in the United States and by Schizophrenia Australia Foundation. The U.S. National Institute of Mental Health has made schizophrenia its number one priority. Sub-specialist journals — such as *Schizophrenia Research* and the *Schizophrenia Bulletin* — are devoting themselves to the illness. The National Health and Medical Research Council has established a Schizophrenia Research Unit at Royal Park Hospital under the auspices of the Mental Health Research Institute of Victoria and the Monash University Department of Psychological Medicine. Increasingly, neuroscientists are sharing an interest with their psychiatric colleagues in the disorder and major technological advances — only a few of which have been described in this lecture — have given researchers hope that although a heterogeneous disorder, schizophrenia is no longer impenetrable to the thrusts of scientific probing.

Thomas Huxley stated that the great tragedy of science was that it involved the slaying of beautiful theories by ugly facts. If this is the case, then we can only hope that in schizophrenia research, the vista changes from the 'beauty' of the unsubstantiated speculation of yesteryear to the 'ugliness' of an increasing bounty of facts.

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Acknowledgements

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Fig. 1 Sander L. Gilman, *Seeing the Insane,* A Wiley-Interscience Publication, John Wiley & Sons, N.Y., in association with Brunner/Mazel Publishers, 1982, plate 99, p.80.
Fig. 2 Ibid., plate 61.
Fig. 3 Kraepelin E. *Dementia Praecox and Paraphrenia,* E. & S. Livingston, Edinburgh, 1919, Fig. 3.
Fig. 4 Vallenstein, Elliot S. *Great and Desperate Cures,* Basic Books, New York, 1986, Fig. 10.2.
Fig. 5 Ibid., Fig. 11.3 (top).

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Hormones, Bone and Cancer

Professor T.J. Martin

1988 Mathison Memorial Lecture
Dean's Lecture Series
The University of Melbourne
24 May 1988

Prof. T.J. Martin

I am greatly honoured to give this 17th Mathison Memorial Lecture. Gordon Clunes Mackay Mathison was a graduate of the Medical Faculty of this University in 1906 and only five years later, after working in St Mary's hospital in London he was awarded the MD degree from The University of Melbourne and a Doctor of Science from London University. He returned here as an assistant pathologist and shortly after that was appointed the first Director of The Walter and Eliza Hall Institute. Unfortunately, it was a position he was never able to take up. The war broke out shortly after that and he became a captain in the AIF. He was wounded in Gallipoli and died shortly afterwards. His friends and colleagues at the time were so impressed by his energy and enthusiasm and the enormous amount he had done in such a short space of time that they established this lecture that I am now honoured to give.

I shall spend the first third or so of this talk giving a summary of several years work by myself and many colleagues in bone biology, to show how our knowledge of this has helped greatly in the last few years to work out the mechanisms by which several cancers have profound effects on bone. Bone constitutes an enormous store of mineral salts and provides the framework for the structure of the body. 99 per cent of the body's calcium is contained within the bone, and despite this enormous excess in bone over that which is in the extra-cellular fluid, the blood calcium level is maintained between very tight limits in normal individuals. It is only in gross abnormalities that we go outside those limits, and a common contributing factor to such abnormalities is the cancers to be discussed later. Many people think of bone as being virtually a dead tissue, but I hope to convince you that it is very much alive, and that we need to know a great deal more than we have even learned over the last ten to fifteen years about the biology of bone if we are going to understand its diseases.

I might say at the beginning that there are a few people who have inspired me to have an interest in the hormones that act upon bone, and subsequently in looking in a more detailed way at cancer. The first of these is Professor Iain MacIntyre, who was my mentor at the Hammersmith in 1965 and '66, and who has helped and advised me greatly ever since that time. Secondly, Doctor Roger Melick with whom I worked for several years when I came back to Melbourne from London to The Royal Melbourne Hospital, and then collaboratively for years after that. Roger Melick was an enormous help and stimulus to me and I certainly pay a great tribute to him. The third person I wish to recognise for the many ways in which he has helped me in my academic career is one who is very well-known to all here, and that is Professor Austin Doyle.

The first thing to convince you of is that bone is very much alive. Within the substance of bones there is a fine network of the trabeculae which contributes much of the strength to bone. There is a network of blood vessels, of course, and of nerves supplying through the external surface. Within the spaces of long bone is the bone marrow which contains the cells contributing to blood formation. These undoubtedly produce many proteins and other factors which are very important for the normal formation and breakdown of bone.

Bone formation and breakdown are continuing all the time, and there are two main cell types responsible for this. The osteoblast is traditionally considered to be responsible for forming bone and the osteoclast for resorption. Osteoclasts are giant multi-nucleated cells with ruffled borders, which attach themselves to the surface of bone, and break it down by releasing acid and enzymes. The processes of formation and resorption have to be balanced equally if bone structure is to be maintained, and there are many factors that operate to bring about this equal formation and resorption. I intend to summarize these, but need to make the point that although osteoblasts have in the past been considered to be only responsible for bone formation, we now know that the family of osteoblasts consists of cells with several different functions.

Some of these become embedded in bone, are called osteocytes, and communicate with the cells along the surface of bone by a system of channels, probably conveying messages between cells. Another type of osteoblast which has lost its ability to form bone is called a lining cell. It is extremely important in the biology of bone, a fact that we drew attention to several years ago by pointing out that it makes messages which instruct the osteoclast to resorb bone (Martin, et al. 1979; Rodan & Martin 1980). This is an important concept in bone cell biology, that the bone resorbing hormones act through osteoblast-like cells in order to activate the osteoclasts to resorb bone (Martin et al. 1988). I am concentrating this discussion on bone resorption, because it is the breakdown of bone which is the problem in the cancers to be discussed later. It is therefore useful to enlarge a little on how resorption is regulated.

The osteoclast is a very large cell which virtually eats away an area of bone. It is a mobile cell which does its job and then moves on to another area of bone. It needs to be activated by factors that are produced locally by adjacent cells, particularly cells of the osteoblast series, and this overall process can be regulated by circulating hormones. The first hormone that was known to promote bone resorption was parathyriod hormone. Collip in 1925 made the first biologically active extracts of parathyroid hormone, injecting them into dogs and a high plasma calcium resulted. It was almost thirty years before it could be shown that this hormone, parathyroid hormone, acted directly upon bone to promote bone resorption.

We can show by culturing foetal or newborn bones *in vitro* that the hormone promotes bone breakdown, and that it does so by increasing the number and activity of osteoclasts. Another group of potent bone resorbers are the

prostaglandins, which are not circulating factors, but locally generated either by other bone cells or by inflammatory cells, or, as we discuss shortly, by tumour cells. Of all the prostaglandins, PGE_2 is the most potent in promoting bone resorption. Vitamin D is, of course, a potent bone resorbing hormone which acts on the osteoblast, and the growth factors — epidermal growth factor and transforming growth factor alpha — are also powerful bone resorbing agents which act directly on osteoblasts. The cytokines, interleukin 1 and tumour necrosis factors alpha and beta are also potent bone resorbers. All of these agents, although they act directly on osteoblasts, have the indirect effect through the osteoclasts of activating resorption, because the osteoblasts produce messages which end in activation of osteoclasts. We presented this theory some years ago to point to the fact that osteoblasts of the bone lining cell type produce a factor or factors which by a number of different mechanisms finish up increasing the number and activity of osteoclasts. There are certainly a number of different mechanisms involved, including chemotaxis, differentiation and activation. Thus there may be several factors, and one of the major areas of interest in bone cell biology over the last several years has been to determine what these factors are. I am sure that the key to understanding diseases such as osteoporosis lies in the chemical identification of such factors.

It is also necessary to understand these processes if we are going to understand how tumour cells interact with bone. There are many circulating and local factors that we know of and undoubtedly others that we have yet to determine, which are important in regulating bone resorption and formation. With that background, I want to spend the rest of the time talking about the effects of certain cancers upon bone.

Hypercalcemia with accompanying symptoms of nausea, drowsiness, polyuria and dehydration, and coma in severe cases, is a very common complication of quite a range of cancers. There are three main types of hypercalcemia in cancer. The first is those solid tumours without bony metastases, that is the humoral hypercalcemia of malignancy. The second is solid tumours with bone metastasis, particularly carcinoma of the breast and kidney; and thirdly, the hypercalcemia that is related to a number of haematological malignancies particularly multiple myeloma and some lymphomas. In each of these cases what we have learned over the last several years of bone cell biology has contributed a great deal to our understanding of the mechanisms and certainly helps form the basis for more rational prevention and treatment.

I shall discuss briefly the tumours that metastasize to bone. It was recognised in the late nineteenth century that certain cancers metastasize to bone, particularly cancer of the breast. We now know from clinical and pathology observations that there are certain tumours that have a particular predilection for growing in bone, especially cancers of breast, lung, kidney and prostate. Over the last several years one of the favoured views of the mechanisms of tumour metastasis is that cancer cells, in order to be able to grow in a distant organ, need special properties to enable them to do so. Therefore, for cancer cells to grow in bone they need to have very different properties from those which allow them to grow in liver, and for that reason we do need to know what properties they require to erode bone and establish in it. Unfortunately it is a common feature of carcinoma of the breast that multiple bone metastases occur, with symptoms of bone pain and easy fracturing, and often associated with a high plasma calcium. The erosion of the bone is caused by a combination of activation of resident osteoclasts, and in some cases probably also direct resorption by the tumour cells themselves. What have we learned of tumour cells over the last few years that enables them to do this? Tumour cells get into the marrow cavity by blood-borne spread; those cells that are going to be able to establish themselves in bone need special properties to do so. They need first to be capable of initiating a small degree of resorption which they can do by a number of mechanisms, and once that initial degree of resorption takes place then the cells are able to become established in that niche and grow there if they have the properties that will allow them to do so. We began studying these questions in the 1970s, in experiments carried out in Sheffield. What they indicated was that prostaglandin production by certain cancers, particularly kidney and breast, could be a major contributor to the bone-resorbing capability of these tumours. However, it was clear even then that there were other factors that could be important. It was, nevertheless, the conclusion at that time that prostaglandins were important in giving tumour cells (say from breast or kidney) the ability once they were in the bone marrow to stimulate resorption. Having initiated resorption, the tumour cells were able to establish themselves in these niches in the bone created by the osteoclastic resorption, and then by virtue of their own bone resorbing capacity were able to grow in bone. However, that was the view we put in the late 1970s and is almost certainly a considerable over-simplification. Several other attributes are probably necessary to enable tumour cells to do this. They should produce bone resorbing factors, and the prostaglandins are only one class of substances which might contribute to this. A second class is the parathyroid hormone related protein, the isolation of which will be described shortly, and which may well be produced by a number of breast cancers and certainly is very commonly produced by kidney cancers. A third class is the family of cytokines, mentioned previously, including the tumour necrosis factors and interleukins. These are very potent bone resorbers which can be produced in marrow, not necessarily only by the tumour cells themselves but by bone marrow cells activated by tumour cells. The second important property is the ability of the tumour cell to produce neutral proteinases particularly plasminogen activator and collagenase. We believe that the plasminogen activator system and its regulation are important in the mechanisms by which tumour cells establish in bone. A third property that is probably important for tumour cells to be able to grow in bone is their ability to transport calcium. Several years ago when with John Eisman we found for the first time that cancer cells, particularly breast cancer cells, possessed receptor for a vitamin D, we speculated that perhaps the function of this was to give to those cells the ability to transport calcium and help them to grow in bone (Martin & Mundy 1987). We tried to prove it over the next several years by correlating tumour levels of this receptor in patients with breast cancer, and following up their clinical course. Despite the fact that we studied over 200 patients, we have not been able to prove it. There are still a number of groups interested in that possibility, and more extensive studies are being carried out. The final requirement for a bone metastasis is the ability to grow in bone. This summary of the current views outlines our own work and that of others illustrating what we know of the mechanisms by which tumour cells establish in bone as metastasis.

The second main class of malignant hypercalcemia to be mentioned briefly is that with the haematological malignancies. The concept developed that myeloma cells or in some cases lymphoma cells were able to produce something which acted on osteoclasts to promote bone resorption. The name 'osteoclast activating factor' was given to such activity. However, we now know from more recent work that the term 'osteoclast activating factor' does not

describe just one substance, but a range of substances, including interleukin 1, tumour necrosis factors alpha and beta, certain of the colony stimulating factors and undoubtedly other cytokines, all of which are able to promote bone resorption. In different haematological malignancies different members of this family of factors will be responsible. For example, we currently think that in multiple myeloma, lymphotoxin (tumour necrosis factor beta) is the responsible factor. In one form of T cell leukemia, interleukin 1 is considered to be the responsible factor for the increased bone resorption. Only now the reagents are becoming available that will allow us to resolve what are the responsible factors, since there are now monoclonal antibodies in existence which should help us to answer the question.

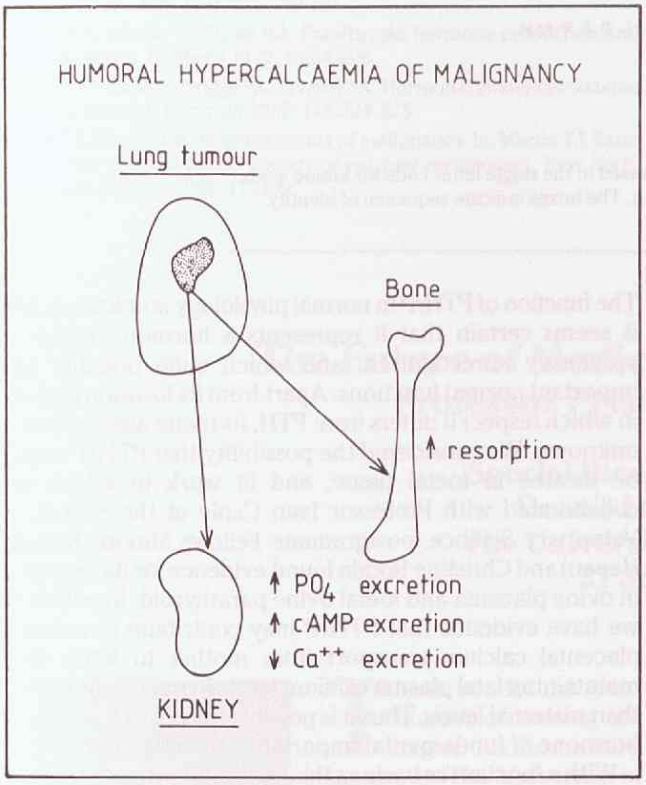

Fig. 1. This depicts the way in which cancers produce factors which circulate in the body and result in effects unrelated to local cancer growth — in this case demineralization of the bones and a high blood calcium.

For the remainder of the lecture I shall discuss some very recent work, that is, the history of the isolation of a factor responsible for the humoral hypercalcemia of malignancy. The work to be summarised over the next several minutes has been done at the Repatriation General Hospital by my many colleagues there, and some of our collaborators elsewhere. The aim was to determine what are the factors produced by certain cancers — particularly squamous cell carcinoma of the lung, carcinoma of the kidney, esophagus and a number of epithelial cancers and certain others — which reach the circulation and act generally upon the skeleton to promote bone resorption, and upon the kidney to reduce calcium excretion and to increase phosphate and cyclic AMP excretion. In 1941 when discussing a case of hypercalcemia in a cancer of the kidney, the late Fuller Albright (1941) suggested that perhaps the hypercalcemia was due to inappropriate or ectopic production by the cancer of parathyroid hormone (PTH). From that time the idea that this syndrome of hypercalcemia in cancer without metastasis was due to inappropriate production by the cancer of PTH became established in the literature (Melick et al. 1972). In 1979 we introduced the term 'humoral hypercalcemia of malignancy' (Martin & Atkins, 1979) to describe patients with a high blood calcium and low phosphate and a high kidney production of cyclic AMP, but without bony metastases and with a low circulating level of PTH. The fact that it was indeed a low circulating level of PTH really only became widely accepted in the early 1980s. Until then it was generally thought that the syndrome was due to the production by the cancers of PTH, in accord with Albright's original suggestion. However, by the early 1980s it was realised that some unknown humoral factor which had biochemical and physiological actions very similar to those of PTH must be responsible, but that it could not be PTH itself.

The evidence to indicate this was obtained in the early 1980s (Mundy & Martin, 1982). First of all it was found that certain extracts from some of these cancers were capable of exerting a parathyroid hormone-like action by stimulating adenylate cyclase activity in PTH-responsive cells, but not in other cells. The cells used in this work were ones that we had developed — clonal lines of osteogenic sarcoma cells that provided exquisitely sensitive biological assays of PTH (Martin et al. 1976; 1987). This assay made it possible ultimately for us to purify this protein. Secondly, this stimulation was blocked by specific peptide antagonists of PTH which were not capable of blocking the actions of other hormones. Thirdly, this activity was not blocked by antibodies against the biologically active part of PTH.

A human lung cancer cell line (BEN), which we had been studying for several years, was found to produce substantial amounts of this PTH-like adenylate cyclase-stimulating activity. The BEN cell line had been established originally from a patient with hypercalcemia and squamous cell carcinoma of the lung, and we had been studying it from other points of view. Purification of the active component from BEN cell medium was achieved by processing large batches of conditioned medium through cation exchange chromatography and several reverse phased high pressure liquid chromatography steps, with monitoring of purification at all stages by use of the sensitive biological assay. A protein of molecular weight 17/18 000 was purified in this way, and in the late stages of purification the only active material eluted from electrophoretic gels was at that molecular weight. The purified material was obtained in only very small amounts, but sufficient for Professor Dick Wettenhall to carry out amino acid sequencing and for biological assay to show that the pure protein was several times higher in specific biological activity than PTH itself. Amino-terminal sequence of purified material pointed to significant homology with PTH about the amino-terminus, with eight of the first 13 residues being identical with those in PTH (Moseley et al. 1987). Knowledge of the first 24 amino acids of the sequence was used to prepare synthetic oligonucleotides as probes, which were used to isolate cDNA clones from a cDNA library in gt10, prepared from the BEN cells. This was work which a graduate student, Larry Suva, carried out with the help of Dr Peter Hudson (CSIRO, Melbourne) and Dr William Wood (Genentec, San Francisco) (Suva et al. 1987). Full-length cDNA clones were isolated and found to encode a prepropeptide of 36 amino acids and a mature protein of 141 amino acids. At the same time, further amino acid sequence to residue 50 was obtained by a combination of a amino-terminal sequencing and use of an overlapping tryptic peptide; as part of the same study, sequence from tryptic peptide was also obtained from residues 68 to 79. All the amino-acid sequence data confirmed the sequence of the predicted protein.

The striking homology with PTH about the amino-terminal region is not maintained in the remainder of the molecule, which therefore represents a previously unrecognised hormone, which may be related to the PTH gene by a

Fig. 2. Structures of human PTH and PTHrP, expressed in the single letter code for amino acids, and including the leader sequence for each protein. The boxes indicate sequence of identity.

process of gene duplication. The amino-terminal functional segment, similar in sequence to the corresponding PTH prototope, can explain the interaction of the PTH-related protein (PTHrP) with PTH receptors. Indeed, just as PTHrP purified from BEN cell medium is clearly more potent than human or bovine PTH (1-34) in stimulating cyclic AMP formation in clonal osteogenic sarcoma cells the synthetic peptide PTHrP (1-34) is approximately four-times more potent than human PTH (1-34) in the assay. We were able to carry out these experiments very quickly after determining the structure of PTHrP because Dr Bruce Kemp in the Department was able to synthesize chemically the necessary peptides (Kemp et al. 1987).

The existence of this protein helps to explain a number of the puzzling features which surround our understanding of the pathogenesis of HHM. The structural similarity about the amino-terminus might be sufficient to explain the PTH-like effects of the protein associated with HHM. On the other hand the differences in the remainder of the molecule can explain the failure of most PTH radioimmunoassays to detect the protein. We have developed radioimmunoassays using synthetic peptides as antigen, based on the amino-terminal sequence of PTHrP. Such assays have the capacity to detect synthetic peptide and tumour protein, but exhibit only weak cross-reactivity or none at all with peptides based on the human PTH sequence. The fact that some antisera in the past have detected elevated 'PTH' levels in hypercalcemic cancer patients could be explained by the fact that occasional antisera might recognize a common epitope about the amino-terminus. In work carried out by Drs Janine Danks and John Hayman, we have used antisera against PTHrP animo-terminal fragments in immunohistochemical studies of tumours, in which cross-reaction with human PTH remains insignificant even under high concentration conditions. This showed PTHrP to be produced by 100 per cent of squamous cell cancers. Its use in immunohistology is likely to become widely applied in tissue diagnosis.

A protein with the properties of the PTH-related tumour product has been found to be produced invariably by human keratinocyte cultures. Such production by normal epithelial cells implies some local, possibly paracrine or autocrine function and may be related to the fact that epithelial cancers are among the more common causes of the HHM syndrome.

The function of PTHrP in normal physiology is unknown, but it seems certain that it represents a hormone which is previously unrecognised, and which quite possibly has important normal functions. Apart from its location in skin, in which respect it differs from PTH, its tissue distribution is unknown. We considered the possibility that PTHrP might be located in foetal tissue, and in work in which we collaborated with Professor Ivan Caple at the School of Veterinary Science, postgraduate Fellows Minoru Kubota (Japan) and Christine Rodda found evidence for its presence in ovine placenta and foetal ovine parathyroid. In addition, we have evidence that PTHrP may contribute to activate placental calcium transport from mother to fetus, thus maintaining fetal plasma calcium levels in mammals higher than maternal levels. Thus it is possible that PTHrP is a foetal hormone of fundamental importance to skeletal growth.

With a function as basic as this, we might propose that the original 'parathyroid hormone' in the evolutionary sense was PTHrP, and that what we have recognised for many years as PTH, developed from it by a process of gene duplication. To put it in another way — the role of PTH is to elevate the extracellular fluid calcium level by whatever means are at its disposal. In the adult mammal this is by promoting calcium release from bone, retention via the kidney, and intestinal absorption through activation of vitamin D. In the mammalian foetus the only source of calcium is through placental transport from the mother. Evolution has transformed the original protein molecule in ways which allow it to produce its physiological effects by adapting to new pathways. We can finish with the speculation that this new hormone is almost certainly going to be found in lower organisms, where it is likely to regulate calcium metabolism by still other pathways. For example, fish have long been considered not to possess PTH. However, it would seem highly probable that they will be found to produce their counterpart of the PTH-related protein, and that it will play a part in the regulation of calcium metabolism in this species.

It has been fascinating, entertaining and a privilege for us to take part in the emergence of a 'new' hormone, to see how clinical medicine provided the clue to its existence, the new molecular science led to its characterisation, and now we go back to comparative physiology to help solve its biological significance.

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The Future of Medical Practice in Australia

Professor Priscilla Kincaid-Smith

Special Bicentenary Lecture
Dean's Lecture Series
The University of Melbourne
21 June 1988

Prof. Priscilla Kincaid-Smith

Thank you for the great honour of inviting me to give this Bicentenary Lecture in The University of Melbourne. The title which you chose for me presented a difficult task requiring a certain amount of crystal ball gazing. I am going to deal with the topic by discussing current problems in medical practice and try to group them under medical, ethical and medico-political headings — but of course these are all interrelated. I shall then suggest some solutions to some of the problems which will influence the future of medical practice in Australia.

I want to remind you that the rate at which medicine is being transformed by discoveries in the research field creates for us a very particular problem in continuing education of medical practitioners. Continuing education will assume an extremely important role in the future, because of this explosion in the discoveries resulting from medical research.

To put this in perspective may I remind you that currently only 0.5 per cent of the human genome has been mapped and as there are no barriers to complete sequencing, our knowledge in this area will increase enormously in the next few years. When we look at medical problems which will influence future medical practice at an international level we still face very considerable difficulties in attempting to achieve the WHO goal: health for all by the year 2000. Year 2000 is approaching rapidly but in the report of the WHO meeting last September it was acknowledged that 14 million children under five die each year and that half a million women still die annually from pregnancy related causes. We don't have anything approaching that sort of problem in Australia and, indeed, some of the specific medical problems in Australia tend to be rather trivial. The so called 'kangaroo paw' or repetitive strain injury epidemic received a lot of publicity. Although one may be amused by it, it created an enormous financial problem for the government. At one stage I read that some 42 per cent of civil servants in Canberra were suffering from this condition. Our profession has a very real responsibility to try to ensure that similar epidemics, which are at least in part iatrogenic, do not occur.

I want to discuss three factors which are going to have a major impact on medical practice in the future. Ageing of the population is the foremost problem which will undoubtedly have major implications for future medicine. AIDS is the second problem hanging over our heads and with a doubling of the numbers of cases every 6 to 10 months we have to make major provisions to cope with this epidemic. I also want to highlight Aboriginal health as an area for which we have a particular responsibility. Some aspects of Aboriginal health mimic third-world problems and are inappropriate in a country which in many other health areas is a leader.

Let us then consider ageing. There are countless publications documenting the effects of ageing on health care but they all say roughly the same thing. The Economics Planning Advisory Council predicts that the population over

the age of 65 for the year 2025 will be 16 per cent. In 1901 only 4 per cent were aged over 65; currently the figure is 10 per cent. This increase in numbers has a greater impact because a very large proportion of health care resources is consumed by older people: 23 per cent of health expenditure is currently consumed by 3.8 per cent of the population who are aged over 75. It is thus inevitable that ageing will have a major impact on medical practice in Australia in the future.

In a paper last year, Paul Gross estimated that the increase in people over 65 will require provision of 5,200 more acute beds, 21,000 more nursing home beds and 16 million more prescriptions by the year 2000. This makes nonsense of the current 'sticking plaster' methods of the Pharmaceutical Benefits Advisory Committee restricting this or that drug to save dollars here and there. What they should be doing is planning for this major inevitable explosion. They cannot hope to keep drug costs down except by refusing to supply them to the elderly.

I don't have a lot to say about AIDS: you all read the newspapers and get almost daily updates on this epidemic. I attended a talk in March in New York given by the US Surgeon General on AIDS and he gave the alarming figure of 2.5 million infected with the HIV virus in America and 50 thousand current cases of AIDS. One reads that 25–30 per cent of people in various African countries are infected with HIV and taking this, together with the doubling every 6–10 months, the picture in Africa is almost beyond comprehension. The life-time cost of treating AIDS is assessed in the *New England Journal of Medicine* as $24,000–$147,000 per patient, and the outcome is inevitably fatal. Australia is fourth in the Western World in prevalence of AIDS, and this is inevitably going to influence medical practice in the future.

In the area of Aboriginal health, we are looking at socio-economic factors which have influenced the increased prevalence of a wide range of medical conditions in Aboriginal people including diabetes, cardiovascular disease infections and renal disease, and last, but by no means least, alcoholism.

I'll focus on renal disease as an area that I happen to know a little about. Two recent studies, one by Doctor Guest in our own department, and one from South Australia, have shown that 20 per cent of the Aboriginal population have proteinuria, some ten times the prevalence of proteinuria in a Caucasian population in Australia.

If you look at the other end of the scale the Australia Kidney Foundation Registry data show that whereas 37 people per million of the total population go on to dialysis each year, 327 people per million of the Aboriginal population require dialysis each year. Major causes of renal disease in this population are infections and type II diabetes, both of which can be prevented. The Aboriginal problem is part of a very well-recognised relationship. An article in the *British Medical Journal* last September [1987] showed a very good correlation between socio-economic scores and standardised mortality ratio. This relationship has been recognised for many years, it's not going to go away and it's something that we've got to take seriously.

Sir Douglas Black in the United Kingdom wrote a very thoughtful report on this entitled 'Inequalities in Health Care' in 1980, and it is said that the report and its recommendations have been buried. Indeed a more recent paper in the *British Medical Journal,* under the heading 'Lies, damned lies and suppressed statistics' again drew attention to the Black report and the fact that not only is there a large gap between health standards in different socio-economic groups but that it is widening. It was stated that the Registrar General's report is tending to say little nowadays of social class so that they're not collecting those damming statistics quite so effectively as before.

If we look across the Pacific at the United States, they have a very different health care system from ours. They don't have a universal health cover as we do and as the United Kingdom has. For this reason whether people do or do not insure has a major impact on the standards of health care. Hammelstein in the *American College of Physicians Observer* reports that 21 million Americans have no health insurance and that as a consequence 60 per cent of hypertension is poorly controlled, and 40 per cent of black women have inadequate ante-natal care. However, it is not only the uninsured who are at risk of not receiving adequate health care. Just this week in the *New England Journal of Medicine* we read that insured American adults of working age who are actually contributing at the time seem to have less access than the elderly to health care services. The same paper reported a clear-cut predictive value for low access for health care services associated with being poor, black or Hispanic. When we look at the Australian health care system and compare it with the countries with whom we have closest allegiance, and whose health care systems we know best, it helps us to put our own serious problems into perspective.

In Australia there are several studies on the relationships between socio-economic factors and health. From the Better Health Commission report, I quote the rather alarming figures that western metropolitan Sydney has a mortality ten to 30 times that of other areas of New South Wales for both heart disease and diabetes, so we clearly have inequalities in health and health care similar to those documented in the U.S.A. and U.K.

I want to pause a minute on the question of unemployment. As with other socio-economic factors, there is clear evidence of an association between unemployment and poor health. A paper in the *British Medical Journal* last year on this topic entitled 'Bitterness, shame, emptiness, waste : an introduction to unemployment and health' really said it all. And there are many studies which show an association between unemployment and poor health dating back fifty years in the case of maternal and infant mortality in rheumatic heart disease. More recent studies show an increased standardised mortality ratio in bronchitis, chronic obstructive airways disease and ischaemic heart disease in unemployed persons. A recent study from Australia shows an alarming figure: that more than half of a group of 401 unemployed aged 16–24 had psychiatric disorders. The current high rates of unemployment are likely to continue into the future and will certainly affect medical practice.

I know that people will be disappointed if I do not discuss at least one 'inequality in health care' that relates to women. This demonstrates another form of discrimination. A study published by Tobin last year showed that of those with positive nuclear scans for coronary artery disease 40 per cent of men but only four per cent of women had further investigation. Men were 6.5 times more likely than women to be referred for cardiac catheterisation after an abnormal scan. Perhaps we have too few women doctors.

I now want to discuss ethical questions and there are many of these that will affect health care, and they are going to have a considerable impact on future medical practice. The question 'who should receive costly treatment and who pays?' has recently been highlighted in the press in Victoria in relation to IVF. Human experimentation, doctors with HIV infection, and informed consent, are all topical issues currently under discussion in this country and of great relevance to the future. Our recent changes in legislation (if gazetted) will have important implications for such things as 'do not resuscitate' orders and cessation of dialysis. We have

not yet grappled with the question of euthanasia and 'living wills' but this affects some 6,000–10,000 persons each year in Holland.

Costly technology now permits survival of very low birth-rate infants. Some studies show that as many as 40 per cent develop mental and psychological problems and it costs $39,000 per survivor. This is another difficult issue but we must try and find a solution; medical practitioners are deeply involved in these issues, and must be informed about them and willing to accept responsibility in making decisions.

An area in which I am personally involved, that of dialysis, also presents a problem in terms of costs. In-centre dialysis costs $38,000 per patient per year and even the cheapest form of dialysis costs $20,000 per patient per year. A committee is currently considering an upper age limit for dialysis. But the numbers increase very sharply once you go over the age of seventy, and the benefits decline. We must be guided here not by costs but by the welfare of our patients. Dialysis can be a misery rather than a boon for some patients and we should recognise and be prepared to offer advice about this. In America at the present time, dialysis continues up into the 90s irrespective of whether people are leading meaningful useful lives or whether they are bedridden or even unconscious. Surely this cannot be either reasonably or ethically acceptable. It is in part a problem related to 'decision by committee' and depriving the doctor of the right to 'play God' in making such decisions, but I am sure that the end result is undesirable.

If you look at a much more common disease namely myocardial infarction there are from 50 to 70 thousand infarcts in Australia every year. Even if we look at the old-fashioned relatively cheap method of thrombolytic treatment for myocardial infarction, namely streptokinase therapy, treating 30 to 40 per cent of infarcts would cost two to three million dollars. The costs of the new tissue plasminogen activator (Tpa) are of course very much higher but have recently been shown to be better. If we treated all patients with myocardial infarction with TpA the costs would be enormous.

Yet another area in which I have a personal interest is expracorporeal shock wave lithotripsy. Economic and other factors created pressure to introduce outdated Dornier machines at considerable cost into this country, two in Sydney and one in Melbourne. In Melbourne the government paid 3.7 million dollars to install a machine but by the time it was installed it was out of date. In Singapore, they had reported a thousand cases treated with the new second generation machines, while we were having difficulty in getting access to our expensive white elephant, because of budgeting problems. Very expensive machines do need controls put on them and the government needs medical advice about these controls to avoid mistakes.

Now I want to just briefly address the question of doctor-patient relationships because I think that these have undergone very important changes recently which raise ethical issues relating to medical practice. Medical practice has become increasingly hospital based and more specialised; it is more costly and more technology-orientated. We are doing more difficult things and through those more difficult things we have much greater control over life and death. These things alone would inevitably lead to some problems in the doctor-patient relationship. Patients are now much more knowledgeable about medical matters; they obviously want the best treatment; they have undoubtedly less trust in doctors and they demand — and quite reasonably demand — more say in what is done. Doctors, on the other hand, are seen to be concerned with the severity of disease rather than with people, and as having greater aspirations for themselves. They are seen as defensive and arrogant. We see ourselves differently, but we see our responsibility as a responsibility for the individual patient rather than for society in relation to health care matters in general.

It is critically important that we should be guided by our responsibility to do the best we can for the individual patient. We cannot, however, totally disregard certain matters which relate to society, such as the cost of health care services. In that regard I see that we have a major responsibility to be well-informed. If two treatments are clearly comparable and one costs less, then it is in society's interest that we should use the less expensive method, and there is no conflict with our responsibility towards our patient. On the other hand, if one is superior then we must leave no stone unturned in our efforts to make it available for the patient who needs it. Assessment of the value of any treatment is difficult, for example the costly technique of lithotripsy for renal calculi, heralded as one of the greatest wonders of modern therapy by enthusiasts, has recently been assessed by an independent assessor as not only more costly but actually inferior to previous techniques.

When addressing the many problems that bedevil our health care services at present, it is cold comfort to know that the same problems exist in other countries. A statement by the Presidents of the three Royal Colleges in London late last year is a timely warning to us: 'Each day we learn of new problems in the NHS — beds are shut, operating theatres not available, emergency wards are closed, essential services are shut down in order to make financial savings.' The ultimate of course is the 'Yes Minister' hospital which ran very cheaply with no patients!

The current nursing shortages are also going to stay with us. Why should these young women (usually women!) assume a lot of responsibility for relatively small rewards when they could go out and work in a much more comfortable environment without having to take that responsibility. I think that the nursing shortages will continue and I think we need to seriously consider in which areas other staff can take over tasks traditionally done by nurses.

I was in China earlier this month and I was fascinated to read some of the things happening in their health care system. I hadn't appreciated until that time that only 120 million, 10 per cent of the population, are covered by the health care services in China. The rest of them actually pay for their medical care. Farmers and small business people pay the full costs and those who work in factories are covered through insurance by employers. Ten billion yuan, the cost of treating 120 million people, sounds a lot of money — it translates into 2.7 billion US dollars, and that's what dialysis alone costs in the United States at this time. It is claimed in China that 10 per cent of the total salaries of those entitled to free medical treatment is being funded through health care; it certainly suggests 'overservicing', but a different model to the one we know: driven by consumers not providers.

In Australia we have a health care system which caters for everybody, a universal health care system. At least this makes us feel good and perhaps we shouldn't complain, but there are serious deficiencies in the system.

I want to focus now on the question of teaching hospitals, which I believe to be extremely important. Again both England and the United States face problems similar to our own. Let me therefore, quote from a paper in the *New England Journal of Medicine* last year: 'We cannot pinch dollars from the academic hospitals if it means that the next generation of physicians will be less well-trained than the present one.' The introduction of DRGs (diagnosis related groups) had a serious impact on financing teaching hospitals

in USA because there was inadequate compensation for the most difficult cases which usually end up in teaching hospitals. The fiscal state of municipal hospitals was described as precarious. There is much talk of introducing DRGs in Australia and we must guard against this additional potential threat to the teaching hospitals.

The root of the teaching hospital problem in Australia is the significant reduction which has occurred in the number of public hospital beds. These have declined from 74,000 to 66,000 between 1983 and 1987, against a tide of increasing numbers of patients seeking public hospital care because of the introduction of Medicare, and because of an ageing population. Those of us who have worked within public teaching hospitals for some years know that beds are in short supply at the present time. With rationing of beds, emergency cases receive preference for admission to hospital, but many of these are inappropriate for tertiary referral centres, such as the elderly demented patient. Because staff in teaching hospitals are trained to treat specialised types of cases, it is a waste of time and expertise to admit 'emergencies' which are often nursing home cases. Once they get in, because of the shortage of nursing home beds, they stay. This compounds our difficulty in maintaining an appropriate profile of patients for teaching our medical students.

Australia doesn't spend a lot on health care compared with other countries; our public teaching hospitals are not going to maintain their role without an injection of additional funding; it is particularly sad that in New South Wales, and to a lesser extent in other States, outpatient clinics have virtually disappeared for the simple reason that outpatients do not appear in the formula used to fund hospitals. Of course, there's not a lot of point in bringing people to outpatient clinics where they sit around for a long time waiting to see doctors, if you then can't, for example, provide them with adequate tablets, and this is another area where budgetary restrictions have had a major impact, in reducing patient services.

While the teaching hospitals face problems, the so-called 'supermarket' clinics are flourishing. The entrepreneur who introduced grand pianos into his health clinics in another State was only a forerunner of a growing industry. As doctors we must approach that sort of development with vigour. Patients are induced to attend by such attractions as 24 hour service and grand pianos. They have numerous costly and probably largely unnecessary services provided, and the clinic bulk bills the government for these. As Ginsburg pointed out in the *New England Journal* not long ago, the competitive market is an opponent not an ally of cost containment in health services. If you increase capacity you increase advertising and marketing and of course the share holders have also got to have their share of the profits. 'For profit' medicine encourages duplication of costly services such as extracorporeal shock wave lithotripsy and CAT scanners. The public is persuaded by advertising to consume more of these costly treatment methods by the 'private for profit' organisation which has little interest outside dollar values and does not ensure that education and medical research are adequately funded. Developments in the 'private for profit' area in the United States should be a warning to us in this country. Relman, in the *New England Medical Journal* in 1986 pointed out the enormous potential power of the 'for profit' health sector in USA when he predicted: 'We're going to see all the wealth and power of the 'for profit' health industry used to influence public opinion and government decisions in their favour. For medical colleges and associations, custodians of medical standards and ethics — developments in the 'for profit' area have thrown up a whole set of new dilemmas which go to the very heart of their reasons for existence.' What can medical practitioners do about the booming 'private for profit' industry which is just beginning to get underway in Australia? For one thing individual doctors shouldn't allow their names and reputations to be used to promote the industry. This is a prominent feature of advertising 'for profit' hospitals in the USA at present.

What about health maintenance organisations, another flourishing industry in the USA? There has been a huge swing towards so called 'prepaid' health care in the USA and a huge swing away from the 'fee for service' system which operates in Australia. Sixty-five per cent of the population in the USA subscribed to prepaid or health maintenance organisations in 1987, compared with only 8 per cent in 1984. Is this good or bad and does it sound a warning to us in Australia that we might also see a sudden dramatic swing away from 'fee for service' medicine? Even more serious than the potential financial implications of a significant move in the direction of private-for-profit organisations, are the ethical implications of pre-paid schemes and health maintenance organisations. If a doctor is expected to act as a gatekeeper in such an organisation, he is not only serving his patient, but the organisation as well. There is really no ethical code to deal with that sort of conflict of interests, and physicians should refuse to enter into such a contract. It's certainly worse when the doctor receives a bonus for restricting or reducing services, which is happening in many of these organisations at the present time in the United States. Much has been written about this in USA journals recently. A government enquiry is forecast which will demand disclosure of referral restrictions and financial incentives in pre-paid health plans.

I believe that we should strenuously oppose similar developments in Australia. There is no place for pre-paid organisations in a country which has a universal health care cover. Health standards have clearly suffered in the USA from the huge swing to pre-paid organisations. Health maintenance organisations which try to reduce services and costs find it particularly difficult to deal with elderly people who have a high rate of functional disability as well as acute illnesses and can't have health services rationed, particularly at the primary care level. It is impossible, for example, to provide an effective geriatric service when services are steadily being reduced and curtailed. Geriatric services inevitably need continuous expansion. A random assignment study published in the *Lancet* compared health outcomes in health maintenance organisations and under the previous 'fee for service' system. High income, initially sick patients really did quite well in health maintenance organisations, but low income initially sick people didn't; they showed a significantly increased mortality as well as requiring more bed days.

Another major change introduced in the USA recently to help control budgets is the system of DRGs (diagnosis related groups). These apply a uniform reimbursement system for particular medical diagnoses. A recent survey of chiefs of medicine concerning the impact of DRGs on standards of health care services showed that 60 per cent thought that the quality of care had deteriorated, whereas only 32 per cent thought that standards had improved. It is one thing to use DRGs for sensible budgeting between departments within hospitals, but it's quite another thing to use them as the index of overall funding of hospitals. Inevitably there will be differences between hospitals. In psychiatry for example, it's very difficult to predict the length of stay and therefore DRGs have created major problems for patient care in this area; they have also given rise to incentives for inappropriate psychiatric management. Some hospitals admit far more seriously ill patients than others and this must be taken into

account, not merely the DRG rating for a particular diagnosis. And there are certain hospitals in the USA, particularly the county hospitals and smaller teaching hospitals, which are suffering very serious financial problems since the DRG system was introduced.

The Anderson Report, a study done for the Department of Health in the United States published earlier this year, depressingly predicts that health services are going to become increasingly dependent on the patient's ability to pay, widening the gap between the haves and havenots. It predicted an increase in the percentage of GNP allocated to health from the present level of 11.5 to 12.2, the inevitable impact of ageing being a very major factor in this prediction. Bradford commenting on this report in *The Australian Doctor* earlier this year said that 'Australia must have a sick health care system if national expenditure on health is not rising.' He based this on the inevitable expansion of services which is occurring due to unavoidable factors such as ageing, AIDS and costly new technology. We are again reminded that health care costs have remained at a very low level and constant over the past four years in spite of the burgeoning private sector which indicates the extent of cost cutting that has occurred in the public hospital and teaching hospital area.

One sad aspect of the current health scene in Australia is constant confrontation between members of our profession and the government. The government appears to be obsessed with the idea of doctors making money. Mr Gear, for example, quoting confidental information obtained from the Health Insurance Commission, states that the average doctor earned $168,000 a year, and that 11 per cent of surgeons and 8 per cent of physicians earn more than $300,000. While, as academics we may envy them, we have to be prepared to look at actual figures of net income, not gross. Practice costs are at least 50 per cent, and in some areas almost 90 per cent, of gross income. If you divide the average doctor's earnings by two, to correct for expenses, you come down almost to the salary of a professor of medicine which I would not regard as a princely sum. The net income of doctors has fallen considerably since 1973 when compared with both average weekly earnings and the consumer price index, and provides a good argument against the constant cries from well-orchestrated lobby groups about 'greedy wealthy doctors'. Another factor which is all too readily forgotten is the hours which a doctor works. As a clinical academic who has responsibilities for running a large hospital department as well as university responsibilities, I am in the hopsital for 60-65 hours a week which reduces the hourly rate of pay to a pretty low level. Many of my physician colleagues in the hospital work for 70 or more hours per week — twice the average.

Now if we turn to the relationship between per capita health expenditure and GDP, we see a very close relationship. In the 1985 OECD report, Australia was sixth behind USA, Sweden, Canada, France and West Germany in both per capita health expenditure and in per capita GDP. Compared with the United States, where health costs as a per centage of GDP have risen from 5 per cent in 1960 to 11 per cent in 1985, our own health care costs have risen quite slowly from 5 per cent in 1960 to only 7.5 per cent in 1985. The only time when costs rose almost as fast as in the USA was with the introduction of Medibank between 1972 and 1975.

Our own Premier, Mr Cain, has drawn attention to the shift away from health to other spending priorities, so that between 1979 and 1987 the percentage of GDP spent on health fell from 7.6 per cent to 7 per cent. On top of this, he states, we have seen the Federal Government's contribution to State health services decline significantly. Commonwealth funding of hospitals' net operating costs has fallen from 50 per cent in 1981 to 38 per cent in 1987. This helps to explain the present situation of the teaching hospitals.

Massive resources have been taken out of public hospital funding and they must be restored. But before I suggest to you possible solutions to the many problems which face future medical practice, I want to highlight another frightening development which, if it continues, will have a major impact on health care standards. There have been considerable increases each year in subscriptions to medical defence organisations. This is a warning to us that we're moving towards the very serious situation that exists in the United States, at the present time in terms of medical litigation. A high rate of litigation is particularly important in relation to the fact that physicians allow their perceived legal responsibilites to replace their clinical judgement. They may either over-investigate so that they can't be sued for missing some rare condition or omit necessary diagnostic procedures which carry a risk of complications. This is another area where we can learn from the quite devastating experience in the USA, in the hope of avoiding this undesirable development in future medical practice in Australia. The introduction of 'contingency' legal fees will certainly aggravate and accelerate this trend.

It's not new for people to suggest solutions to problems in medical practice. At the time of the French Revolution the National Assembly planned to replace physicians with a national health service, and to impose a militant compulsory conversion to healthy living which would make hospitals and health care unnecessary. The evil of ill health was expected to disappear, and laws would be enacted to compel citizens to use their new freedom in frugal living and wholesome pleasures.

Well, what about solutions to these many problems which I have raised for future medical practice? I really don't want to say anything very much about AIDS, but it is going to have an inevitable and major impact on health care in the future and it raises considerable difficulties, both in relation to health care funding and also ethical difficulties. I have already quoted the predicted costs of this world epidemic which presents the greatest public health risk since the Black Death. I particularly like a quotation from Inglehardt in the *New England Medical Journal:* 'Striking a balance between caring for patients with AIDS and safeguarding them from discrimination on the one hand, and public health measures deemed necessary to secure the well being of the population on the other hand' will be of increasing importance as the epidemic progresses.

The next part of Inglehardt's paper is even more important for the Australian scene: 'Physicians will be at the centre of this struggle because they are in commanding positions of responsibility within the government, in organised medicine and at the patient's bedside.' In relation to 'commanding positions of responsibility within the government', physicians have lost considerable status in Australia in recent years. We need to regain those positions of responsibility and, above all, the confidence of the government so that we can regain our lost status. The medical profession has a great deal to contribute in an advisory role to government and we have been progressively deprived of that role with the demedicalisation of health departments, State and Federal. The government is also a loser because it deprives itself of the best advice on medical matters. Clearly, when dealing with an infectious disease such as AIDS, medical practitioners are the best advisers. Currently the government is getting too little advice from the medical profession and too much from pressure groups emotionally involved in the AIDS epidemic.

I believe that the greatest priority should be given to increasing resources for teaching hospitals. We want to restore teaching hospitals to what they were before 1983 when current budget squeezes began. They are, after all, the centres of excellence in medicine; they safeguard standards, teach our medical students and they provide the best and most sophisticated sort of treatment. Currently we are providing a service that falls short of what we would regard as adequate in teaching hospitals.

I believe we must resist the present rapid expansion in the 'for profit' health care area. I am not in any way opposed to private hospitals, but, until now, few of these have been 'for profit' hospitals. A 'private for profit' organisation introduces a third party which has to get part of the precious health dollar, and we are having too much difficulty extracting the necessary dollars to look after our patients to spare any for shareholders.

Not only should we aim to provide good services in terms of quality of clinical care, but the dignity of the patient must be restored. The elderly patient walking along a public corridor in the radiology department clutching his clothes in one hand and his short and inadequate gown behind him with the other hand is deprived of all dignity and we must do better than this within our public hospitals.

We have to accept the need for assessment; things like outcome assessment, and peer revue are inevitable and we should welcome them. Some form of outcome assessment should be included in hospital accreditation criteria, but we have got to get it right, and it's very easy to make errors in difficult areas. We should recognise that considerable differences exist. For example it costs almost twice as much to treat an individual patient in Boston than it does in Newhaven. Both would be regarded as excellent health care centres, but none the less those differences exist, and we have got to account for them and understand them before we try to apply general rules across the whole field.

RSI requires little further attention, but our profession has a responsibility to make sure that we don't permit similar epidemics in the future which are, at least in part, iatrogenic. We must be aware of the consequences of unemployment and socio-economic factors, and try to do something about them. We have a particular responsibility in the field of Aboriginal health and this should be a very high priority for research, and funding based on research and assessment. We must proceed with sensitivity. The Aboriginal community believes that in some areas we have already inflicted too much research on them. We must be optimistic. The Australian Better Health Commission report says that all the features of ill-health reflected in lower socio-economic groups will increase in that section of population which under-uses health services. On the brighter side of things, a recent study in the *British Medical Journal,* showed quite clearly that with vigorous monitoring and organisation of services, this lower socio-economic group can be persuaded to make use of preventive measures in health care.

When we introduce expensive new technologies, we should use the formula for release and assessment used in the case of MRI scanners which were first introduced for assessment by the public teaching hospitals. The example of CAT scanners and lithotripters, which were purchased initially by the private sector, is the wrong model for introducing costly new technologies. Competition will inevitably lead to duplication of services. Careful assessment of expensive new technologies is important.

It is important to protect the traditional primary care physicians from commercial entrepreneurial developments. One thing that was very much criticised at the time, but which did help to restore the balance, to some extent, was the budgetary restriction of after hours reimbursement last year. We've got to get it right, but nevertheless anything we can do to prevent the major expansion of entrepreneurial development in the health field is worthwhile. Entrepreneurial clinics encourage over-use of expensive tests and provide financial incentives to their medical employers to order more and more costly tests. Bulk billing encourages this. As our Vice-Chancellor has often said in the past, if the patient actually sees the account and pays a proportion of the cost, this provides an automatic brake on those entrepreneurial practices which are racing away with so much money, through bulk billing. There must be some controls in an open-ended 'fee for service' system. The other feature which needs attention in this area is to increase the reward for time spent with the patient, in relation to the reward for procedures which are currently overvalued.

Health maintenance organisations don't really offer anything in a country that already has a universal health insurance, and I believe that if DRGs are to be introduced, experience in the United States shows that they must be used very carefully, not perhaps so much to compare different hospitals as within hospitals.

Our profession cannot avoid important responsibilities in relation to expensive new technologies and if we are to help make decisions we must be well-informed. The care of very low birth rate infants is an example, and a leading article in the latest *Lancet* provides a number of criteria which help us to approach this difficult problem.

Finally, may I finish on the question of education. I think that this Faculty produces excellent doctors, but one area where perhaps we can try to do better, is in giving the students a better understanding of patients as sick people. Our students need not only knowledge but understanding. Understanding without knowledge is useless, but knowledge without understanding is dangerous — old Chinese proverb. Let us not forget, however, in facing the very real problems which will confront us in the future of medical practice, the words of William Osler: *To prevent disease, to relieve suffering and to heal the sick — this is our work.*

Professor Priscilla Kincaid-Smith, C.B.E., MD, DCP, FRCP, FRACP, D.Sc., FRCPA, was appointed to a Personal Chair in Medicine in The University of Melbourne Department of Medicine at The Royal Melbourne Hospital in 1975. She has an international reputation in the field of kidney disease. She has served on a wide range of university, hospital and State and Federal Government committees and produced over 400 publications. She was President of The Royal Australasian College of Physicians 1986-88.

MEDICAL RESEARCH AT THE UNIVERSITY OF MELBOURNE

Reaching and handling — How the brain and hand interact

On view in the foyer of the Medical School building is a display produced by the Brain Research Laboratory of the Department of Anatomy. The Laboratory has focussed its research on elucidating the basic relationship, in the normal subject, of the interaction of brain and hand . . . the display examines the role of one part of the brain, the cerebral cortex, in determining sensorimotor functions of the hand.

Book Review

Frederic Wood Jones

Photograph by Jack Cato

A List of the Works of Frederic Wood Jones 1879-1954
Barry F. Christophers
2nd edn, the author, Melbourne, 1985

A Supplement to A List of the Works of Frederic Wood Jones 1879-1954
Barry E. Christophers
The author, Melbourne, 1988

In the years 1930 to 1937, when he occupied the Chair of Anatomy in our University, medical students, doctors, members of the scientific community and many others in Melbourne came under the spell of Frederic Wood Jones. Barry Christophers never met Wood Jones but has become one of his most devoted followers, a result of which being this meticulous bibliography and supplement. He has tracked down the writings of his hero with relentless zeal — one might almost say with obsession.

Christophers produced a check list of Wood Jones' writings over twenty years ago, followed by the first edition of *A List of the Works of Frederic Wood Jones* in 1974, a second edition in 1985, and now a supplement in 1988.

The reason for this extensive supplement is that Wood Jones bequeathed '. . . all his technical books and papers, manuscripts, card indexes and other personal chattels in his room at the Royal College of Surgeons' to Jessie Dobson, M.Sc., his long-time secretary, assistant and close friend, in both Manchester and London. In turn, she bequeathed these papers to The Royal College of Surgeons of England, and, like Barry Christophers, the reviewer has spent many hours reading this fascinating material. Christophers has listed the works in chronological order, so that in browsing through his compilation one unrolls the story of Wood Jones' life.

It is immediately apparent from his writings that Wood Jones was a restless soul, ever seeking new knowledge and adventure; this bibliography shows him to have been in the tradition of the great field naturalists, preferring field work to the laboratory bench. (One of Wood Jones' legacies to Melbourne was the foundation of the McCoy Society, the name chosen for the first professor of Natural Science in this University and the object 'For Field Investigation and Research.')

The first paper listed was published in 1900 when Wood Jones was a medical student. Soon after graduation (MBBS London 1904) he joined the Eastern Extension Telegraph Company as Medical Officer and travelled to the Cocos-Keeling Islands where he met Gertrude, daughter of the Governor, George Clunies-Ross. They were married in 1910, the same year as he published *Corals and Atolls* a remarkable book, based on observations made during his stay at Cocos-Keeling and opposing a number of views that had been put forward by Charles Darwin on coral atoll formation.

In 1907 we note that he became assistant to Elliot-Smith (then Professor of Anatomy in Cairo) in the archaeological survey of that part of the Nile Valley which was to be flooded when the Aswan dam was constructed. Much of the onsite work was done by Wood Jones and invaluable reports such as *The Archaeological Survey of Nubia* resulted.

Reading through the bibliography we see that he moved from Nubia to Manchester, then (during the First World War) to London. *The Principles of Anatomy as seen in the Hand* (1920) resulted from a series of lectures given to RAMC medical officers. (This book to me is outstanding in its simplicity and clarity — a 'must' for any budding anatomist.)

In 1919 Wood Jones accepted the Chair of Anatomy in Adelaide and Christophers' bibliography records this very productive period, which included *The Mammals of South Australia* in three volumes, published between 1923 and 1925. At the end of 1926 Wood Jones moved to Honolulu to occupy the Chair of Physical Anthropology in the University of Hawaii, and another major work resulted, *The Matrix of the Mind* (1928) in conjunction with S.D. Porteus. It was followed by a masterpiece of comparative anatomy, *Man's Place Among the Mammals* (1929).

In his writings you can trace his journeyings: Honolulu to Melbourne 1930 (a short stay in Peking); Melbourne to Manchester 1938; in 1945 he moved to London to take up his final and, I believe rightful place, as the first Sir William Collins Professor of Human and Comparative Anatomy at The Royal College of Surgeons. Here, assisted by Jessie Dobson, Wood Jones reassembled, recatalogued and rejuvenated the Hunterian Museum which had been devastated in 1941 by wartime bombing.

Christophers lists not only Wood Jones' major works but also scientific papers, newspaper correspondence, radio talks, many unpublished manuscripts (including chapters for an autobiography) and much more. The full story of this man's fascinating life remains to be told. His most obvious and well-qualified biographer would have been Jessie Dobson, but she for personal reasons did not attempt this task.

Barry Christophers' bibliography represents years of painstaking and devoted work; and he is to be congratulated for bringing together an invaluable record of the works of this remarkable man.

Wood Jones was much more than an anatomist, anthropologist and embryologist. He was a thinker, a questioner, a sceptic regarding aspects of Darwinian evolution, a warm-hearted, humorous, gregarious man. The reviewer remembers his vivid stories told in the evenings on McCoy expeditions; he also wrote many stories, was a talented illustrator and a good friend, though one who pursued relentlessly people with whom he did not agree. He had a deep knowledge of anatomical history, a wonderful anatomical library and also enjoyed a good detective story.

He wrote on *The Claims of the Australian Aborigine;* he was concerned with our flora as well as our fauna; he gave a classical lecture on the anatomy of judicial hanging and, equally, gave much thought to *Life and Living* (published 1939). Wood Jones had an 'aura of greatness' around him and the interpretation of his complex life will tax the skills of his biographer. Barry Christophers is now engaged on this task. I wish him well.

James Guest

Notice of Annual General Meeting 1989

The Annual General Meeting of the University of Melbourne Medical Society (UMMS) will be held at 6.30 pm in the Sunderland Theatre, ground level, Medical Building, The University of Melbourne, Grattan Street, Carlton, on Tuesday, 9 May 1989. This meeting is preceded by the Dean's Lecture in which Dr Lorraine Dennerstein, Director, Key Centre for Women's Health in Society, The University of Melbourne, will deliver a lecture entitled 'Hormones, Mood and Sexuality from Freud to Feminism'.

Business

1. Minutes of 1988 Annual General Meeting
2. Chairman's Report
3. Financial Report, 1988-1989
4. Election of Committee 1989-1991

   Nominations are called for the election of six (6) members of the Committee of UMMS for 1989-1991 and close on 2 May 1989.

   The following five retiring members of the Committee are eligible and available for reappointment, and under section 7.3 of the Constitution are proposed for re-election:

   Dr Thomas Kay
   Dr John MacDonald
   Mr David Westmore
   Mr Michael Wilson
   Professor Emeritus Sir Douglas Wright

   The following member is proposed under section 7.3 of the Constitution, for election and has consented to her nomination:
   Dr Diana Sutherland

   In accordance with section 7.3, any two members may in writing, addressed to the Honorary Secretary at least seven days before an Annual General Meeting, nominate any other member or members to fill vacancies on the Committee. The consent of each person so nominated must be submitted in writing.

   If more nominations than vacancies available are received, then an election will be held at the meeting.
5. General Business

Minutes of Annual General Meeting 1988

The Annual General Meeting of the University of Melbourne Medical Society (UMMS) was held at 6.30 pm, on 26 April 1988, in the Sunderland Theatre, Medical Building, The University of Melbourne. The meeting was preceded at 5.30 pm by the Dean's Lecture entitled 'Physicians in Geriatric Medicine — Will They be Needed in the Year 2000?' This was delivered by Professor Robert Helme, Professor/Director, Mount Royal National Research Institute of Gerontology and Geriatric Medicine.

1. Minutes of Annual General Meeting 1987

The minutes of the 1987 Annual General Meeting, previously circulated in *Chiron*, 1988, were adopted as an accurate record of the proceedings.

2. Chairman's Report

The Chairman reported the success of the special events held in 1987. These included the 125th Anniversary of the Medical School dinner, the seminar to celebrate the Centenary of women entering the medical course and the Halford Oration, delivered by Sir Michael Woodruff.

UMMS membership is approximately 1,200 and recruitment of new graduates in 1987 added another 150 members. Members recently received mailed copies of *Chiron*, Vol. 2, No. 1, 1988. Special thanks were given to Mr Peter Jones, the Editor of *Chiron* and Mrs Margaret Mackie, the Associate Editor and Designer, for their outstanding work.

The UMMS B.Med.Sc. Prize 1986 was awarded to Ms Diana J. Gillatt for her study entitled 'Metabolism of neurotensin by the isolated perfused rat kidney'. Ms Gillatt worked under the supervision of Dr Arthur Shulkes at the Austin Hospital and gave an excellent presentation. This prize of $250, sponsored by the Society, is awarded to the medical student whose research report is judged to have made the most important contribution to knowledge.

The Chairman reported that the **Dean's Lecture Series** was continuing to attract good audiences to some excellent lectures. Members were asked to make special note of two important features in the 1988 Dean's Lecture Series program: the Special Bicentenary Lecture, 'The Future of Medical Practice in Australia', to be delivered by Professor Priscilla Kincaid-Smith on 21 June, and the seminar, 'Contemporary Issues in Medical Ethics — a Review', to be convened by Professor Emeritus Richard Lovell. The Chairman also drew attention to the **Continuing Medical Education** courses which are progressing well under the administration of Ms Robin Orams.

The **1988 UMMS function** is being planned for October/November this year and will consist of a lecture preceded by refreshments.

3. Financial Report 1987/1988

The financial report for 1987/88 was presented by the Chairman and copies were circulated at the meeting. This showed, at 30 March 1988, an income of $48,728, with expenditure of $31,701 and outstanding debts of $17,195. The high cost of *Chiron* was noted. The report was received. It was noted that UMMS Executive has recommended a donation increase to $35, with a capitation to the Alumni Association of $11. No objections to this were raised.

4. General Business

It was noted that there would be a number of vacancies on the UMMS Executive Committee in 1989, in particular, the positions of Honorary Secretary and Honorary Treasurer.

The support given by the Alumni Office was noted, particularly in the computerisation of graduate records.

Mr Peter Jones was invited to inform the meeting of a current proposal to launch a newsletter for the Society. He recommended that such a proposition should be considered as it would enable UMMS to communicate with members more frequently. He said that it would be a vehicle for dialogue between members and would be a more appropriate channel for some of the material received for *Chiron*. He said that it would represent, not so much an economy, as a forum for better interchange of ideas.

The meeting closed at 6.45 pm.

UMMS 1988 Lecture
The University of Melbourne
8 November 1988

The UMMS 1988 Lecture, *To the Antipodes by Sailing Ship — Medical Aspects of the First Fleet Re-enactment Voyage,* was delivered by Dr Robert Simpson, Fleet Surgeon on the First Fleet re-enactment voyage. Dr Simpson graduated MBBS from The University of Melbourne in 1977 and was admitted as a Fellow of The Royal Australasian College of Surgeons in 1985. He also holds the degree of BA (1986) from The University of Melbourne. He is currently a Medical Administrator with the Monash Medical Centre, National Secretary of the Medical Association for the Prevention of War, Australia, and as a member of the Committee of Convocation of The University of Melbourne represents medical graduates at the Faculty of Medicine.

As the UMMS special function for 1988, members joined the Dean, Professor Graeme Ryan, and Dr Simpson for a light buffet and drinks prior to the lecture. The following is Dr Simpson's brief personal account of the voyage and includes some of the description illustrated during his informative and entertaining lecture.

The First Fleet Revisited
R.L. Simpson


Rob Simpson

On 13 May 1787, unheralded and unfarewelled, the fleet which carried the first European settlers to these shores, a fleet which has become known as the 'First Fleet', set sail from Portsmouth. Some say the British neither expected nor desired to hear from this motley band again. In this they would have been disappointed. Not only was the voyage of the First Fleet remarkably successful but the settlement founded by these hardy souls flourished.

Consisting of eleven vessels — HMS *Sirius,* HMS *Supply* and nine chartered commercial ships — the fleet carried some 1350 people of whom 759 were convicts. The voyage took eight months and one week, covered 15,000 miles and saw deaths of only 55 people. The second fleet, arriving in June 1790, by comparison lost 267 convicts from a total of one thousand. That the First Fleet and subsequent colony were so successful was in no small part due to the choice of Captain Arthur Phillip as Commodore and Governor, Lieutenant Philip Gidley King as Phillip's aide and John White as Surgeon General.

In 1975 Gidley King's great great great grandson, Melbourne historian and journalist, Dr Jonathan King, in the process of researching his forebears' life and times, was struck by the idea of re-enacting the voyage of the First Fleet. As the trials and tribulations of the following years revealed themselves, Jonathan would have occasion to wish that the thought had never crossed his mind. One plan after another would grow but then founder and it seemed that the First Fleet would not sail again. However, a chance meeting between an Ansett Airline executive, Wally Franklin, and Jonathan King changed all that. Within months of that meeting the First Fleet Re-enactment Company was born and an unstoppable momentum created.

If a book about the First Fleet re-enactment voyage were to be written, a possible title would be 'The Twenty-fifth Eleventh Hour'. There must have been at least that many times when the project's viability teetered on the brink. The Australian Bicentennial Authority (ABA) initially refused even to endorse the project, let alone commit funds to it. In the end the voyage did receive the stamp of approval as a Bicentennial project, and on 11 May 1987, two days before the re-enactment fleet was due to sail from Portsmouth, word came through that the ABA had offered to lend the project $500,000. This money, together with $500,000 from the New South Wales Government, finally convinced the owners of the vessels of the re-enactment fleet that the project was solvent. This was only two days before our planned departure and one day before the Queen was to review the fleet at anchor in the Solent. Another eleventh hour had passed.

On the day of our departure, Wednesday 13 May 1987, disaster nearly struck. An accident in the engine room of *Soren Larsen,* the flagship of the fleet, came close to killing the engineer, sinking the ship and ruining everyone's day. But that was not to be and we were at last at sea. I can well remember being at the wheel of the mighty *Soren Larsen* as the fleet made its way around the Isle of Wight and into the English Channel. Although we had already sailed from London to Portsmouth, it was not until we had left the shores of England that we felt our voyage had really begun.

Having flown from Australia to London I had joined the fleet about a month earlier as it had begun to gather in St Katherine's Dock, London. In the ensuing nine months I had ample opportunity to ponder on '24 hours out and nine months back' as the idea for a book, *Life at Six Knots,* began to take shape in my mind.

As we set sail from Portsmouth heading for Santa Cruz de Tenerife the fleet comprised six vessels: *Soren Larsen,* HMAV *Bounty, R. Tucker Thompson, Tradewind, Anna Kristina* and *Amorina.* The flagship, *Soren Larsen,* built in 1949 in Denmark by a man of the same name, carried Commodore Mike Kichenside. With the Commodore travelled the Fleet Communication Officer, David Iggulden, the Fleet Purser Clare Taylor, the Fleet Scribe Jonathan King, and myself as Fleet Surgeon. Other members of the fleet medical team were Dr Peter Riddell on *Amorina,* Fleet Dentist Gillian Jean on *Anna Kristina,* Nurse Judi Lincoln on *Bounty* and Nurse Helen Pochojka on *Tradewind.*

All those aboard, and perhaps most especially the seasick prone Fleet Surgeon, were expecting the worst as we crossed the mouth of the Bay of Biscay. But in vain did we dread this passage. Our course took us well west into the Atlantic before turning south and the elements treated us most gently. Motion sickness, however, was still a problem. The mainstay of our preventive program was the SCOP patch. Stuck behind one ear at least six hours before departure, the scopolamine in the patch is absorbed through the skin and into the blood stream. The makers of the patch, CIBA GEIGY, had supplied the fleet *en masse* and had agreed to be the medical sponsors of the voyage.

Shortly after leaving Portsmouth, Dan Yates, First Mate on *Soren Larsen,* organised the watches. Each watch had a member of the permanent crew as leader and was made up by some of the 18 so-called trainee crew who had signed on for the leg to Tenerife. We worked a four hours on and eight hours off system. Thus, you could have to get up at midnight and work until 4am and then again from midday to 4pm, or the 4am to 8am and 4pm to 8pm watches. All the trainee crew were obliged to be part of this system, irrespective of the fact that they had paid dearly for the privilege. Being on watch entailed having someone at the wheel, someone on the lookout at the bow, making sail changes as required, assisting the officer of the watch with navigation and radio work and generally maintaining the ship. As the months passed I, for one, found that it never got easier to get up for the midnight watch. The 4am and 4pm watches were generally the most popular as they offered a view of both the sunset and sunrise — invariably spectacular.

The re-enactment fleet, given the different ideas of each captain and different sailing characteristics of each vessel, found it impossible to sail as a fleet. We came quickly to admire the abilities of the First Fleet sailors who had managed to sail as a fleet until they left Cape Town, at which time Phillip had split his fleet into smaller groups. We had the luxury of modern radio equipment and when we lost sight of each other we communicated on the radio at set times each day. *Amorina* even started a half-hour First Fleet Re-enactment radio program, broadcasting each day (probably illegally) on VHF radio.

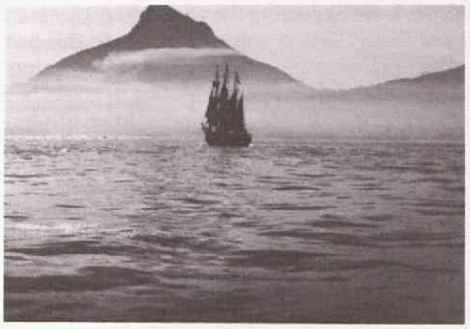
As the fleet approached Tenerife we found time enough to stop at Porto Santo in the Madeira island group, home at one time to Christopher Columbus and where the ancient cobble-stone streets and well-supplied bars made this short visit a pleasure. Then on to Tenerife. Visited by the original fleet two hundred years earlier, Santa Cruz de Tenerife is also the site of one of Lord Nelson's few

losses — an arm as well as a battle. Dominated by Mount Teide, a 12,000 feet volcano, we were made most welcome and several monumental parties followed our arrival.

Already the medical team had been called on many times. Even before we left the English Channel a case of renal stones had required *Amorina* to make an emergency stop at Plymouth to put ashore one of their crew. Each vessel had one of the fleet medical team aboard or someone with nursing training as part of its normal crew. Each vessel also had the medical kit required by law and a supplementary kit provided by the re-enactment medical team. This was particularly necessary as the vessels of the fleet came from many different countries and we found ourselves dealing with medications labelled in many languages and with a variety of expiry dates. Although we also carried enough surgical instruments to perform an appendicectomy, we had with us the advice of the Royal Australian Navy about operating at sea: 'Don't do it'. As luck would have it, apart from several minor procedures, this was advice with which we were able to comply.

From Tenerife we sailed south-west, the north-east trade winds taking us to the west side of the Atlantic, a classic square-rigged sailing ship route. As we approached the equator, both sea and bird life almost disappeared. The dreaded doldrums produced a profound lethargy in many, broken only by the visit of King Neptune as we 'crossed the line'.

The leg to Rio de Janeiro was the longest of the voyage. However, as we travelled at an average of six knots (twice the speed of the original fleet) we found time to visit St Vincent's Island in the Cape Verde group, an extremely barren island where it rarely if ever rains and houses can be safely (and sometimes are) built out of cardboard boxes. What a sight it must have been for the locals to wake and see seven sailing ships anchored in their harbour (we had by this time been joined by *Our Svanen*).



Our Svanen approaching Lion's Head, Cape Town, South Africa.

After another unscheduled stop, this time at Salvadore on the coast of Brazil, the fleet reached Rio de Janeiro and we were welcomed, officially by the Mayor and unofficially by Ronald Biggs. Our stay in Rio was not without drama. News of impending financial ruin at home, matched by a similar possibility in Brazil, made for some anxious moments. These were compounded, medically, by a nasty car accident involving several of our people. Seeking treatment for those most seriously injured offered the chance to take a look at the health system in Brazil. Surgeon General John White had taken the same opportunity two hundred years earlier and had in fact demonstrated a new amputation technique to the Surgeon General of the Portuguese Army. This was one aspect of the voyage that the current Fleet Surgeon chose not to re-enact.

The passage across the South Atlantic Ocean took our fleet into some of the most isolated territory of our globe. For weeks we saw no sign of human life. However, as we sailed further to the south bird and sea life returned: albatross of all sorts; white chinned, storm and cape-petrels by the thousand; dolphins playing in the bow wave and the odd passing whale provided great excitement.

Just after midnight on 22 August over the radio came the dreaded cry — "Man overboard! Man overboard!" Henrik Nielson, aged twenty-five, mate on *Anna Kristina,* had fallen overboard whilst handling the flapping sheets of a head sail. Despite an extensive search of the vicinity by four of the nearby re-enactment vessels, Henrik, a friend to us all, was not seen again.

In the first moments of this our worst disaster, one of the trainee crew on *Anna Kristina* slipped and produced the worst injury of the voyage. Late in the afternoon on 23 August John Gryska, the bosun on the *Soren Larsen,* and I transferred in a rubber Zodiac over to *Anna Kristina* — John to help with the sailing (we were still two weeks out of Cape Town) whilst I attended the injured.

Life on *Anna Kristina* differed markedly from that on the *Soren Larsen.* A one hundred year old Norwegian *galeas* restored to its former glory, the authenticity of its rigging made it hard work to sail. The relaxed Scandinavian ethos was well to the fore. Twenty-six year old Captain John Sorenson showed what legends are made of when he sailed right to the dock in Saldanha Bay, the fleet rendezvous on the coast of South Africa. It was the custom to motor rather than sail in and out of harbours, but John, having been reassured that the pilot was paid by the job not by the hour, decided to take his time and sail all the way.

On a beautiful morning over one hundred thousand people turned out to welcome us into Cape Town. We took such weather to be the norm, but during the next two weeks came to realise how lucky we had been. With the south-easterly gales comes a cloud across the top of Table Mountain, known locally as the 'table-cloth', a cloud we came to know well by the time we sailed out of Table Bay. Our departure was delayed (as was the original fleet's departure) by such gales and perhaps we did not wait quite long enough. No sooner had we left but the gales reappeared and our passage around the Cape of Good Hope was memorable, especially for the trainee crew members who had joined us in Cape Town.

The original fleet took sixty-two days to sail from Cape Town to Botany Bay, with the Roaring Forties as their driving force. Our fleet, however, headed north-east for the island of Mauritius. Initially controlled by the Dutch, then the French, and from 1810 to 1968 by the British, this now independent island was celebrating Australia Week in the final days of its first International Festival of the Sea.

Medical drama preceded our arrival. A trainee crew member on board *One and All* (a South Australian brigantine which had joined the fleet in Cape Town) collapsed. Sea conditions made turning back next to impossible and the fleet had no alternative but to sail on to Mauritius, a four-week voyage conspicuous for wet weather. Wakened for the mightnight watch by a cheerful voice from one about to finish their watch, you could hear the rain hitting the deck. You struggled into wet-weather gear and headed to the galley for a coffee before spending the next four hours in the rain. This weather lasted for three of the four weeks of the voyage to Mauritius.

The leg from Mauritius to Fremantle brought the fleet back into the Forties and westerly winds. The islands of St Paul and Amsterdam were passed temptingly close by, but lack of time prevented us accepting the kind invitation from the French team resident on Amsterdam to luncheon on fresh crayfish.

Given the fact that the medical team on the re-enactment fleet treated over 600 patients and had to face, among others, such disorders as brucellosis, typhus and porphyria cutanea tarda, I, for one, was relieved when the coast of Western Australia came into view. The worry that a serious accident could happen at any moment remained, but as we sailed around the coast to Sydney we were confident that help was to hand if required.

The fleet enjoyed day after day of westerly gales as we were swept across the Great Australian Bight. The dreaded Bass Strait, however, initially presented a beautiful summer's day and we stopped for a swim. Diving into the 180 feet deep water was sensational, and reminded us of earlier swims in the Atlantic Ocean in water nine thousand feet deep. Two days later the Strait showed us what it could do, producing force 11 winds, the strongest we recorded on the entire voyage.

First Botany Bay on 18 January 1988 and then Sydney Harbour on the 26th, offered our fleet a welcome the like of which will not be repeated for some time, if ever again. The trials and tribulations were over and Jonathan King's dream fulfilled. It had been a most marvellous experience for all involved and we learned many lessons. We learned, particularly, that whilst most things get better by themselves, it is important to recognise those that will not. We learned that the world contains many adventurers in foreign parts, whose paths we city dwellers rarely cross. Just for a while our paths did cross and this re-enactment of history will no doubt be responsible for many a change in course.

UMMS B.Med.Sc. Prizes 1987

Rosalind L. Coulson

for her study entitled

'The endocrine regulation of glucose-6-phosphatase and total tissue protein content in the liver, kidney, skeletal and cardiac muscle of the fetal sheep during late gestation'

The aim of this study was to examine the roles of the fetal adrenal cortex and endocrine pancreas in the prepartum rise in glucose-6-phosphatase activity and protein content of various tissues of the fetal lamb. The work was carried out in the Physiological Laboratory in the University of Cambridge (UK).

Enzyme activity and protein concentrations were determined in fetal liver, kidney and muscle from intact fetuses near term and from animals which had been hypophysectomized, adrenalectomized, pancreatectomized or cortisol-infused earlier in gestation. The results showed unequivocally that cortisol is required for the prepartum rise in glucose-6-phosphatase in both liver and kidney. In addition, fetal tissue protein content appeared to be dependent upon insulin concentrations.

These experiments required considerable technical expertise and meticulous attention to detail at all stages of the investigation. The study has shown how the prenatal surge in fetal cortisol is involved in a maturational change which is crucial to neonatal survival. The findings represent a significant contribution to perinatology and may be particularly relevant to the problem of hypoglycaemia of the premature infant.

and

Christine B. Phillips

for her study entitled

'Diabetes Mellitus in Central Australia'

Although the high prevalence of diabetes in Aboriginal communities is well documented, little has been known of the pattern of the complications of the disease in Central Australian Aboriginals.

The aim of the study therefore was to measure the frequency and effects of diabetes in Central Australian Aboriginals by identifying all the diabetics who attended health care services over a defined period; by detailed clinical and bio-medical examination describing their current state of health; and by determining the case fatality rate for the group during the same period.

Using a retrospective study of hospital and health clinic records together with a cross-sectional study to determine the frequency and extent of complications in the diabetic population, the results obtained supported the view that diabetes in Aboriginal people is a disease in which lack of control leads to many complications, much hospital expense and higher levels of mortality than in the general community. The data argue strongly for a new educational program in which lifestyle diseases are explained in a comprehensible and acceptable way to Aboriginal people. Only then will they be able to make clear choices about prevention and control.

The study involved extensive data gathering with long periods of residence with the Aboriginal people in Central Australia. It has revealed an unfortunate picture of uncontrolled diabetes in these people and contains important messages for those responsible for the delivery of health care to Aboriginal communities.

From Class of '38 reunion correspondence:

. . . I can recollect only two important events in my career. Firstly, to graduate under difficult circumstances and secondly, hopefully, to make it to the dinner on the 26th February. See you then.

Reunions — Think Ahead

When did you graduate? Is next year your 5th, 10th, 15th, 20th, 25th, 30th, 40th, 45th of 50th since graduation? It is best to plan your reunion well ahead of time. Some of your class mates will be overseas and some interstate. Overseas and interstate graduates do travel to Australia for reunions if they have enough advance notice. Venues also need to be booked well in advance.

Please let the UMMS office know of your plans and we will supply you with a list of graduates from your year and a set of address labels from the Alumni office. We will also advise you on the alternatives you may wish to explore and give any assistance we can regarding venues and speakers.

UMMS OFFICE

Graduate and Community Relations
Faculty of Medicine
The University of Melbourne
Parkville 3052
Telephone (03) 344 5888

Reunions in 1989

10th Year Class of '79
Date Probably November
Venue To be advised
Contact Lorraine Baker
(03) 857 4091

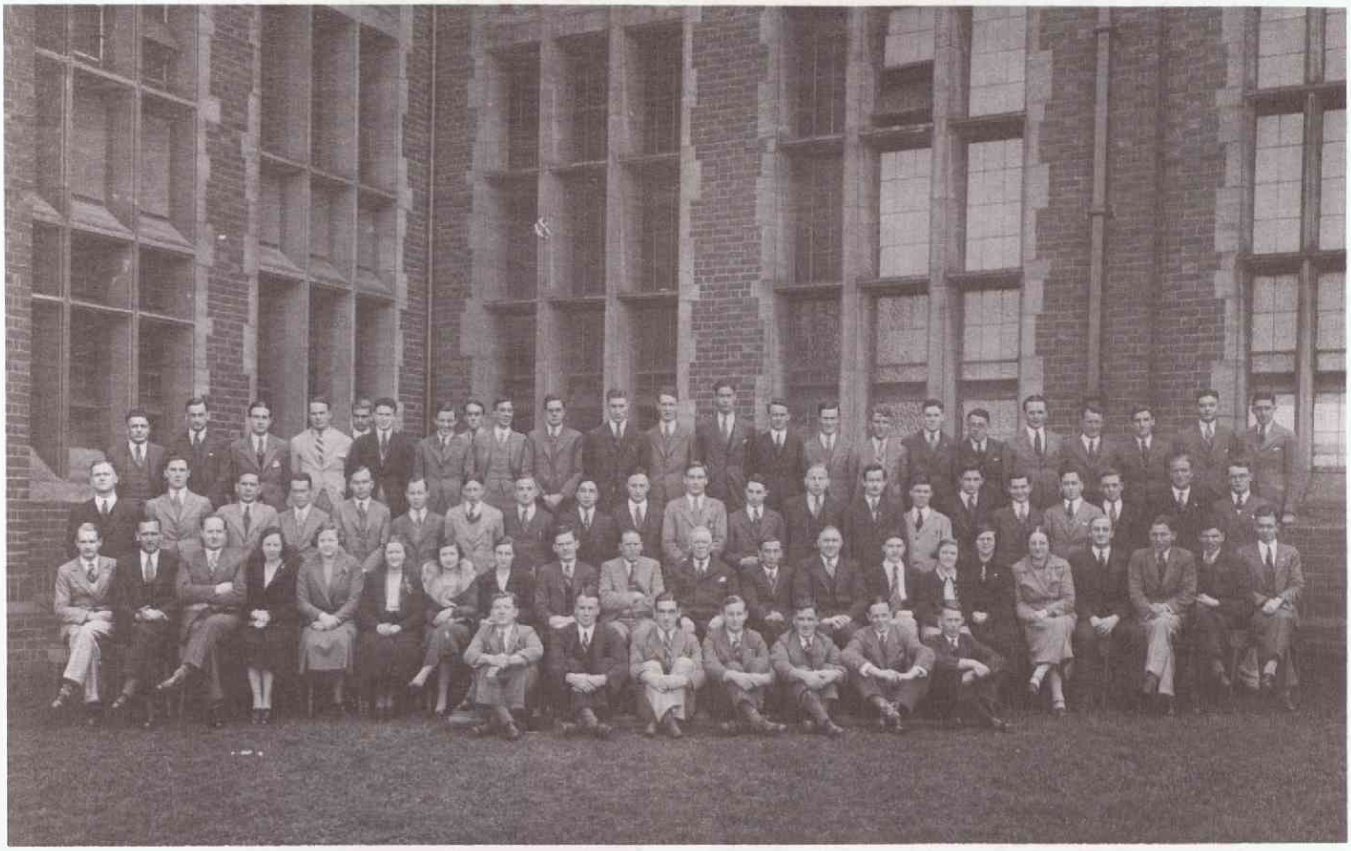
15th Year Class of '74
Those interested in a reunion please contact
David Copolov (03) 388 1633
Mental Health Research Institute
Private Bag 3, Parkville, 3052

20th Year Class of '69
Date Mid, to late October
Venue To be advised
Contact Kevin Moriarty
(bh) (03) 663 5022
(ah) (03) 817 3418
John Collins
(bh) (03) 347 0122

30th Year Class of '59
Provisional details
Date Saturday 25 November
Venue To be advised
Contact Clive Bennett
(03) 783 2445

45th Year Class of '44
Currently being planned
Contacts
June Howqua (03) 419 6166,
Alan Beech (ah) (03) 592 4448,
John Hurley (ah) (03) 818 1932,
Jim White (ah) (03) 596 1084

50th Year Class of '39
Date Friday 10 November 1989
Venue Hilton Hotel
Contact H.R. Clegg
(03) 379 3181



Back row: W.T. McNamara, S. Preston, E.J. Parsons, H.D. Steward, J.O. Lavarack, L. McLennan, D.J. Biddle, D.E. Copping, A. James, W.R. Lane, W.D. Refshauge, R.F. Gray, T.E. Waters, A.L. Thom, W.L. Forsyth, R. Dunne, J.A. Gooden, J.D. Reid, C. Georgeff, H.F. Tucker, E. Kay, L. Healey, D. Edwards. **2nd row:** N. Morrissey, R.W. Shrimpton, A. Carter, G.V. Rudd, E.F. McKenzie, V.G. Bristow, F. Kenny, C. Copland, V. White, O. Burgur, B. Widmer, S. Rose, R. Stanton, J. Mullany, D.J. Shale, E.G. Strahan, R.K. Edwards, R.E.G. Maclean, R.W. Waddell, W.F. Ferguson, R. Wall. **3rd row:** J.A. Alexander, H.W. Illingworth, V.E. Knight, Miss U.B. Cato, Miss M. Ross, Miss V. Glover, Miss R. Southwick, Miss M. Ryan, Mr W.E.A. Hughes-Jones, Professor F. Wood-Jones, Professor W.A. Osborne, Dr W.J. Young, Dr E. Ford, Miss L. Williams, Miss M. Henderson, Miss H. McKenzie, Miss A. Finney, J.F. Connell, H. Wilson, J. Haywood. **Front row seated:** J.A. Morelini, F.W. Kiel, F.C. Davies, K. Goding, C. Mendelsohn, A. Jackson, I.H. Cuming. **Third Year, Class of '38, 1935.**

The Class of '38 Jubilee Dinner

At the Naval and Military Club on the 26 February 1988, 26 medical graduates of The University of Melbourne enjoyed their Jubilee Dinner. It was an official Bicentenary Event.

Guests of Honour were Sir Douglas Wright, Chancellor of The University of Melbourne and Professor R.R. Andrew, Former Dean of the Faculty of Medicine, Monash University. Sir Douglas had been Lecturer in Pathology in our 4th year and clinical teacher in Surgery as an out-patient surgeon at the old Melbourne Hospital. Rod contributed to our clinical teaching as a Registrar at the same hospital.

Graduates arrived from interstate, country and city. Several were still in practice although most had retired. To aid recognition and fill in some of the fifty years since graduation, on entry each was furnished with a name tag with the print large enough to be read at a distance with or without bifocals. Also each was given curriculum vitae of those attending. On receipt of acceptance to attend, each was asked to supply a short resume of activities since graduation. They were asked not to be modest about appointments and honours. Several were reluctant about the honours.

Sol Rose was Chairman of the formal proceedings; Ted Kay proposed the Loyal Toast; Robert Wall proposed a toast to our Alma Mater to which Sir Douglas replied; Don Duffy and Margaret Henderson proposed a toast to our Clinical Schools to which Rod Andrew replied.

The night was a merry one. We moved from table to table after the formal proceedings were over. And we talked and talked and talked. Several of the things we talked about warrant recording. We were 'depression time' students and we recalled those days. We recalled that everyone walked at least to the Baths in Swanston Street to board a tram home — that was the end of a section, so we saved a penny. Others walked on to Flinders Street to get the train.

We were a mixed group. There were holders of Senior Scholarships and Free Places. A couple of students had their own cars. There were mature age students who were pharmacists and teachers or science graduates and managed to work part-time. There was a fall out in first year. Chemistry was a major problem for some.

In a photograph of our third year there are nine women among 67 students — at least two are among the absentees from the photograph (five were at the dinner). Apart from the absentees, we collected a few from other years, as 75 new doctors graduated MBBS in 1938.

We were very conscious of the deteriorating political situation in Europe. Many had begun their apprenticeship of service with the MUR and RAAF Reserve. 1938 graduates served in every theatre of war. We recalled those who did not return, and the decorations and awards that were earned.

The curricula vitae revealed a remarkable story of service to medicine and to the community. The diversity of medical and communal involvement warrants study. The University of Melbourne pre-war undergraduates and teachers certainly excelled and served the community well.

Sol Rose

Back row: Bernard Zerman, Ralph Lewis, David Lunn, Tony Capes, Don MacDonald, Henry Horne, George Klempfner, Alan Bodey, Geoff Chiam. **2nd row:** Geoff Conron, Graham Schmidt, Julian Heinze, Ken Potts, Barry Pointon, Peter Valentine, Peter Clarke, Brian Davie, Ken Hardy, Ian Paterson, Barrie Morley, Les Hill, Bernard Clarke, Rick Kelly, John Hall. **3rd row:** Alex McPhee, Jim Robinson, Graham Dudgeon, Stewart Dabb, Leon Carp, Sze Kwong, John C. Woods, Elizabeth Lewis, Colin Williams, C.H. (Mokkie) Mok, Colin Mathews, Bill Ramsay, John R. Woods. **4th row:** Isabel Sutton, Wendy Donoghue, Kath Hayes, Paul McKenna, Serge Preradovic, Freddie Oh, Rosemary Hallowes, Ming Yeung, Gad Trevaks, John Daniel, Helene Wood, Bob Molnar, Phillip Rubinstein, Frank Evans. **5th row:** Barry Walters, Max Hankin, Jim Munro, Robin Ramsay, Renata Valentine, Sir Edward (Weary) Dunlop, Peter Nelson, Betty Lenaghan, Alf Slonim, Graham Martin, Maria Milecki. **Front row:** Peter Shiels, Jack Cohen, Will Carter, John Fraser, Jim Cummins, Graham Boyd, Russell Ferguson, Eugene Spangaro, Barry King, Jim Lawson.

The Class of '58 30-Year Reunion

The 30-Year Reunion of the Class of '58 was held on the weekend of 12 and 13 November 1988. On the Saturday we celebrated with a dinner at the Windsor Hotel and seventy-one graduates, out of a total of approximately 115, attended. 'Weary' Dunlop was our guest and he provided an ideal focal point for the night — 'Weary' is like good red wine and entertained us an only he can.

On Sunday 13th we had an informal family lunch at Fergusson's Winery. This gave us another opportunity to catch up with colleagues we were unable to see the night before.

Some travelled long distances to be with us: Jack Cohen, Les Hill and Alf Slonim from the U.S.A.: Sze Kwong from Hong Kong; Geoff Chiam and Freddie Oh from Singapore; Graeme Martin from New Zealand; and from interstate, Jim Robinson (WA), Jim Lawson and Helene Wood (NSW) and Graeme Boyd and Graeme Dudgeon (Tas).

We were sad that several of our number were no longer with us — Kel Arthur, Eric Doenau, Michael Hickey, Aubrey Moss, Peter Sims, Robin Smallwood, Oscar Steinberg, Max Swingler and Bert Wainer. We missed them all.

We found that most of us are greyer, balder, portlier and more mellow. Most of us are content and agreed that we would choose medicine again if we had the opportunity. Some of us regretted that our children were unable to follow in our footsteps. We talked about how different the world is now than it was when we were students, and how values and attitudes have changed.

Our enjoyment of the weekend was such that most wished the next reunion to be in five years rather than ten. Special thanks are due to the committee: Maria Milecki who tastefully chose the venue for the dinner, Jim Munro who arranged printing of the program, Barry King who organised lunch at Fergusson's Winery and Geoff Conron, Peter Nelson and Renata Valentine who provided great support. Our sincere gratitude goes to our convenor, Ralph Lewis, whose enthusiasm and energy initiated this reunion.

Renata Valentine & Barry King.

Graduates united again

Eight very successful medical graduate reunions were held in 1988. These were for graduates in their 10th, 15th, 20th, 25th, 30th, 40th, 45th and 50th year since graduation. The reunions provided a tremendous source of interest for those who attended and the organisers are to be commended for the excellent work they put in to make these events possible. Some reunions extended to weekend conferences, including a family day, others held special dinners and most sought biographical details from graduates of their year. The Medical History Library greatly appreciated the donation made by the Class of '48 at their reunion. (RO)

Letter

11 July 1988

Dear Editor,

A note from Robin Orams of late April 1988 reinstating my membership, brought to my attention the fact that you were looking for news of members and graduates. You might, perhaps, be interested in a reunion dinner held at the home of Dr and Mrs Leo L. Morgenstern in Rye, New York on June 2 of this year. The occasion was to honour the visit of Dr Newman Pincus and his charming wife Lee. To make the occasion a more distincly 1944 Melbourne graduate reunion, Dr Hubert Sissons and his wife Pat (formerly Pat Lovett who trained at the Alfred Hospital) were also among the guests. To make the matter even more Melburnian, we also had Gilles and Antoinette Reinaud in the dinner party. Gilles represented Banque Paribas in Melbourne for some seven years and is now in their New York office and living in Rye as a close neighbor of Mickey and Leo Morgenstern. We did have some American medical and non-medical guests, as well, who enjoyed this trans-Pacific and trans-cultural experience. You, perhaps, should know that Dr Sissons is the Chief of Pathology at the Institute of Orthopedics in New York

Leo Morgenstern, Roy Bean and Newman Pincus at their 40th graduation anniversary, New York.

City, though he still retains personal and professional connections with England.

But for the fact that his son was graduating from college, Dr Trevelyan Palmer and his wife Claudia (Melbourne MBBS, 1954) would have attended, but we could understand his attending his son's graduation. You might also be interested to know, in view of your articles on Melbourne medical families, that my daughter Mary Jo is a 1981 graduate of New York Medical College and is currently a specialist in emergency medicine at Booth Memorial Hospital in Flushing, New York. Dr Palmer, too, has a daughter who is just graduating in medicine from Columbia University College of Physicians and Surgeons. He tells me she is planning further work in pediatrics.

Either we are very lucky or there must have been something in the atmosphere (or was it the beer?) in Melbourne that enabled us to survive and enjoy our professional lives in various parts of the world.

The Pincus's have gone back to Australia, but we hope to have June Howqua of the same class of '44 come and visit us again as she has done in the past.

I especially want to send my regards to Pansy Wright and Sid Sunderland. I am sure that their association with the Class of '44 has helped to keep them young and vigorous. I saw them last at the reunion dinner in 1984 and with luck, I hope to see them again at a reunion dinner in 1994.

Finally, in closing, I would extend an invitation to Melbourne medical graduates coming to New York, to give me a call at my office, so that we can trade stories and news over one of the liquid products of the Carlton and United Breweries.

Sincerely yours,
Leo L. Morgenstern MD, FACP

2 Van Wart Avenue
White Plains, New York 10606
(914) 949-2430

Promising genes! c.1890 L to R: Edward L. Gault, Augustus L. Kenny, Gertrude W. Gault, W. Atkinson Wood, George A. Syme (Royal Australasian College of Surgeons Archives).

Faculty of Medicine

Message from the Dean

General comments on the past year

In the early months of 1988, the Faculty participated with the rest of the University in the Strategic Planning process, outlining the approaches of the Faculty in meeting its objectives in relationship to the advancement of knowledge, the provision of education, and contributing to the development of the community. This was an important exercise in focussing attention upon the issues that need to be addressed by the Faculty and the University over the ensuing five years, particularly in meeting the challenges of the Federal Minister for Employment, Education and Training in the White Paper on Higher Education Policy.

During the year the Faculties of Medicine and Dental Science agreed to recommend amalgamation to form a 'Faculty of Medicine and Dentistry'. This proposal was approved in principle by the University Council to take effect at a date to be determined during 1989. Discussions are in progress concerning implementation of the proposal which will promote closer and more effective interaction in research, in undergraduate and postgraduate education, and in medical and dental professional relationships.

The report of the Committee of Inquiry into Medical Education and Medical Workforce was published during 1988. The Committee made a large number of recommendations concerned with medical undergraduate education, the internship year, postgraduate professional training for general medical practice and medical specialties, the provision of an appropriate supply of medical practitioners in different categories, issues relating to overseas trained medical practitioners, and the selection of students into medical courses. The Faculty of Medicine considered the recommendations of the Committee and found no substantial disagreement in relationship to any of the issues raised in the report. It was particularly noteworthy to this University that no recommendation was made to decrease the intake of students to the medical schools in Victoria.

During 1988 the Faculties of Medicine and Science agreed to collaborate in developing a major Molecular Biology/ Biotechnology educational initiative for the University by integrating and expanding relevant teaching programs in the faculties. Professor Emeritus Nancy Millis acted as Co-ordinator of this initiative that led to the award of funds from the Victorian Education Foundation to establish a Graduate Diploma of Biotechnology course to begin in 1989.

Following the Faculty's review of Psychiatry and Behavioural Studies at the end of 1987, successful negotiations occurred with the Office of Psychiatric Services of the Health Department of Victoria to establish four First Assistant positions in the Department of Psychiatry: two in the field of Psychiatry of Old Age, one in Community Psychiatry and one in Child Psychiatry. Discussions have also occurred with the Department of Psychology concerning a proposal to establish a 'School of Clinical Behavioural Sciences', with the aim of providing a broader, more integrated basis for research, undergraduate teaching and postgraduate clinical psychology training programs for the University in the field of Behavioural Studies related to Medicine.

Considerable progress was made during 1988 in the implementation of new teaching hospital affiliations. Although the affiliation agreement with Box Hill Hospital terminated at the end of 1988, arrangements were finalised to enable the attendance of students at Maribyrnong Medical Centre at the beginning of 1989. A joint clinical school to be called 'The Royal Melbourne Hospital/Maribyrnong Medical Centre Clinical School' has been established and will be supervised by the present Associate Dean (Clinical) at The Royal Melbourne Hospital, Mr. Alan Cuthbertson. Professor Neville Yeomans took up his appointment to the Chair of Medicine at Maribyrnong Medical Centre in August 1988. Towards the end of 1988 it was agreed to proceed to advertise a Chair of Surgery to be located at Maribyrnong Medical Centre, to be funded (as with the Chair of Medicine) by the Health Department of Victoria. Negotiations continued during the year with The Geelong Hospital, leading to agreements to advertise Chairs of Medicine and Surgery to be located at the Hospital and to be funded from Hospital resources. Agreement was reached that students from The University of Melbourne will attend The Geelong Hospital from the beginning of 1990 at which time a joint clinical school with St Vincent's Hospital will be established. Agreement was reached during 1989 to continue the association of The University of Melbourne with Preston and Northcote Community Hospital (PANCH). Currently students from St Vincent's Hospital Clinical School attend PANCH for clinical experience, but PANCH has agreed that small numbers of students from the Austin Hospital/Repatriation General Hospital Clinical School can also attend to gain experience in casualty and anaesthetics. PANCH has also offered to provide funding to support the joint appointment of a First Assistant in Surgery at the Hospital in conjunction with the Department of Surgery (St Vincent's Hospital). In reviewing 1988, it is appropriate to thank the Boards of Management and staff of all of our affiliated teaching hospitals for their generous assistance over the years in permitting students from The University of Melbourne to gain clinical experience in their institutions.

A pre-occupation of the Faculty towards the end of 1988 was to develop strategies in coping with the major budgetary cuts of 3.3 per cent applied to all budget divisions of the University. All departments of the Faculty showed excellent co-operation in applying these cuts to ensure the minimum possible damage to our educational and research programs. There is however considerable concern as to the extent to which additional cuts in later years will further erode the infrastructural support for the routine work of our departments.

Also towards the end of 1988, attention was directed towards the provision of appropriate documentation for the Accreditation Committee of the Australian Medical Council which is scheduled to visit The University of Melbourne in March 1989. This Committee is charged with assessing whether the medical course of The University of Melbourne should continue to be accredited by the Australian Medical Council.

Student matters

The intake into the first year of the medical course was again 182 students for 1988. The VCE cut-off score for selection was 359, compared with 350 in 1987 and 360 in 1986. Included in the entry into first year was the usual quota of 13 overseas students (who required VCE scores of at least 372, compared with 390 in 1987 and 378 in 1986) and a small number of mature age students selected on the basis of both VCE and

tertiary studies. One full-fee paying overseas student was admitted 'outside quota' with a VCE score of 367.

In 1988 the Faculty again participated in the University's Special Admissions Scheme in which up to ten students are admitted to the first year of the medical course on the basis of VCE performances somewhat lower than the normal cut-off figure but considered to be adversely affected by social and educational disadvantage.

The Faculty's Extended Special Admissions Scheme continued in 1988, having been implemented for the first time in 1987. This Scheme provides for the selection of up to ten additional disadvantaged students whose academic performances are between the above Special Admissions cut-off and the cut-off score for entry into Science at the University. The students are offered admission to the second year of the medical course if they perform at a satisfactory level in prescribed science subjects for two years.

The Faculty's Lateral Entry Scheme continues to operate successfully, offering the opportunity for students to gain selection into the second year of the course on the basis of appropriate tertiary studies. In addition, the Faculty's Refugee Entry Scheme provides access to the course for appropriately qualified senior medical students or recent medical graduates admitted to Australia with refugee status.

During 1988 planning was completed and Handbook entries were approved for major curriculum changes in the three preclinical years to be implemented with the introduction of the two-semester academic year in 1989. The Curriculum Review Committee believes that the new curriculum will result in a more cohesive and integrated teaching program, with a more even distribution of work and assessment load. Some of the modifications being introduced in 1989 include: a greater emphasis on more integrated and correlative areas of study; some increase in teaching in Anatomy and Physiology for First Year students; provision of a short introductory program in Biochemistry in First Year within a new two-semester subject Medical Chemistry; a major increase in the Community Medicine component in each of the first three years, in particular with an expansion of Community Medicine teaching in Third Year from one term to two semesters, incorporating material currently taught but with substantial additional teaching in the fields of medical sociology, public health, health promotion and communication skills. Opportunities will also be provided for introductory clinical and Anatomical Pathology experience in the hospitals in the second half of Third Year.

During the year the Faculty also completed a review of the last three years of the course with the aim of introducing changes into fourth and fifth years in 1990 and final year in 1991. The major features of these proposals include: in Fourth Year, the introduction of Clinical Advanced Study Units, country rotations and additional teaching in an expanded 38 weeks (currently 35 weeks) teaching year; restructuring of Fifth Year to modify the rotations in Paediatrics (11 weeks including Community Paediatrics — previously 10-week rotations), Psychiatry (9 weeks — previously 8 weeks), Obstetrics and Gynaecology (10 weeks), and Community Medicine (10 weeks — previously 4 weeks) including provision for a 4-week rotation in Public Health (previously 2 weeks) and a 4-week rotation in suburban and country general practices in Primary Medical Care (previously 2 weeks); transfer of some current teaching, including Infectious Diseases and Geriatrics, from Fifth Year to Fourth and/or Sixth Year; completion in Fifth Year of the assessment of subjects currently studied in Fifth Year; and the expansion of the Sixth Year teaching program from 20 to 28 weeks, preceded by an options period of at least 8 weeks (previously 10 weeks). It was also agreed to introduce the 'objective structured clinical examination' (OSCE) format as a component of clinical assessment in Fourth Year in 1989 and in Fifth Year Obstetrics and Gynaecology in 1989.

Research

For 1988 the Faculty of Medicine attracted research funds from sources outside the University totalling approximately $18 million. These funds were derived from government agencies, private foundations, industry sources and donations. The largest contribution was an amount of approximately $7.5 million from the National Health and Medical Research Council, including approximately $2 million for one new and five continuing Program Grants. In addition to the NH&MRC funds administered through the University, associates of University departments working in affiliated teaching hospitals received over $1.5 million in NH&MRC grants, giving an overall total of approximately $9 million from this source — once again the largest allocation of NH&MRC funds to any medical school in Australia.

During 1988 two research groups in the Faculty received special recognition. First, Professor Graeme Clark's group, the pioneers of the Bionic Ear, was awarded Special Research Centre status by the Federal Government to establish the Human Communication Research Centre at The Royal Victorian Eye and Ear Hospital. This is the second Special Research Centre in the Faculty, the other being Professor Ian McKenzie's Research Centre for Cancer and Transplantation in the Department of Pathology. Also during 1988 Dr Lorraine Dennerstein was awarded Federal Government funding to establish a Key Centre for Women's Health in Society. This is one of a small number of Key Centres for Teaching and Research in tertiary educational institutions in Australia to promote advanced teaching and research in areas of national priority and community need. The aim of the new Centre is to develop new approaches to women's health issues by integrating knowledge from the social sciences and humanities with medical science.

Staff and Alumni matters

A number of important Chair appointments were made during 1988. Dr. N.D.Yeomans took up his appointment in August as Professor of Medicine at Maribyrnong Medical Centre. Professor T.J.Martin transferred from the Department of Medicine (Repatriation General Hospital) in November to the Department of Medicine (St Vincent's Hospital); Professor Martin had earlier taken up his additional appointment as Director of the St Vincent's Medical Research Institute. Dr R.E.H.Wettenhall took up his appointment to the Chair of Biochemistry in November. Dr C.L.Masters accepted the appointment of the Chair of Pathology, and Dr B.M.Tress accepted appointment to the Chair of Radiology, both with effect from 1 January 1989. Also during the year Professor H. Burry was appointed Professor/Director of Rehabilitation Medicine at The Amalgamated Melbourne and Essendon Hospitals, with responsibility for promoting teaching and research in Rehabilitation Medicine across the Faculty.

Dr R.A.Sinclair accepted appointment to the position of Professor/Director of Anatomical Pathology at the Austin Hospital, with effect from the end of January 1989. Dr A. Tonkin was appointed a Professorial Associate in the Department of Medicine (Austin Hospital/Repatriation General Hospital), and Dr P.M.Colman was appointed a Professorial Associate in the Department of Biochemistry. In December, Dr A.W.Burgess, Director of the Ludwig Institute for Cancer Research (Melbourne Branch), accepted appointment as Professorial Associate with the title of Professor in the Department of Surgery (The Royal Melbourne Hospital).

At the end of 1988 the following senior appointments were either pending, under advertisement or about to be advertised: Chairs of Ophthalmology, Community Medicine, Medicine and Surgery at Repatriation General Hospital, Medicine and Surgery at The Geelong Hospital, Surgery at Maribyrnong Medical Centre, Orthopaedic Surgery at Royal Children's Hospital, Professor/Director of the proposed Austin Hospital Research Institute, and Professor/Director of Anatomical Pathology at St Vincent's Hospital.

At the end of 1988, four professors of the Faculty retired and were appointed Professor Emeritus: Professor H.D. Attwood of the Department of Pathology and Medical History Unit, Professor A.J.Day of the Department of Physiology, Professor W.S.C.Hare of the Department of Radiology at The Royal Melbourne Hospital, and Professor G.A.Kune of the Department of Surgery at Repatriation General Hospital. In addition, the Chairman of the Department of Pathology, Dr R.McD.Anderson, retired at the end of the year. Each of these retirees will continue to have significant association with the Faculty. Professor Attwood has agreed to continue in his role as Curator of the Medical History Museum. Another notable loss to the Faculty was announced at the end of 1988, with the resignation of Dr G.Whelan, Associate Dean (Clinical) at St Vincent's Hospital, who will take up the appointment of Director of Community Medicine at St Vincent's Hospital at the beginning of February 1989. Dr Whelan however will continue in his important role as a member of the Curriculum Review Committee of the Faculty.

Notable honours gained during 1988 by persons associated with the Faculty included the appointments of the present Vice-Chancellor and former Dean, Professor D.G.Penington, as Companion of the Order of Australia, and Dr E.Chiu and Mr G.Westlake as Members of the Order of Australia. Professor J.P.Coghlan, Deputy Director of the Howard Florey Institute of Experimental Physiology and Medicine and Deputy Vice-Chancellor (Research) was honoured by being the first Australian recipient of the prestigious Dale Medal from the British Endocrine Society. Professor T.J.Martin was presented with the Chemofux Award in Vienna for his contributions to bone and calcium research. Professor D. Metcalf of The Walter and Eliza Hall Institute of Medical Research was awarded the 1988 Robert Koch Prize by the West German Koch Foundation. Dr B.E.Kemp, Deputy Director of the St Vincent's Institute of Medical Research, was awarded the 1988 Selwyn-Smith Medical Research Prize of The University of Melbourne.

In 1988, Professor K.J.Hardy, Chairman of the Department of Surgery (Austin Hospital/Repatriation General Hospital), performed Victoria's first successful human liver transplantation operation. Professor Hardy's team at Austin Hospital was subsequently recognised formally by the Health Department of Victoria as the State's official Liver Transplantation Unit. Mr R.Mee, Director of Cardiac Surgery at Royal Children's Hospital and Senior Associate in the University Department of Paediatrics, performed Victoria's first successful human heart transplantation operation following the establishment of the State's Paediatric Heart Transplantation Unit at Royal Children's Hospital.

The University of Melbourne Medical Society continues to flourish, with a current membership of approximately 1500, including 155 members of the 1988 medical graduation class who were recruited to membership of the Society (and the Alumni Association) following the hand-over ceremony to the Medical Board of Victoria in December. The Society Journal, *Chiron*, continues as an excellent publication under the editorial leadership of Dr Peter Jones and Mrs Maggie Mackie. In December, largely due to the creative energy of Mrs Mackie, *Medicine*, a new four-page Newsletter, was produced with the aim of keeping students, staff and graduates up-to-date with new developments in the Faculty. It is intended to maintain *Chiron* as appearing once-yearly, and the Newsletters appearing twice-yearly.

Graeme Ryan

Retirements

The following Minutes of Appreciation were adopted at the last meeting of the Academic Board for 1988.

Professor H.D. Attwood

Harold Dallas Attwood was born in Scotland in 1928. He graduated in Medicine from the University of St Andrews in 1951 with the gold medal in Medicine. After an intern year in the U.S.A. and a post in Dundee he became interested in pathology as a career. Initially this interest was pursued at the Dundee Royal Infirmary as Lecturer in Pathology. During this time his research in the area of amniotic fluid embolism as a cause of maternal death led to the award of Doctor of Medicine (St Andrews) in 1957. In 1957 Professor Attwood returned to the U.S.A. to work at Yale. In 1959-1961 he became senior pathologist to Pfizer Ltd in Britain.

Harold Attwood took up appointment in 1961 as Assistant Director of Pathology at The Royal Women's Hospital, Melbourne. His experimental work and further clinical studies in amniotic embolism gained a Melbourne MD in 1964. In 1965 he became Director of Pathology at The Royal Women's Melbourne. In 1966 when the Austin Hospital was established as a teaching hospital within The University of Melbourne, Harold Attwood became its Foundation Professor of Pathology.

As a result of changes in the medical curriculum in 1979 which reduced the teaching requirements within the Austin Hospital Pathology Department, Professor Attwood came to the campus department in 1980. In addition to his teaching commitments within the department he took charge of the Medical History Unit and became Curator of the Pathology Museum.

In 1964 he was appointed pathologist to the committees set up to monitor perinatal and maternal mortality in Victoria. The reports of these committees have had a major influence on improvement in these areas. In 1978 he became a member of the founding Committee of the Sudden Infant Death Research Foundation and a member of the Mesothelioma Registry.

Professor Attwood's leadership in the field of medical history has been of special significance. He has been co-editor of several volumes of papers for the Medical History Unit. In addition, in 1986 he produced a magnificent facsimile edition, with Melbourne University Press, of William Clift's copy of Matthew Baillie's *Atlas of Morbid Anatomy* (1799).

He has been at various times chairman of the A.M.A. Section of Medical History, honorary historian to The Royal College of Pathologists of Australasia, co-editor of the *Medical History Australia Newsletter* and more recently secretary of The Australian Society of the History of Medicine. He is a regular contributor to *Chiron*, the Journal of the University of Melbourne Medical Society.

Professor A.J. Day

Allan John Day was born in Adelaide in 1927. He completed his B.Sc. and M.Sc. at The University of Adelaide. In 1949 he entered the Adelaide Medical School as an undergraduate, retaining the position of Demonstrator in Physiology until 1950. On graduating MBBS in 1953 he was appointed Lecturer in Physiology which marked the commencement of a 30-year period of original contributions and leadership in lipid research and physiology teaching.

In 1957 he was awarded a Doctorate in Medicine by The University of Adelaide and in 1959, after working with the late Lord Florey at the Sir William Dunn School of Pathology, Oxford University, his original studies of lipid metabolism were accepted for a D.Phil. (Oxon). He was appointed to a Senior Lectureship in 1955 and a Readership in 1964, both at The University of Adelaide.

In 1967 he took up the Chair of Physiology at this University, rapidly established an active research program and assumed responsibility for the organisation of medical physiology teaching.

In all of his teaching and course planning Professor Day has sought to blend basic and applied clinical science to the advantage of his students. He has always represented the case for basic medical science teaching being extended formally into the clinical years and has accumulated a wealth of practical experience in this regard as Director of Physiology and Examiner to The Royal Australasian College of Surgeons in the decade 1968-78. During that period the College of Surgeons introduced novel teaching methods and assessment procedures which Professor Day successfully introduced into the medical undergraduate course in Physiology at this University.

Professor Day has also been a significant contributor to knowledge in the important research field of cholesterol metabolism and arterial disease. He is acknowledged internationally as the first worker to recognise the importance of the macrophage in the formation of cholesterol deposits in the arteries. It must be with considerable satisfaction that now, twenty years after these particular observations, he witnesses a most intense international research activity on this topic, including recognition of his original observations.

Professor Day has served as Treasurer of The Australia Physiological and Pharmacological Society, President of The Australia Atherosclerosis Group and member of the Editorial Board of the *Journal of Atherosclerosis*. He is a Fellow of the American Heart Association Council on Atherosclerosis and over many years has been an adviser to the National Heart Foundation.

Professor W.S.C. Hare

William Samuel Calhoun Hare was born at Ballarat in 1923. From Geelong Church of England Grammar School, he won a resident scholarship to Trinity College in 1942. His medical course was interrupted by illness and he graduated MBBS at The University of Melbourne in 1951, winning the Hubert Sydney Jacobs Prize in Clinical Gynaecology and sharing the Beaney Scholarship in Surgery. He spent his Junior and Senior Resident Medical Officer years in 1952 and 1953 at The Royal Melbourne Hospital. In 1954 and 1955 while he was a Radiology Registrar at The Royal Melbourne Hospital he became a Doctor of Medicine (The University of Melbourne), a Member of The Royal Australasian College of Physicians and The Royal Australasian College of Radiologists (RACR) and gained the Diploma of Diagnostic Radiology (The University of Melbourne). He was then appointed Assistant Radiologist at The Royal Melbourne Hospital. In 1958 he was awarded the Thomas Baker Travelling Fellowship of the RACR and became the Director of Radiology at The Royal Melbourne Hospital. In 1963 he was awarded the Rouse Travelling Fellowship of the RACR and the same year was elected a Fellow of the RACR. In 1965 he was appointed as the Edgar Rouse Professor of Radiology at The University of Melbourne. This was the first Chair of Radiology in Australia. In 1984 he was elected to Honorary Membership of The Radiological Society of North America.

From the beginning of his career in radiology, Professor Hare showed unique skills in performing procedures in all aspects of radiology. He introduced percutaneous transfemoral cerebral angiography to Australia and was actively involved in innovative coronary angiography techniques. He became an international authority on the radiology of analgesic nephropathy and is a world leader in interventional uroradiology. Many of his techniques have been adopted around the world and have contributed to the marked reduction in the incidence of open surgery for ureteric and renal calculi. Professor Hare's impact upon the teaching of radiology at both undergraduate and postgraduate level has been enormous.

Professor Hare was Assistant Dean (Clinical) in the Faculty of Medicine between 1976 and 1981. In 1971 he was the Foundation President of the Asian and Oceanian Society of Radiology. He has been a Councillor of The Royal Australasian College of Radiologists from 1960 and was President in 1986/87. He continues to contribute actively to many national and State government departmental committees. He is currently Chairman of the Radiation Safety Committee of the Health Department Victoria, the Research Committee at the Peter MacCallum Cancer Institute and the Mammography Sub-Committee of the RACR.

Professor G.A. Kune

Gabriel Andrew Kune was born in 1933, attended Melbourne Boys High School, and in 1957 graduated in Medicine at The University of Melbourne. Surgical training followed at The Royal Melbourne Hospital, at St Mary's Hospital and Guy's Hospital in London and the Lahey Clinic in Boston, U.S.A. He gained the Fellowship of The Royal Australasian College of Surgeons in 1962, Fellowship of The Royal College of Surgeons (England) in 1963, and Fellowship of the American College of Surgeons in 1966.

He was appointed Surgeon to The Royal Melbourne Hospital in 1967 and Consultant Surgeon in 1977. He has been Senior Surgeon at the Repatriation General Hospital since 1977, and Honorary Senior Surgeon at Austin Hospital since 1978.

When The University of Melbourne established Chairs of Medicine and Surgery at the Repatriation General Hospital in 1977, he was appointed Foundation Professor of Surgery, and has held that position since that time. Other significant academic appointments have included the Arris and Gale Lecturer in 1970 and Hunterian Professor in 1977, both at The Royal College of Surgeons of England, and Visiting Professor at the Universities of Marseilles and Lyon, France, the Universities of Southern California, Illinois and Texas, the Universidad National del Sur, Argentina, and Semmelweiss University in Hungary.

Professor Kune has been actively involved in medical research for the past twenty-five years, making several significant contributions toward medical knowledge in the field of gastrointestinal disease. He developed a unique research design to investigate the causes and prevention of large bowel cancer, the commonest internal cancer in Australia. This study is at present the largest and most detailed in the world and has already made a major impact on the understanding of the causes of large bowel cancer, in particular by showing the importance of diet, heredity and emotional factors in this disease.

His writings are very extensive and include two books on the surgery of the gallbladder and bile ducts, the second of which was later translated into Japanese and Italian, and remains an internationally recognised text. In December 1988, he was awarded a Doctorate in Medicine at this University for his collected writings on gastrointestinal disease and surgical infection.

Professor Kune has served on numerous committees of the Faculty, the Repatriation General Hospital and other national and international organisations. He was a member of the National Liver Transplantation Committee and Vice-President of the International College of Gastrointestinal Surgeons. He is a member of several Australian and international medical societies, and is a Fellow of The Royal Society of Medicine.

Department of Community Medicine

The Department of Community Medicine, orginally titled 'Community Health', was established in 1975. The case for this academic development in Australian medical schools had previously been made in the Karmel Report of 1973, following which the Whitlam Government adopted the recommendation of the then Hospital and Health Services Commission and earmarked funds for all medical schools for the introduction of what was described at that time as 'Community Practice'.

Community Medicine under a variety of names had been emerging as a new discipline throughout the world for three reasons. First there was an increasing demand by society for medical care oriented towards the whole person rather than the disease process. Rightly or wrongly traditional medical school curricula were not seen to deliver graduates capable of this commitment. The second area of concern was that hospital-based experience did not accord with the epidemiological realities of disease in the community, so that clinical training, which until that time had been purely hospital-based, was seen as an inadequate preparation for professional life to be spent outside major teaching hospitals. Finally, it was becoming apparent that maldistribution of medical practitioners, both geographical and by specialty, the escalating cost of medical care and questions as to the direction of medical research, were likely to result in different systems of health care in the future. It was vital that new medical graduates be made aware of change and trained to cope with developing professional roles.

Towards the end of 1976 the University purchased the current central building of the Department at 243 Grattan Street. In subsequent years 249 Grattan Street and 159 Barry Street were added and, most recently with the introduction of the Key Centre for Women's Health in Society, 209 Grattan Street.

In 1977, responsibilty for teaching and research in social and preventive medicine was transferred to the Department. Community Medicine thus came to represent a broader academic perspective than the original concept of 'community practice' upon which government funding was based. From this point two primary objectives were seen for the Department: The first was to develop in undergraduates a broader, outward-looking sense of their future role in the community associated with an ability to relate easily to other health professionals. Teaching would emphasise the preventive and rehabilitative components of health care and aim to create an awareness of the social, cultural and political aspects of health and illness. Learning would be directed particularly towards students' attitudes, perspectives and roles in health care delivery.

The second objective was to develop research in epidemiology, health care services and primary medical care. The last named presented a particular challenge because at that time general practice research was weak, so for it to obtain credibility in the university setting it was imperative to develop a strong research component and attract its personnel to postgraduate studies and future acedemic roles.

Teaching programs have spanned the whole course and concentrated in the first, third and fifth years. In First Year, Behavioural Science I, incorporating three components of growth, development and ageing, medical sociology and medical psychology, replaced Medical Studies I in the curriculum review of 1979, the latter subject having consisted principally of bio-statistics. Social science teaching has been notorious throughout the world for its poor reception by medical students, so that a great deal of effort has been directed to producing a course to meet their particular needs. The innovation of teaching in smaller groups together with field visits to general practitioners and hospitals have provided a considerable advance in achieving the objectives of the department.

First Aid, with appropriate academic support, was introduced as a voluntary exercise in 1980 and became a mandatory part of the course from 1983. It resulted from the students' initiative because they correctly perceived themselves as inappropriately incompetent in medical emergencies throughout their undergraduate days. The acquisition of first aid skills has given them an early sense of their community role.

Social and Preventive Medicine: Epidemiology as a discipline was first taught in 1974; since then it has become apparent that it must be regarded as a core subject in the medical curriculum. Not only is it vital to the understanding and writing of medical literature, it is also the fundamental discipline which underpins progress in public health practice. It has taken some time to tune the teaching strategy in an appropriate manner but the exercise is now successful, again assisted through the use of smaller groups.

Advanced Study Units have been offered in Second and Third Year. A range of some ten topics is available for student selection. These have achieved the important objective of developing the initiative of students to go into the community to examine topical issues, as well as their literature searching and writing skills.

Fifth Year Community Medicine includes primary medical care, forensic medicine and a number of important medical subjects where hospital teaching is either deficient or inappropriate, such as ethics, occupational medicine and alcohol and drug dependence. The incorporation of forensic medicine into Community Medicine has been seen as relevant integration because of its overlap, not only with ethics, but with other 'topical' community medicine issues.

The introduction of primary medical care was a fundamental objective in the establishment of the Department. From its out-set communication skills were taught as a critical component, now recognised by the Faculty to be of basic importance in the training of medical undergraduates.

From 1989, with a move to a semester system and following an extensive review of the curriculum, there will be a substantial increase in the teaching of community medicine and a re-organisation of related subjects. Behavioural Science in First Year will be replaced by a one semester subject, Introduction to Medicine, which will incorporate the first aid course now described as 'introduction to emergency medicine'.

In Second Year there is a one semester subject of Behavioural Science and in Third Year Community Medicine I will absorb the current program in social and preventive medicine, expand to include health promotion, health care economics and the teaching of communication techniques. The last named is, *inter alia*, intended to equip students with the necassary skills to undergo the transition from the pre-clinical to the clinical phase of the course.

In Fifth Year the current clinical component of Community Medicine II is doubled providing particularly for the

expansion of primary medical care and public health teaching.

Two graduate programs were introduced in 1982; the Master of Science in Epidemiology, originally by coursework and research, is now a research only program. Secondly, the Master of Medicine in Primary Medical Care was the first postgraduate degree in general practice to be offered in Australia and, so far as is known, only the second in the western world. This has been seen as a basic objective from the outset; four students have already graduated and many more are in progress.

Research in the Department has pioneered areas distinct from the traditional biomedical research in which the Faculty has a distinguished record. The broad areas are occupational health, health services, lifestyle factors in disease, women's health and medical statistics.

A major activity has been the Health Watch program, a current prospective study investigating mortality and cancer morbidity in the petroleum industry, funded by the Australian Institute of Petroleum. This study has completed its eighth year and is likely to continue for the foreseeable future. Its outcome will represent a substantial contribution to the epidemiology of occupational disease. In addition a number of major studies have been conducted into health services involving large scale data collection. Since there is no other centre in Australia which has a comparable activity much has been achieved in productive research, given the limited resources. General practice research has still to reach a desired state of maturity despite some excellent work by members of staff and postgraduate students. The training of general practitioners for academic roles has been and will remain a key objective.

In July 1988 the Department welcomed the Key Centre for Women's Health in Society. Dr Lorraine Dennerstein is the Director following the acceptance of her proposal by the Commonwealth Department of Employment, Education and Training. There is no doubt that this Centre will quickly establish international recognition in women's health and make an important contribution to teaching and research.

In the clinical area it has always been regarded as fundamental that primary care can only be taught by practising clinicians. With the construction of the new Broadmeadows Community Health Centre the Department was able to negotiate an affiliation in 1986 and now has a teaching and research unit there. The arrangement has been mutually beneficial and members of the staff have already made significant contributions to the overall aims and objectives of the Centre. However only a small proportion of the students can be accommodated for teaching purposes so that there is heavy reliance on a network of some forty community health centres and private medical practices in the northern and western suburbs of Melbourne, as well as a number of rural practices. There are good relations also with community and social agencies which are generous in their support of student teaching.

It is significant that the Department was established at the time the economic downturn of the 1970s commenced. It was therefore not part of the rapid expansion in the 1960s and early 1970s; in fact it has functioned only during the period when the University as a whole has experienced progressive contraction of its resources.

This is one reason that the number of full-time academic staff is disproportionate to the teaching load. Another is the necessity to rely on visiting lecturers to provide for the wide diversity of topics within the discipline, in all of which the permanent members of the staff cannot be expected to be skilled. This is not of itself necessarily undesirable but it does leave them vulnerable, particularly in relation to study leave and/or illness and is compounded by administrative and clinical commitments.

The first major staff change occurred with the departure of Dr David Christie at the end of 1987 to take up the Chair of Environmental and Occupational Health at the University of Newcastle. His epidemiological research was recognised internationally and he made a major contribution to the academic life of the Department. He has now been replaced and the academic staff has been strengthened by the appointments of a senior lecturer in drug and alcohol education and a lecturer in statistics.

With only thirteen years of existence the Department of Community Medicine remains the youngest of the twenty-three departments of the Faculty of Medicine. There is therefore no sense of history to record as has been the case with descriptions of other departments in this publication. Not unexpectedly, it has taken this time for the Faculty to accept its key role in future teaching and research. From 1989 the teaching commitment of the last eight years is almost doubled. Futhermore it is the only department which comprehensively spans both the pre-clinical and clinical years, with the latter being carefully programmed as the application of the theoretical principles taught in the first three years.

The Department will continue to attempt to reflect the need for medical students to think about the connection of their profession with the wider community and their own contribution to that community. It is the logical focus to introduce some liberal values in medical education and to counter the perception of society that the profession has at best a limited interest in welfare issues. Furthermore, it is conscious that the undergraduate curriculum, because of the essential knowledge content, must of necessity be narrow and to an extent specialised; nevertheless increasing attention should be paid to historical, philosophical and cultural matters.

Much remains to be achieved. The need for teaching in multi-cultural and trans-cultural medicine is becoming urgent and it is important to ensure that the expansion in primary care teaching does not overtake the resources available. The successful initiative at the Broadmeadows Community Health Centre will be extended to other such centres in the coming years with the objective of giving teaching at the community level the comparable status and resources of a hospital-based clinical school. It is only by such outreach that student teaching can be supervised by university personnel.

It is intended to offer a postgraduate diploma in epidemiology from 1990. This will have the dual purpose of providing the needs of health professionals for an understanding of epidemiology and, at the same time, stimulating an increased interest in the master's degree. Health services research will continue to grow with much of it likely to be promoted on a contract basis with Federal and State health departments. Particular attention will be given to general practice research with a view to maximising the number of general practitioners who understand the research process.

All of the above needs to be seen in relation to the total health care scene where public tertiary care hospitals should be only one place in which students receive their clinical training. Much greater use in the future will be made of community resources and the private sector. It is the Department of Community Medicine which will increasingly be called upon to mobilise such resources. Any future expansion of the Medical School is likely to be seen in this context.

Ross Webster
Chairman
Department of Community Medicine.

Reports from Clinical Schools

Austin Hospital and Repatriation Hospital.

In 1988 the Clinical School made few changes in its teaching programs, but a number are being planned for 1989.

During 1988, we saw Professor T.J. Martin appointed to the Chair of Medicine at St Vincent's Hospital and also as Director of the St Vincent's Medical Research Institute. Dr Neville Yeomans was appointed to the Chair of Medicine at the Maribyrnong Medical Centre, making the total number of professors appointed from the Clinical School to twelve over the 22 years of its existence. In addition, Dr Lorraine Dennerstein was appointed Director of the Key Centre for Women's Health in Society, Department of Community Medicine at the University. All of these people will be missed by the Clinical School.

During the year Mr Bob Jones joined the University Department of Surgery and the interest of the Department at the Austin in transplant surgery lead to the first liver transplant in Victoria being performed at the Hospital. In Anatomical Pathology Dr Roger Sinclair was appointed as Professor/Director at the Austin Hospital and he will be commencing in early 1989.

In the Fourth Year the timetabling was rearranged to allow students to spend more time in the wards. In the Fifth Year the teaching of palliative care was incorporated into the psychiatry teaching program, using facilities of the recently formed Palliative Care Unit at the Repatriation General Hospital. This program was well-received by students.

The Clinical School has spent a great deal of time preparing for teaching in 1989, for not only is the new curriculum to be introduced for Fourth Year, but the Clinical School will also have a change of hospitals. In 1989, Box Hill Hospital leaves us to become a Monash University Teaching Hospital; arrangements have been made for Casualty/Anaesthetics teaching to take place at Preston and Northcote Community Hospital. In addition, next year, for the first time Bendigo and Northern District Hospital will accept students in Fourth Year in Medicine and Surgery.

During the year the Clinical School participated in a trial OSCE (Objective Structured Clinical Examination). The impression was that it was a success, although requiring a great deal of preparation. It is worth noting that the OSCE format is already affecting students' thinking and approach to their work in the wards.

The Clinical School continues to take increasing numbers of students from overseas for electives, and the amount of secretarial time being spent on this correspondence is increasing.

In the Sixth Year results 1988, all 62 students from the Clinical School passed. Mr Martin Delatycki was the top student. He was equal second for the whole year and was the top student in Medicine and winner of the Jamieson Prize.

I should like to thank members of the Clinical School and its staff for their willingness to teach and work for the students. This year will be the last year for Mrs Jean Bright who has been Administrative Secretary to the Clinical School from its inception in 1967. The Clinical School extends a special thanks to her for all the work she has put into it.

Bernard Sweet
Associate Dean (Clinical)

The Royal Melbourne Hospital.

Nineteen eighty-eight has been a year of busy committee activity gearing up for significant changes in the curriculum which are to be introduced in 1990. Sixty-three students commenced Fourth Year in 1988, with sixty-seven Fifth Year students and sixty-three in final year. Results of the final year examinations were generally satisfactory with ten of our students in the first twenty. Carolyn De Poi was Top Student for 1988.

Next year teaching of Fourth and final year students will commence at the Maribyrnong Medical Centre. This very welcome fusion of The Amalgamated Melbourne and Essendon Hospitals and the Maribyrnong Medical Centre presented some difficulties with the naming of the joint clinical school, but the title 'Royal Melbourne Hospital and Maribyrnong Medical Centre Clinical School' has finally been agreed upon. Maribyrnong Medical Centre will provide a much needed broadening of the spectrum of clinical diseases.

In August, Professor Neville Yeomans was appointed to the Chair of Medicine at the Maribyrnong Medical Centre and agreement has been reached that an appointment to a Chair in Surgery will also be made. Professor Robert Helme was appointed to the position of Professor/Director of Gerontology and Geriatric Medicine at the National Research Institute, Mount Royal Hospital in October 1987 and Professor Hugh Burry became Director of Rehabilitation Medicine in March 1988.

In 1989, instead of six terms in Fourth Year, we will move to four terms of 8 – 9 weeks with a two-week introductory course. This longer time with each group of instructors will allow a better progressive assessment to be made and students should settle into ward activities more easily. In First Term, the Fourth Year students will be at The Royal Melbourne Hospital or Maribyrnong Medical Centre. Medical and surgery groups will rotate to Ballarat Base Hospital, a surgical group will rotate through Goulburn Valley Base Hospital, and a medical group through Wangaratta Base Hospital during Terms 2, 3 and 4. We welcome the decision by Wangaratta Base Hospital to take our students for this medical rotation which should be of great value to broadening their experience.

In order to meet the major changes to the Fifth Year program to be introduced in 1990, teaching of geriatric medicine and emergency medicine will be moved to Fourth Year for 1989. Some teaching of infectious diseases will take place at the Clinical School during Fourth Year but most of the formal teaching in infectious diseases will move to final year and will remain with Fairfield Hospital.

Next year it will be necessary to start the teaching of geriatric medicine in Fourth Year. This will be in a two-week block, either at the beginning or the end of a medical term.

The principles of emergency medicine will be covered during the First Term lecture program and the practical experience obtained during the surgical rotation at the Royal Melbourne or Maribyrnong Hospitals. It is hoped that this experience will be reinforced during the rotations to country hospitals.

Anaesthetics teaching, previously in Fifth Year, will be moved to final year in 1991, when there will be an increase in teaching weeks from twenty to twenty-eight weeks.

In September 1988 a trial examination was held in each of the Clinical Schools to test the feasibility of using an Objective Structured Clinical Examination in conjunction with a written paper and a common medical and surgical long case as the main assessment. Under the OSCE system, students move around about fifteen stations spending about five minutes at each. They may take a history, examine a system, interpret an investigation or perform a task, for example, take a blood pressure. The marking is structured to make the examination as objective as possible.

Twelve volunteer students undertook a six station trial examination on a Saturday morning. There were minor organisational problems but it was clear that it should be possible to mount this form of examination as the definitive method of assessment next year. Dr Graeme Young and Mr Harry Ross have been our representatives on the organising committee.

Once again, the clinical teachers at The Royal Melbourne, Ballarat Base and Goulburn Valley Hospitals have given their time freely to the Clinical School. We look forward to the new associations with Maribyrnong Medical Centre and Wangaratta.

Alan M. Cuthbertson
Associate Dean (Clinical)

St Vincent's Hospital

This year 70 students graduated from Sixth Year at St Vincent's Hospital to begin their internship training. The size of this group of students, the largest graduating class from this institution, grew to this level as a result of the return from leave of absence of six more students than the number departing. In recent years, leave of absence after Fifth Year has become more popular. Many students use this time profitably to mature, to broaden their horizons, and to gain experience of medicine in other lands prior to preparation for finals and future careers. One of these graduating students, Christine Phillips, during leave of absence, worked in Africa, assisted financially by the award of the prestigious Commonwealth Lennox Boyd Scholarship. She also had time to complete a Bachelor of Medical Science degree with the Department of Community Medicine while working in Central Australia. For this latter work she was jointly awarded the UMMS B.Med.Sc. Prize (1987) for her study entitled 'Diabetes Mellitus in Central Australia'.

We are delighted to have made arrangements during 1988 for our students to be taught in 1989 at the Goulburn Valley Base Hospital, Shepparton, the Wangaratta District Base Hospital, the Warrnambool and District Base Hospital, so that they can gain experience early in their clinical careers working with a patient population with common clinical problems — a marked contrast to the spectrum of illness seen in many units at their parent hospital — St Vincent's.

We look forward in anticipation to the changes in clinical assessment which will occur in 1989 with the introduction of the Objective Structured Clinical Examination (OSCE). From a pilot program tested in 1988 we learned that the students appreciate the uniformity and reliability of this form of assessment. However, we may need teaching classes for our examiners who must be taught to observe rather than quiz the candidate at most of the stations.

This report marks the end for me of six years as Associate Dean. I leave with the satisfaction of knowing that the educational innovations introduced during that time have become accepted learning/teaching practice. I will miss the frequent student contact but I am delighted that the role is being passed to the safe hands of Dr Wilma Beswick.

Greg Whelan
Associate Dean (Clinical)

Faculty of Medicine Final Year

Top Final Year Student 1988
Carolyn Michelle DePoi

Carolyn DePoi

Carolyn Michelle DePoi was credited with first place in the final MBBS examinations in 1988. She also won the Beaney Scholarship in Surgery, the Fulton Scholarship in Obstetrics and Gynaecology, and the RACGP Prize in Community Medicine.

Born on the 1 March 1965, Carolyn is the second child of an Italian migrant couple. She went to Merlynston Primary School and Mercy College, Coburg, completing her secondary education at St Aloysius College, Flemington. Her HSC grades included A' in English, Pure and Applied Mathematics, Chemistry and Physics.

She entered the Medical School in 1983, enjoying both the social and academic life of the preclinical years. She topped each year winning: The McKenzie Award, Dwight Prize, T.F. Ryan Prize, the Exhibition in Anatomy and was a Prosector in 1984. The Wellcome Prize in Physiology, the Walter & Eliza Hall Exhibition in Pathology and the Boots Prize in Pharmacology are but some of the awards she has received.

She joined the RMH Clinical School in 1986. During her elective period she visited Chiang Mai, Thailand and Norwich, England, which provided much experience with many contrasts. Enjoying most aspects of Clinical Medicine she remains uncertain of her particular direction within the profession's broad limits.

Carolyn has interests in ballet and theatrical dance (having commenced these at the age of three), aerobic exercise and tennis. She intends to broaden her knowledge of both the Italian Language and Medical History with studies in these areas.

Final Year MBBS 1988

Australian Medical Association Prize
DePoi, Carolyn (RMH)

Rowden White Prize
DePoi, Carolyn (RMH)

The CIBA-GEIGY Prize
DePoi, Carolyn (RMH)

Medicine

Keith Levi Memorial Scholarship in Medicine
Delatycki, Martin (AH/RGH)

Robert Gartly Healy Prize in Medicine
Delatycki, Martin (AH/RGH)

Jamieson Prize in Clinical Medicine
Delatycki, Martin (AH/RGH)

Upjohn Award in Clinical Pharmacology and Therapeutics
Cunningham, Malcolm (AH/RGH)

Community Medicine

RACGP Prize in Community Medicine
DePoi, Carolyn (RMH)

Surgery

Beaney Scholarship in Surgery
DePoi, Carolyn (RMH)
Sylivris, Stephen (RMH)

Robert Gartly Healy Prize in Surgery
DePoi, Carolyn (RMH)
Sylivris, Stephen (RMH)

Proxime Accessit Prize in Surgery
DePoi, Carolyn (RMH)
Sylivris, Stephen (RMH)

Ryan Prizes in Surgery (RACS) (RMH/SVH)
DePoi, Carolyn (RMH)
Sylivris, Stephen (RMH)
Burt, James (SVH)

Smith & Nephew Prize in Surgery (AH/RGH)
Hoggarth, Susanne (AH/RGH)

E.H. Embley Prize in Anaesthetics
Hoyle, David (RMH)

Neil Bromberger Prize in Orthopaedics (AH/RGH)
Cunningham, Malcolm (AH/RGH)

Obstetrics & Gynaecology

Fulton Scholarship in Obstetrics & Gynaecology
DePoi, Carolyn (RMH)

Robert Gartly Healy Prize in Obstetrics
Walpole, Tamson (AH/RGH)

Prize in Clinical Gynaecology
French, Craig (AH/RGH)

Kate Campbell Prize in Neo-Natal Paediatrics
Campbell, Janine (SVH)

Alfred Edward Rowden White Prize in Clinical Obstetrics
Campbell, Janine (SVH)

Edgar & Mabel Coles Prize in Obstetrics (RMH/SVH)
Campbell, Janine (SVH)

Max Kohane Prize in Obstetrics & Gynaecology (AH/RGH)
Walpole, Tamson (AH/RGH)

Paediatrics

Howard E. Williams Prize in Paediatrics
Campbell, Janine (SVH)

Child Growth & Development Study — Nursing Mothers' Association Prize in Paediatrics
DePoi, Carolyn (RMH)

Clara Myers Prize in Surgical Paediatrics
Blackney, Mark (RMH)
Campbell, Janine (SVH)

Psychiatry

John Adey Prize in Psychiatry
Campbell, Janine (SVH)

John Cade Memorial Medal in Clinical Psychiatry
Campbell, Janine (SVH)
O'Brien, Terence (SVH)

Graduate List 1988

Bachelor of Medicine and Bachelor of Surgery

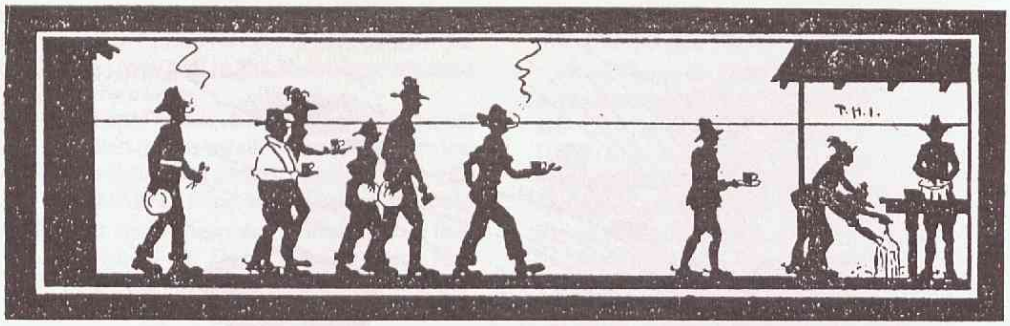
Timothy Leonard Alexander, Murray David Anderson-Hunt, Mark Jeremy Ashcroft, Francesco Anthony Barbagallo, Graham Alasdair Raymond Barrington, B.Sc., Petrina Louise Barson, Sally Meredith Bartle, Samuel Edward Battaglia, B.Sc. (Monash), Lisa Lloyd Bendtsen, Peter Ramon John Bishop, Mark Christian Blackney, Sharon Kay Boots, Peter Bosanac, Kathleen Mary Braniff, Glen Anthony Burgin, Paul Peretz Burstin, James Drummond Burt, Gary Joel Campain, Janine Kathleen Campbell, Chan Anthony Chung Man, Anne Bernadette Chang, David William Chesney, Harold Keng-Keng Chua, Michael Stuart Clark, Anita Helen Clarke, Michael John Clarke, Jennifer Joy Conn, B.Sc., Dip. Ed., Jennifer Alice Conway, Maria Lisa Coperchini, Jeremy William Couper, Andrew Thomas Crawford, Alison Joan Cross, Malcolm Andrew Cunningham, Robynne Felicity Dakis, Alexander Harvey Darling, Robert Kingsley Dawborn, Richard Hendry de Boer, Martin Bruce Delatycki, Lyndall Cripps Dennis, Carolyn Michelle DePoi, Fio De Vincentis, Jane Stuart Dodd, B. App. Sc. (RMIT), Scott Maurice Donnellan, Lorelle Tricia Drew, William Alexander Dwyer, Steven Reginald Ellen, Jennifer Anne Eury, Peter Malcolm Evans, Mark William Faragher, B. Med. Sc., Christina Phui Hoong Fong, Christopher Meng Kit Fong, Eva Yoong Yoong Fong, Craig John French, Diana Jane Gillatt, B. Med. Sc., Peter Thomas Joseph Girdlestone, David James Glaspole, Robert Andreas Gocentas, Margaret Isabelle Gralinska, Gabrielle Netherway Hall, Victoria Judith Hayes, Matthew Hayhoe, Jennifer Ping Chin Hee, Deborah Ellen Herbst, Lien Hoang, Glen Richard Hocking, B.Sc., Ph.D. (Monash), Susanne Gwenda Hoggarth, Joshua David Honig, Tina Chien-I Horng, Richard George Horton, Patricia Iris Hough, Andrew Paul Howard, David Kenneth Hoyle, David Kurt Huppert, Jenny Louise Hynson, Colin Constantinos Iatrou, Raymond John Ingamells, Adam Warren Julius Jenney, Caroline Louise Johnson, Bruce Edward Jones, Ioanna Kalogeropoulos, Anthony George Kambourakis, Ian Henry Katz, Raymond Soo-Aik Khoo, Matthew Curwen Killen, Jennifer Anne Kimmins, Yi Mien Koh, John Kondopoulos, Angela Koravos, Marc Bernard Lanteri, Angelo Riccardo La Spina, Christine Hoai-Huong Le, Jane Li Lian Leong, Ronald Yin Lon Leong, Susan Elizabeth Lester, Michael Levenda, Han Hui Liem, Adrian Cheok Kean Lim, Lim Chong Yeh, Ian Lindsey, Hendry Khetjang Liu, Emily Lo Wan Yee,

David Tat Shing Louey, Catherine Isabel Love,
Hong Thai Luong, Geoffrey Roy Macaulay,
John Andrew Mackay, Jennifer Wils Majoor, Barbara Manovel,
David Peter Manton, Damian Marinucci,
Caroline Lisa Marshall, Philippa Ann Marsland,
Luke Daniel Matar, Joanne Elizabeth McClean,
Robyn Mary McDonald, Colin Malcolm McKenzie,
Philip Lachlan McKenzie, Ashley Maurice Miller,
Susan Patricia Mouritz, Paul Keith Muirden,
Paul Nicholas Murray, Ng Siew Eng, Ngoc Huong Nguyen,
Vicki Anne Nott, Terence John O'Brien, Ian Chye Heng Ong,
Jacek Owczarek, Lazaros Papadopoulos, B. Med. Sc.,
Helen Louise Parker, Andrew John Patrick,
Colin Richard Pearson, Eugenia Pedagogos,
Christine Vi Tuong Le Pham, Thuy Thu Pham,
Trong Hieu Pham, Jennifer Anne Marshall Philip,
Christine Beatrice Phillips, B. Med. Sc., Dean Popa,
Robert Popovic, Jenny Proimos, Lisa Kaye Rasmussen,
Kevin John Ratten, Merryn Lee Rayner, B. Med. Sc.,
Andrew Peter Rothfield, B. Sc., Lena Amanda Sanci,
Adele Shabshis, Alexandra Bridget Shepherd,
Gary Philip Silver, Iain James Skinner,
Wayne Jacob Frijda Smit, B. Med. Sc., Belinda Claire Smith,
Margaret Susan Somerville, Paul Baden Sparks,
Lynette Joy Squires, Simon Peter Stafrace, Michael Starr,
Dianne Patricia Stephens, Neil David Stitt, Charles Shun Su,
Peter Satkunasingam Subramaniam, Suresh Sundram,
Thomas John Sweeney, Stephen Sylivris, Andrew Fergus Tan,
Lay-Thuan Tan, Siew Ching Tan, Peter Tung Mee Tang,
Catherine Mary Tenni, David Morgan Thomas,
Melissa Mary Thomas, Jillian Mary Thompson,
Bruce Victor Thorpe, Ting Teck Chuon, Lydia Tkacz,
Daniela Todaro, Nghia Thanh Tran, George Tzimourtas,
Platon Vafiadis, Claudio Antonio Villella, David William Walder,
Stephen William Walker, Tamson Alice Walpole,
Marli Ann Watt, Andrew Bryant Weber, Paul Thomas Whiting,
Sean Rohan Winfield Williams, Debra Anne Wilson,
Wong Chin Hong, Wong See Chang, Peter Charles Worboys,
Gavin Michael Wright, Mohamad Nasir Zahari Johari.

Shot

Shot like an innocent garden thrush;
Never a bob to spare;
Never the chance to make it up;
Never a chance to square,
But sweat it out for another year,
The future pretty blue;
Four years more on hard got cash,
Hardly enough for two.
But what's the odds to the Faculty,
The non-benevolent.
It eats you up with sudden death,
For only one per cent,
And never a chance to make it up,
Never a chance to *squeal.*
Never a Supplementary shot,
But out on the one misdeal;
You may scramble over the border line
Of Anatomy's argument,
Till Physiology shoots you twice,
For a paltry one per cent.
Shot in Anatomy — sudden death;
You knew enough to do,
For a few more marks in Bio. Chem.
Would pass you in the two.
But out you go, for the missing few,
Out for a dreary swot;
A twelve months clean for one per cent,
Shot without a shot.
And never a chance to reason why,
And never a chance to know,
Why blokes with the same per cent, as we,
And any amount of dough,
Are in their stride with the other blokes,
And I'm left down below.
With never a chance to make it up,
Never a chance to squeal;
It hurts a bit to be left behind,
Shot on the one misdeal.

THE SPECULUM, September 1912, p.106.



From *Australia in Palestine*, Angus & Robertson, Sydney, 1919, p.122.

Medical Students in the Great War 1914-1918

John C. Trinca

When war broke out between Great Britain and Germany on 4 August 1914, patriotic fever was at such a pitch that the Australian Army was inundated with volunteers. So appealing was the call to arms and the thought of adventure that many medical students rushed to join the military forces. Even some students in the final years of the medical course were so strongly motivated that they were prepared to abandon their studies forthwith. Typical of these undergraduates was F.K. ('Dum') Norris (later Major-General Sir Kingsley Norris), a fourth year medical student on third term vacation at Yea, who dashed back to Melbourne to enlist in the A.I.F. as the newspapers were predicting the war might be over in a few months. A.P. ('Plum') Derham, who had performed brilliantly in the early years of his course, became ill in the final year and was ordered to give up study for a year. Instead, he enlisted for active service in the 5th Battalion and subsequently won fame as a front-line soldier at Gallipoli.

Sixteen medical students joined up in the first month of the war, four being in their 5th and final year (J.R. Balfe, A.P. Derham, B.D. Lang, J.S. Mackay), and five in their 4th year (W.L. Armstrong, R.C. Bassett, S.E. Craig, F.K. Norris, D.R.C. Tregonning). A further seventeen medical students enlisted in September and October 1914 and these included S.O. Cowen, L.E. Hurley, J.B. Hudson, H.S. Jacobs all in the 4th year of the course. Thus, when the first convoy of 30,000 Australian and New Zealand troops sailed from St George's Sound, Albany, on Sunday 1 November 1914, it contained 33 men who only three months before had been medical undergraduates treading the campus of The University of Melbourne. Sadly, five members of this group were never to return. Of the remainder, many were to serve on Gallipoli before being recalled to finish the medical course. Ten subsequently re-enlisted and joined the AAMC after graduating in Medicine. Some who were brought back to Australia and discharged from the Army in order to continue the medical course, re-enlisted as combatants and never graduated.

By the end of the war, 131 medical students had left The University of Melbourne to join the armed forces and the records reveal that nearly half (63) had volunteered to serve as combatants in the infantry (for example, Battalion, Artillery, Light Horse or Flying Corps) rather than as non-combatants in the Australian Army Medical Corps (for example, Field Ambulance, Casualty Clearing Station, Hospital Ship or Hospital). The awards and decorations earned by members of this select group during their active service make an impressive list — 9 Military Crosses, 5 Military Medals, 1 D.S.O., 1 O.B.E. and 1 Order of the Nile.

Seventeen made the supreme sacrifice, including two who were in the final two years of their medical course — Joseph Rupert Balfe (5th Year), a football blue, who joined the 6th Battalion in August 1914, and was killed in action on 26 April 1915, one day after the Gallipoli landing and John Burgoyne Hudson (4th Year), who joined the 14th Battalion in October 1914, was wounded at Gallipoli, and subsequently discharged from the AIF, then joined the British Army, was commissioned 2nd Lieutenant, but was killed in action in France in October 1916. Others to die on active service included the following:

John Gardiner who had just commenced his medical course in 1915 when he enlisted as a private on No.2 Hospital Ship, was discharged on 16 April 1916, to resume his course, but declined to do so and three days later re-enlisted as a gunner, was commissioned 2nd Lieutenant 18 months later, was awarded the Military Cross for gallantry in March 1918, and was killed by a shell near St Quentin on 1 September 1918.

Richard Horace Maconochie Gibbs, 3rd Year, a football blue, joined the 6th Battalion as a 2nd Lieutenant in November, 1915. He was killed in France, in his first engagement, and for his gallantry was awarded the Military Cross posthumously.

Malcolm Stuart Kennedy, 3rd Year, played 18 games in 1911/12 with the Melbourne Football Club, gave up his course to enter Duntroon, left Duntroon as Lieutenant to join the Light Horse, was wounded at Gallipoli, was General Staff Officer in charge of Intelligence when he was killed by a stray shell while on his way to the trenches in France on 2 January 1918.

Eric Brodie McKay, 1st Year, Captain of Melbourne Grammar School in 1914, enlisted as a private in the AAMC shortly after commencing the medical course, was commissioned 2nd Lieutenant in August 1915, wounded on Gallipoli, torpedoed on *Southland*, and died of wounds sustained at Pozieres on 10 August 1916.

Geoffrey Ballantyne Tunbridge, 2nd Year, was Dux of Ballarat Grammar School and a leading athlete being stroke of the school crew, captain of athletics and a member of the football team. He enlisted in March 1917 in response to a call for volunteers for the infantry, and was in the Artillery when he was killed in France at 'Hill 60' on 14 May 1918.

Eighty-seven medical students joined up in the first two years of the war — 41 in 1914 and 46 in 1915. Inevitably, such a loss of potential doctors cast additional strain on the civilian medical services already depleted by graduate enlistments. The students themselves were faced with a dilemma as to where their duty lay — should they abandon study and join up or should they continue their course, graduate and then join up? Medical authorities were quick to give firm guidance to the students, as is shown by the following extract from a leading article entitled 'The Shortage of Medical Officers in Hospitals' which appeared in *The Medical Journal of Australia*, dated 6 February 1915:

> . . . Medical students and medical practitioners appear to be in some doubt as to what course they should pursue. In another column we publish a letter giving advice to senior students from the President of the General Medical Council of Great Britain. This advice is to finish their studies, and not to volunteer as combatants, since their service as medical officers with the Army may be required later on. At present, there is no demand for fresh volunteers for the contingents which may be sent from Australia.'

Despite this and other exhortations, medical students continued to join the armed forces at an alarming rate in 1915, but thereafter the numbers dwindled being largely confined to those who had failed to pass First or Second Year.

The Ass: "Are you wounded, mate?"
The Victim: "D'yer think I'm doing this fer fun?"

From *The ANZAC Book*, Cassel & Co., London, 1916, p.43.

The Committee of Management of the Melbourne Hospital was even more forthright in its attitude to war service and attracted criticism when it stated that it 'does not want the freshly qualified men who have taken honours to go to the front.' Early in the war the Medical Students Society had asked this Committee if young graduates appointed to the resident staff of the Melbourne Hospital would be allowed to appoint locum tenentes in the event that they should secure commissions in the RAMC or AAMC, and also if service rendered abroad with the troops would be reckoned as service in the Hospital for appointment later to the position of senior resident medical officer. The Medical Superintendent replied that students who had passed in the honours list should stay at home and serve their hospital by qualifying for the senior posts whilst those who had taken pass degrees should be induced to go to the front. This report produced a scathing response in an article in *The Medical Journal of Australia* 1915 (Vol.1, p.321) in which the Melbourne Hospital Committee was accused of 'looking after itself'.

By 1916, the shortage of medical graduates had become so serious that drastic action was required. Many former medical students (including 58 from The University of Melbourne) were discharged from the Army and transported back to Australia in order to complete the medical course. Of the former medical students brought back to Melbourne in 1915 and 1916, 13 were able to graduate before the war ended and re-enlist as Captains in the AAMC and another 32 graduated after the Armistice. However, ten of the 'recalled' men declined to resume their studies at this time and re-enlisted as combatants (after the war five of this group were to graduate in Medicine and another two were to drop out of the medical course). Information is lacking about two ex-medical students who were recalled and another, who was invalided back to Australia, presumably too ill to resume the course.

Of the 56 medical students who remained on active service until demobilised after hostilities had ended, 38 are known to have resumed the medical course at The University of Melbourne after

the war, three changed to another course, four took up other occupations, one remained in the services, and ten could not be traced. Eight of the 38 who returned to the Melbourne medical school failed to complete the course.

Kingsley Norris remembered the severe shortage of medical manpower in Melbourne when he was recalled from active service. Infectious diseases, such as diphtheria and scarlet fever, were rife and Frank Scholes, the Medical Superintendent at Fairfield Infectious Diseases Hospital, was so desperately short of staff, that the Dean of the Medical School (Sir Harry Allen) granted him permission to employ final year medical students as residents. Three who were thus appointed were 'returned' students — F.K. Norris, D.J. Thomas and L.E. ('Treacle') Hurley. These three and several other 'returned' medical students were destined to become leading medical men in Melbourne. The following (listed in alphabetical order) are worthy of mention:

Charles William Adey, 3rd Year, joined 3rd L.H. Fld Amb. 7.10.1914, returned to complete course February 1918, graduated MBBS 1920, MD 1922.

Charles William Bennett, 4th Year, sailed March 1918, discharged and finished course in London graduating LRCP, MRCS 1919, then joined RAMC, FRACS, Cons. Surgeon Prince Henry's Hospital.

Stewart Osburn Cowen, 4th Year, private AAMC 26.10.1914, Gallipoli, sent back to finish course August 1915, graduated MBBS 1916, Exhibitioner in Medicine, Surgery and Obstetrics and Gynaecology, Jamieson Prize in Clinical Medicine, re-enlisted Capt. AAMC 13.11.1916, MD 1920, Hon. O.P. Physician (1923-1928), I.P. Physician (1928-1945) to Melbourne Hospital, Stewart Lecturer in Medicine, The University of Melbourne, 1937.

George Vernon Davies, 3rd Year, joined No.1 AGH 25.11.1914 as a private, returned 1915 to complete course, graduated MBBS 1916, re-enlisted September 1916 as captain AAMC, awarded DSO, MD 1920, MRCAP 1938, Ph.D. 1968, MO i/c Paton Memorial Hospital, Vila, New Hebrides 1920-23, Hon. Physician Wangaratta Base Hospital 1924-48, Cons. Physician 1948-55, MO Mental Hygiene Department, member Vic. Branch Council AMA 1942-7.

Alfred Plumley Derham, 5th Year, joined 18.8.1914 as private in 2nd Field Ambulance, served on Gallipoli, awarded MC 1915, mentioned in despatches twice, returned 1917 to complete course, graduated MBBS 1918, re-enlisted Captain AAMC 1.5.1918, MD 1923, 2nd World War ADMS 8th Division, 2nd AIF 1940-5, P.O.W. 1942-45, C.B.E. 1946, E.D. 1940, FRACP 1938, Hon. Physician Royal Children's Hospital 1920-48, member Vic. Branch Council of AMA 1928-37.

John Ellis Gillespie, 3rd Year, joined 8.10.1914 as private in 3rd Light Horse Field Ambulance, served on Gallipoli, returned to complete course, graduated MBBS 1918, re-enlisted AAMC, DA 1949, FFARCS, RACS, Hon. Anaesthetist Alfred Hospital 1946-53, 2nd World War served in Middle East and New Guinea, DADMS, CO 2/3 Aust. CCS, E.D., despatches twice.

Eric Fitzgerald Harbison, 2nd Year, joined 16.9.1914 as private in 7th Battalion, served on Gallipoli, recalled 3.9.1915 to complete course, graduated MBBS, August 1918, re-enlisted Captain AAMC, demobilised as medically unfit 19.6.1919, MS 1931. Married Dr Julie Hickford (see *Chiron* Vol.2, No.1, 1988).

Leslie Everton Hurley, 4th Year, lacrosse Blue, joined 11.9.1914 as private in 2nd Field Ambulance, served on Gallipoli, returned 16.5.1916 to complete course, graduated MBBS, gaining all Exhibitions in Finals in 1917, MD 1919, MS 1920, FRACP 1938, Hon. Physician to In-Patients Royal Melbourne Hospital, Stewart Lecturer in Medicine, The University of Melbourne 1947, 2nd World War Specialist Physician to RAAF.

Frank McCallum, 4th Year, joined 26.11.1914 as private in 1st AGH, served on Gallipoli, where he contracted typhoid fever, invalided to Australia, discharged, re-entered medical school, graduated MBBS in 1917 and promptly re-enlisted in AAMC, DPH, 1920, DTMH (Lond.), Director-General of Health of Commonwealth Health Department.

John Shaw ('Jock') Mackay, 5th Year, joined 2nd Field Ambulance, was recalled from Gallipoli, finished his course in 1916, re-enlisted in the AAMC, was awarded the M.C. and bar for gallantry, and after the war proved to be so efficient that he was made the first permanent Medical Superintendent of the Alfred Hospital. Unfortunately, his promising career was to be shortened by tuberculosis which eventually caused his premature death.

Frank Kingsley Norris, 4th Year, joined 1st Light Horse Field Ambulance, recalled in 1916 to finish course, graduated MBBS 1916, MD 1920, later Major-General Sir Kingsley, K.B.E., C.B., C.B.E., D.S.O., E.D., K.St.J., Honorary Physician to King George VI and Queen Elizabeth II, Director-General of the Medical Services of the Australian Military Forces from 1948 to 1955, Deputy-Director of the 1st Australian Corps from 1943 to 1945. Hon. Cons. Physician to Children's Dept, Alfred Hospital, 1948-55, Medical Board of Victoria, President Vic. Branch BMA 1948, & c.

Clifford Henry Coomer Searby, 3rd Year, joined AAMC, recalled 1916 to finish course, QHS, BSc, MB 1921, MS 1924, FRCS Eng. 1925, FRACS 1928, Stewart Lecturer in Anatomy (1923-25), Hon. Surgeon to King George VI and Queen Elizabeth II, 2nd World War Surg. Specialist RAAF, President Medical Board of Victoria, Member of Faculty of Medicine, the University of Melbourne.

Albert William Shugg, 3rd Year, 3rd Light Horse Field Ambulance, Gallipoli, recalled to finish course, MBBS 1918, C.B.E., Honorary Physician to Royal Hobart Hospital, President Tasmanian Branch of AMA, Federal Council of AMA, President Tasmanian Society for the Care of Crippled Children.

Byron Lionel Stanton, 2nd Year, AAMC, discharged 1917 to finish course, MBBS 1921, MRCP (Lond.) 1926, FRACP 1943, FPS 1930, Lecturer in Materia Medica and Pharmacy, the University of Melbourne, Editor *Australian Pharmaceutical Formulary*, member of numerous medical, pharmaceutical and governmental committees: 'one of the great medical men of Australia, and his contribution to the advancement of medical knowledge by his writings, his teaching and his practice, with his personal example of integrity in all his dealings, constitutes and perpetual memorial to a greatly loved physician.'

Douglas John Thomas, enlisted at the end of 2nd Year, 6th Field Ambulance, served Gallipoli, recalled to finish course, graduated MBBS 1918 with 1st Class Honours in all subjects and Exhibition in Surgery, MD 1920 Dip. Med. Radiology (Eng) 1935, MRCP 1936, MRACP (Foundation Member), Hon. Physician to O.P. 1924-1939, I.P. 1939-1953 Melbourne Hosp., President (1949) and Treasurer (1950-1954) Vic. Branch BMA, Chairman Cancer Institute Board 1949-52, Medical Superintendent Bethesda and Epworth Hospitals, Member of Committee of Management of RMH 1945-1954. He pioneered the establishment of modern radiological and pathological departments in association with private hospitals and was one of the prime movers in the formation of the Peter Mac Callum Institute.

Cyril Joseph Tonkin, 3rd Year, enlisted in August 1914 1st Light Horse Field Ambulance, served Gallipoli, gassed at Bullecourt in France, recalled to finish course, MBBS 1921, Examiner in Materia Medica and Pharmacy, O.B.E.

The shortage of medical manpower was so acute that even a veterinary student who had served with the 6th Field Ambulance on Gallipoli was brought back to undertake the medical course at Melbourne University. Carlyle Sandford Wood, had completed the first year of the veterinary course when he enlisted in March 1915. He had gained a Blue for rowing and was a member of the Melbourne University crew which won the Grand Challenge Cup. He was one of four brothers who all joined the Forces, and, remarkably, all survived the war. 'Carl' Wood, after his discharge from the Army in 1916, commenced the medical course at second year and graduated in 1920. Later Carl Wood (FRCS Edin. 1922) was to become a leading Obstetrician and Gynaecologist in Melbourne, holding senior appointments at the Alfred Hospital. He died in 1987 and was the father of two distinguished medico sons — Professor E. Carl Wood (MRCOG, FRCS) and Mr Alec S. Wood (FRCS).

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First generation J.H.B. | Second generation F.J.B. | Third generation J.W.B. | Third generation W.R.C.B.

Fourth generation S.A.B. | Fourth generation P.J.T.B. | Fifth generation A.J.C.B.

THE BENNETT FAMILY

John Henry Bennett		(Lond.) Grad. 1912
Frederick John Bennett	son of J.H.B.	(Melb.) Grad. 1926
John Willmott Bennett	sons of F.J.B.	(Lond.) Grad. 1946
Winfield Robert Curtis Bennett	sons of F.J.B.	(Melb.) Grad. 1950
Stephen Andrew Bennett	son of J.W.B.	(Melb.) Grad. 1975
Penelope June Thomson Bennett	daughters of W.R.C.B.	(Monash) Grad. 1976
Alison Jean Curtis Bennett	daughters of W.R.C.B.	(Monash) Grad. 1978

First Generation

Reginald Allbon Bennett wrote in his *Complete log of my journey to Australia and back in 1914* of his visit to stay with his brother Jack (John Henry Bennett) in St Arnaud, Victoria, with whom he was reunited after twenty years: 'He is the same genial old chap — full of his jokes and kind ways, always busy and loves his work as the already beloved and successful doctor.' He describes vividly his impressions of the town and the roar of the Lord Nelson Goldmine workings — 24 hours a day except Sundays.

John Bennett was living with his wife Amy (nee Gardiner) in *Clovelly*, a bungalow at the end of a dusty side street off the main road. Nurse Cameron ('of uncertain age') was living with them also and there was Toby the dog and the two horses, Nora and Tom, who took Jack on his rounds in the buggy when he was not busy visiting the sick on foot. The two-seater buggy 'fairly flies', records Reg, describing his outings with his brother who had been a GP in the town since returning from England some twelve months before. He comments on a visit to a Chinese camp, and on meeting an old pioneer in a shack, and describes a funeral at which there were forty-two buggies in a procession half a mile long. He also records that there had been a big epidemic of typhoid that summer, breaking out after a drought and the use of an old water supply. Accompanying Jack on a visit to the local hospital, he wrote:

> He was dressing an appendix wound and the patient, a young boy, groaned with the pain. Suddenly I turned deadly faint and was obliged to clutch the table to steady myself. I was in terror that I might be sick in the ward and at the same time daren't try to get out into the open air for fear of falling with giddiness.

John Henry Bennett was born in 1860, the son of Reverend Augustus Frederick Bennett (and who in 1890 published a fascinating autobiography, *The Life Story of a Christian Minister*). Originally migrating to New Zealand J.H.B. reached Melbourne with a young family in 1888; a third son, Frederick John, was born in 1890. The family subsequently moved to Terang in the Western District where J.H.B. prospered as a pharmacist and soft drink manufacturer. In 1906 he was able to afford to return to England to complete his long-interrupted medical studies, obtaining his degrees at Kings College at the age of 52, and returning to Australia in 1912 to practice in St Arnaud, moving a few year's later to the Melbourne suburb of Auburn. War broke out in 1914 during Reginald Bennett's visit and two sons of J.H.B., Frederick John and Ernest Leslie both saw service in the trenches in France as stretcher bearers with the AIF. Both the sons went to Melbourne University, Leslie graduating with a Bachelor of Arts and teaching for some years before following the calling of his grandfather and earlier forebears in the Ministry. J.H.B. remained in Auburn for the rest of his life, dying in 1934, aged seventy-four.

Second Generation

Frederick John (Jack) Bennett returned from service in France and enrolled as an ex-serviceman in The University of Melbourne to

study Medicine, qualifying MBBS in 1926. During the First World War an Australian 'cobber', Teddy Mercy, took Jack on leave from France to visit his cousins in Reigate, Surrey, and a romance developed between Doris Mercy Willmott and Jack. In November 1923 Doris came out to Australia and was married from *Ripley*, the home of her Uncle George Mercy (former Mayor of Camberwell) in Balwyn, the service being held in the small brick church in nearby Canterbury Road, on 23 December 1923.

The three sons of this marriage subsequently embarked on medical courses, but the youngest, Peter Reginald Dane Bennett, who studied 1st year Medicine when the Melbourne students were at Mildura, did not continue and became interested in ecology. He has written a definitive book, *Organic Gardening in Australia*, runs a successful organic gardening supply business in Adelaide and writes and broadcasts on ecological issues.

Frederick John joined his father's practice in Auburn and maintained his association with the Alfred Hospital as an Outpatient Assistant. In due course Leonard Ball, later to become the well-known Alfred Hospital surgeon, joined the practice which was still based in *Therapia*, an elegant two-storey home in Hepburn Street, Auburn, named after various family homes in England, deriving from Augustus Frederick Bennett's early associations with Turkey. (His father the Rev. Samuel Bennett, D.D. was Embassy Chaplain at Therapia and Constantinople from 1835-1847, a period when the plague claimed 140,000 lives.)

After John Henry's death in 1934, Frederick John decided to take the family to England in June 1935, the practice in Hepburn Street being taken over by Dr Leslie Kirsner. In England he worked as a General Practitioner at Uxbridge near London and later at Torquay in Devon. During the war years he worked unbelievable hours as a solo practitioner and was a member of the Home Guard. His three sons John, Robert and Peter, who had been at Scotch College in Melbourne, went to Mill Hill School in London.

Third Generation

The eldest son, John Willmott Bennett, born on the 23 October 1924, entered St Bartholomew's Hospital Medical College in 1940, graduating in 1946 with distinction and a much sought after prize. He was appointed House Physician at the British Postgraduate Medical School, Hammersmith, London 1947-1948. He married Christina Hudson of Trumpington, Cambridge in 1946, and they followed the rest of the family out to Australia in 1948. John was an RMO at the Repatriation General Hospital, Heidelberg, from 1948 to 1953. He was an honorary Clinical Assistant to Bill King's Outpatients at The Royal Melbourne Hospital from 1950 to 1965 and became a member of The Royal Australasian College of Physicians in 1953. In the same year he left 'Repat', to join the practice of Carrington, Vorath and Rose in Surrey Hills.

John's three children entered The University of Melbourne and the eldest David John became a geologist. The youngest Carolyn Elizabeth (Lindy) pursued an Arts course and majored in geography whilst Stephen Andrew followed in the medical tradition. Lindy married secondary teacher, Michael Mulcahy, became interested in town planning and worked for many years for the Ministry of Housing.

John was a member of the Victorian Scottish Regiment and was its Medical Officer for many years. He was a keen ornithologist and very interested in the outdoors, particularly trout fishing. Later he became interested in the classical guitar and was tutored by Sadie Bishop. John's sudden and untimely death at the age of 47, left his family, friends, and a multitude of patients completely bereft.

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Winfield Robert (Bob) Curtis Bennett, born on the 22 July 1927, entered St Bartholomew's Hospital Medical College at London University in 1944, initially being at Queen's College, Cambridge where the college had been evacuated from London. Bob played rugby in the Pre-Clinical Bart's Team up at Cambridge. He shared top place in 1st Year and was awarded a scholarship, obtained 2nd place in the Anatomy Prize and was awarded the Harvey Prize in Practical Physiology.

In 1946 Frederick John, Bob's father, disenchanted with the prospect of nationalised medicine, returned to Melbourne to practice. A decision was made for Bob to complete his medical studies at The University of Melbourne, following the family to Melbourne a year later and graduating with honours in Medicine in 1950. He did not follow the family tradition of general practice, except for some experience as a locum, including a period in the mining town of Derby in Northeast Tasmania and also in the Western District town of Colac. He was an RMO at the Alfred Hospital in 1951. Meanwhile Frederick John had been continuing in general practice, but mainly as a much revered Outpatient Medical Officer with the Repatriation Department in Melbourne. He died, after a long illness, in the Heidelberg Repatriation Hospital in 1952.

After his year at the Alfred, Bob joined the 'Repat' as an RMO at the Caulfield Hospital. Later he worked at RGH Heidelberg where he became a Registrar in Radiology in 1954, obtaining the Diploma of the College of Radiologists in 1956. He practiced as a radiologist with the 'Repat' at Caulfield Hospital prior to moving to Perth in 1957 as Assistant Radiologist to the Perth Radiological Clinic, returning with his family to Melbourne in 1959 and working for a year as relieving Assistant Radiologist at The Royal Melbourne Hospital.

In 1960 the Preston and Northcote Community Hospital was opened by the then Premier Sir Henry Bolte and Bob joined the hospital to develop the Radiological Service. He obtained the Fellowship of the Faculty of Radiologists of London in 1960 and was elected to Fellowship of the College of Radiologists of Australasia in 1965 (both now Royal Colleges). He remains Director of Radiology at PANCH, running a 'state of the art' department, and is a Senior Associate of The University of Melbourne Department of Radiology. For many years Bob taught radiological anatomy at Melbourne University, pioneering this component in the restructured medical course. He also teaches postgraduates at Melbourne University, and radiology to St Vincent's Hospital medical students at PANCH.

Bob has many interests on the fringe of medicine and was a foundation member of the AMA Arts Group, of which he has been Honorary Secretary/Treasurer since its inception in 1959, and in more recent years has taken on the Presidency as well. He has had work exhibited in every one of the twenty-nine successive annual exhibitions and has developed a particular interest in watercolour portraiture. He is an exhibiting member of the Society of Wildlife Artists of Australasia. Having an interest in history he has been collecting the bric-a-brac of radiological practice for more than quarter of a century and is Custodian of the Royal Australasian College of Radiologists Museum. More recently he was appointed to the Medical Advisory Panel of the Victoria Museum.

At The Royal Women's Hospital Bob met Mira Murray, a Nursing Sister, who had come to Australia on a working holiday from Aberdeen, Scotland. They were married in March 1951 and had four daughters, who were educated at the Presbyterian Ladies' College, the family moving to a home opposite the side entrance to the school to facilitate the education program.

Fourth Generation

Stephen Andrew Bennett, born 11 September 1951, second son of John Willmot Bennett was educated at Scotch College and entered The University of Melbourne graduating MBBS. (He was at the University at the same time as his cousin Susan, an Arts student. On one occasion they had all been having coffee together and Susan joined her cousin and her close friends who were studying medicine to attend a Radiological Anatomy Tutorial being given by her father, all of them filing in and sitting in the front row, to Bob's momentary consternation.)

Stephen, following an internship at Wangaratta & District Base Hospital, went overseas and was a Trekking Leader/Medical Officer in Nepal. Subsequently he became a General Practice Trainee both in Hobart and in Melbourne and in 1981 once again became Trekking Leader/Medical Officer in Nepal. Like his brother David, who as a geologist spends most of his life in remote parts of the world, he is an ardent conservationist and in the family tradition has also become a General Practitioner, based in Hobart (as this is close to his beloved wilderness), where he lives with his wife Louise and two sons. David also is married with two children.

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The eldest of Mira and Bob's four daughters, Susan Jane Mercy Bennett, born 12 March 1952, had considered studying Medicine, but changed to Humanities in her last year of school and entered Melbourne University where she graduated B.A. and Dip. Ed. Colleagues at school had mostly entered the medical stream and in due course she married a medical student Malcolm Chesney Barnett, now an obstetrician and gynaecologist and they have four daughters. Susan's particular hobby is genealogy which she pursues with great enthusiasm.

Mira and Bob's second daughter Penelope June Thomson Bennett, born 4 January 1954, entered Monash University to study Medicine and graduated in 1976. At one period during her course she was working with a GP at Terang where her great grandfather had originally practiced as a pharmacist at the turn of the century, and located a medicine bottle with the Bennett name on it. Penny married accountant Anthony Medland in 1979, and they have a son and two daughters. Penny was an Intern and a Junior RMO at the Queen Victoria Medical Centre and followed this with a year as a Senior RMO at the Box Hill Hospital and a further year in the Family Medicine Program. She obtained the Dip. Obst. RCOG during this period. She worked for some time in a group practice at Ascot Vale and now works part-time as a GP at the Surrey Hills Clinic. Penny, when she has time, excels at needlework — particularly *petit point.*

Alison Jean Curtis Bennett, born 1 April 1956, also entered Monash University to study Medicine graduating in 1978. She was an RMO at Shepparton and Box Hill hospitals and eventually after working part-time at the Royal Children's she became Assistant to Dr Geoffrey Bartlett, General Practitioner at Mooroolbark. She married Michael Bathie, an accountant, in 1985 and continues to work in the Mooroolbark practice. Alison is a talented knitter and has won 1st Prize twice at the Royal Show including the Bicentennial Show where she also gained 2nd and 3rd prizes.

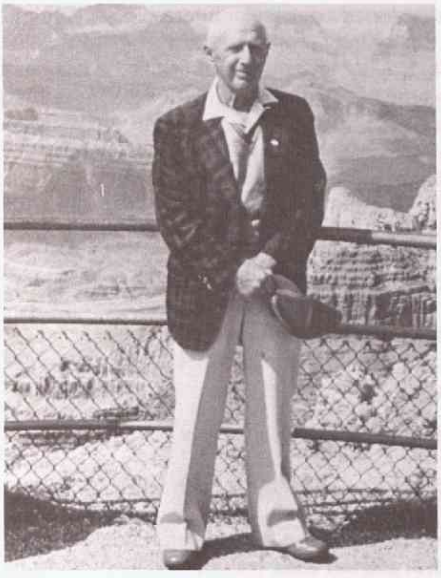
The youngest daughter Jennifer Anne MacFarlane Bennett, born 11 October 1957, entered the State College of Victoria in 1975, obtaining her Diploma of Teaching in 1977 and graduating a Bachelor of Education in 1983. She is a dedicated primary teacher and recently married Andrew Watts, an engineer. She also excels in imaginative craftwork.

And so, to date, there have been six General Practitioners out of the seven medical practitioners, in four generations, in direct descent, only one member of the family deviating from the tradition and becoming a radiologist (though still a generalist).

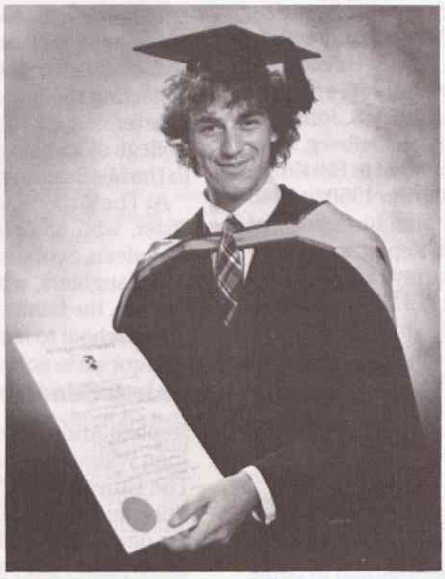
W.R.C.B.

THE GOODMAN (COHEN) FAMILY

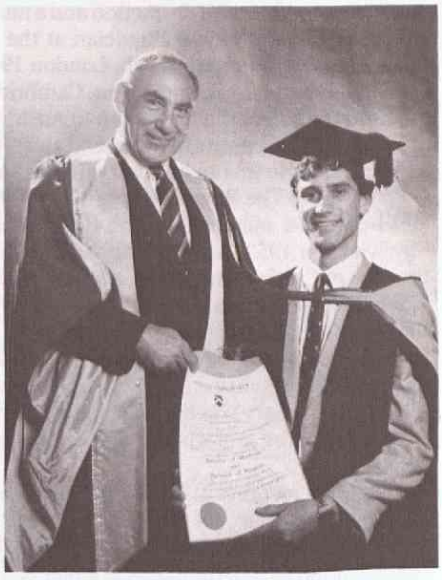
Philip Goodman		Grad. 1925
Edward (Ted) Goodman	brother of Philip	Grad. 1941
Philip Cohen	nephew of Philip & Ted	Grad. 1951
Brendan S. Cohen Silbert	first cousin of Philip Cohen	Grad. WA.1976
Gary P.B. Cohen	son of Philip	Grad.Monash. 1983
Neale D. Cohen	son of Philip	Grad.Monash. 1984



Philip Goodman



Gary Cohen



Philip & Neale Cohen

This medical family spans three generations and is unusual in that all members are still active, although the first generation is retired. At the time of writing, they have provided a total of 162 years of medical services and should chalk up a double century by the year 2000.

On 1 December 1857 in Manchester, England, Philip Blashki from Poland married Hannah Potash (nee Immergut) and they booked a passage to sail to America from Liverpool. They arrived at the docks only to discover that their ship had sailed the previous evening, however their shipping agent said that their 'luck was in', as there was another ship sailing that same day, bound for Australia where people were picking up gold on the streets — so fate played its part, and Philip and Hannah became pioneers in the young colony of Victoria, where they disembarked in 1858.

Philip and Hannah Blashki had fourteen children and their daughter Esther, who was born in Melbourne in 1874, married Nathan Goodman in Melbourne in 1898 after he had migrated from his native London. They set up a general store in Delegate, New South Wales, where their first four children, including Philip, were born; two of the four did not survive the rigours of outback pioneer life. Esther and Nathan moved to Melbourne prior to the birth of their fifth child Jean Victoria, and produced a further three children of whom Edward (Teddy) is the youngest.

First Generation

Philip Goodman, born 1902 in Delegate, NSW, educated at St Kilda Park State School (No. 2460), Wesley College and The University of Melbourne, commenced his medical course in 1920 and graduated in March 1925. Among many fellow students destined to excel in their profession, surely the most distinguished was John C. Eccles, Rhodes Scholar, Research Scientist and Nobel Prize winner, who took off nearly every Exhibition during his course.

Following residencies at London Hospital, Launceston General and Melbourne Eye and Ear Hospitals, and one year as an Assistant in Port Augusta, Philip entered general practice in Wonthaggi, where he was one of two doctors serving a population of twelve thousand, plus the surrounding district. After a busy eight years, during which he married and fathered three of his four children, he moved to another general practice in Golden Square, Bendigo. He was shortly appointed Physician to Bendigo Hospital and subsequently became Senior Physician and Consulting Obstetrician. One of his early residents was a young Lance Townsend, later Professor of Obstetrics at The University of Melbourne. Philip Goodman spent twenty years in this practice, to which he had been lured by the possession of a grass tennis court and a swimming pool.

His community activities included a period as President of the Council of Bendigo High School, where he endowed the Goodman Poetry Prize. He also founded the Music Advancement Society of Bendigo (which still flourishes) as the inaugural President. He played pennant tennis, golf, billiards (winning the Sandhurst Club Tournament three times), and competitive bridge.

With the family grown up, Philip and his wife moved to Beaumaris, where he remained in practice until 1975 continuing to work part-time for a further eleven years, retiring in 1986 after sixty-one years of medical service. He now lives in Beaumaris opposite the 15th fairway of the Royal Melbourne Golf Course and plays golf there and at Spring Valley. He also plays pennant bowls at the Beaumaris Bowls Club and bridge at the Victorian Bridge Association.

Philip Goodman was widowed in 1965; of his three surviving children, Peter, a D.Sc. of Melbourne University is doing research in physics at that University. Anne, a nurse, controls the Southern Nursing Agency in Beaumaris, and Bruce is a secondary school teacher. Also worthy of mention are his thirteen grandchildren and eight great grandchildren.

For many years he was the Bendigo District Representative of the BMA, Victorian Branch, and at age eighty-six still leads a very active, independent life and is highly competitive at bowls and bridge.

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Edward Goodman, born 1917 and youngest brother of Philip, graduated MBBS (Melb) 1942. During his course, he was involved in boxing and represented Melbourne University. After graduation he enlisted in the RAAF and served throughout the Second World War as a Flight Lieutenant Medical Officer.

At the end of the war he set up general practice in Albury, and remained there for many years with his wife and two daughters.

Edward and his family eventually moved to Burwood, Melbourne, where he set up a general practice which he continued until he took up a position with The Shepherd Foundation. He has now retired from practice and enjoys lawn bowls and other leisure activities.

Second Generation

Philip H. Cohen, born in 1928, was the eldest child of Henry and Jean Cohen. His mother, sister of Philip and Edward, was a pharmacist.

One of his vivid early memories was of being taken to a hospital in Bendigo by his uncle, Dr Phil Goodman, to witness the circumcision of an infant. This operation was performed by clamping bone forceps onto the yelling infant's foreskin for three minutes before making the bloodless scalpel cut. The experience created an almost overwhelming response, which forced him to hastily go outside for fresh air, but did not put him off following the family's medical tradition.

He attended Hawthorn West Central School where he had the distinctionof being 'dux' and gained a scholarship to Melbourne Boys High School. There he was involved in competitive rowing in coxed fours on the Yarra. He did achieve some success in a radio quiz competition known as 'Junior Information', run by the late Norman Banks, where he was pitted against a very famous quiz contestant named Barry Jones.

A scholarship to study medicine enabled him to embark on his career, after matriculating at the age of sixteen. The next six years were largely devoted to study, with keen involvement in a variety of sports, including tennis, squash and Australian Rules football, all without distinction.

After graduating with honours in surgery Philip Cohen spent a year at Bendigo Base Hospital, which gave him broad practical experience, before deciding to take on postgraduate surgical training at the Austin Hospital, which was at that time largely for chronic and incurable diseases. He soon decided to abandon this for a job as RMO at Heatherton Tuberculosis Sanatorium, a relatively new institution. This experience, for about a year, was to later prove valuable overseas.

His surgical inclinations led him to a position as a surgical resident at The Jewish Hospital, Cincinnati, Ohio, for a year from June 1954, where he found the lack of recognition of his Australian training and experience very frustrating. He was persuaded by a New Zealander whom he had befriended, to take on the job as house physician at The Longview State Hospital in Cincinatti. This was a turning point in his career as this 3,000 bed institution was being used as a testing ground for a new type of drug, chlorpromazine. After six months there, involved in the early research on the new tranquilizers under the guidance of Professor Douglas Goldman, he was convinced that there was a good future in psychiatry. However, he remained in the USA for a further six months as chest physician at the Eastern North Carolina Sanatorium in Wilson, North Carolina, before returning to Melbourne to attend the Olympics in late 1956.

He decided to train in psychiatry and joined the Mental Health Department, Victoria, in 1957 and was responsible for pioneering the introduction of tranquilizers in this country. He had a twelve-year career in the Mental Health Department at Sunbury, Mont Park and Royal Park, during which time he completed his DPM, (Melb).

In 1966, he was appointed acting Psychiatrist Superintendent to set up the Glenhuntly Rehabilitation Centre, which he ran for two years. This Unit was very successful and innovative, and the subject of a semi-documentary film, *A Time for Re-adjustment* (sponsored by Roche Pharmaceuticals) which won an Honourable Mention at the 12th World Rehabilitation Conference in Sydney in 1972.

He incurred the displeasure of the authorities and decided that his enterprise would be more fulfilling in private practice, and he has been a private consultant for twenty years now. He has held the post of Honorary Psychiatrist at Prince Henry's Hospital and is now Assistant Psychiatrist at the Monash Medical Centre, Prince Henry's campus.

Philip Cohen was appointed the first Honorary Psychiatrist at Frankston Community Hospital, a position which he held for many years. He is a Foundation Member of The Royal College of Psychiatrists of England and a Fellow of The Royal Australian and New Zealand College of Psychiatrists, being a Foundation Member of that body, and has served on the Victorian Committee for many years.

He continues to practice as a consultant and has in recent years been particularly interested in the assessment and rehabilitation of drug addicts and associated with Odyssey House. He also has been involved in forensic psychiatry, in the assessment of injuries and compensation, as well as in rehabilitation.

He married a London girl, Thelma Collins, in 1959, and their four surviving children include two medical graduates — Gary and Neale, Brendan, a teacher of drama and literature and a budding musician named Samantha.

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Brendan Sydney Cohen Silbert, first cousin to Philip Cohen, was born in Melbourne in 1952. After his father's death from an astrocytoma during his early childhood, his mother remarried, changed her surname to Silbert and moved to Perth. He was educated at Christchurch Grammar School and then at the University of Western Australia where he graduated MBBS in 1976.

He worked then as Anaesthetic Registrar at the Sir Charles Gairdner Hospital and then at St Bartholomew's Hospital, London, in 1980, where he obtained his FFARCS (1981) and the FFARACS (1982). In 1983 he obtained a position as assistant in anaesthesia at Massachusetts General Hospital, Boston and was an instructor in anaesthesia at Harvard Medical School. He held both positions through 1984-85. In 1986 he returned to take up a position as Staff Anesthetist at St Vincent's Hospital, Melbourne.

He intends to return to Harvard Medical School in 1989 to a full-time research post into analgesics.

He has been interested in sport and earned a University Blue for Australian Rules Football at the University of Western Australia and played in the State Amateur Team. He also has run ten marathons, including the famous Boston Marathon (three times) and the Melbourne Marathon (twice).

His career and sporting interests have kept him very busy, but he is planning to settle down to married life with his fiancee, Michelle, in the near future.

He has published a number of research papers in three separate areas: Lithotripsy, E.E.G.s., and synthetic opioids in anesthesia.

Third Generation

Gary Philip Bernard Cohen, born in 1960, is the eldest son of Philip and Thelma Cohen. He was educated at Mt Scopus College and awarded a General Certificate of Excellence for his HSC results in 1977. He entered Monash University Medical School in 1978 and graduated MBBS with Honours in 1983. After internship and another year at the Alfred Hospital, he decided to gain some experience in general practice. He commenced postgraduate training in psychiatry at Heatherton Hospital and in 1989 moved to the Dandenong Psychiatric Hospital.

Gary has been a keen sportsman and won trophies for the junior discus in a State-wide competition, and also a junior swimming contest. For the past six years he has played competitive volley ball, including membership of the Victorian State Champion Team, Heidelberg, in 1985. He also represented Australia in volley ball at the Maccabiah Games in Jerusalem in 1985.

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Neale David Cohen, second son of Thelma and Philip Cohen, was born in 1961 and also educated at Mt Scopus College. He graduated from Monash University Medical School (with Honours) in 1984 and continued with internship and as RMO and Medical Registrar at the Alfred Hospital. He is currently pursuing postgraduate qualifications in Medicine at the Royal Southern Memorial Hospital.

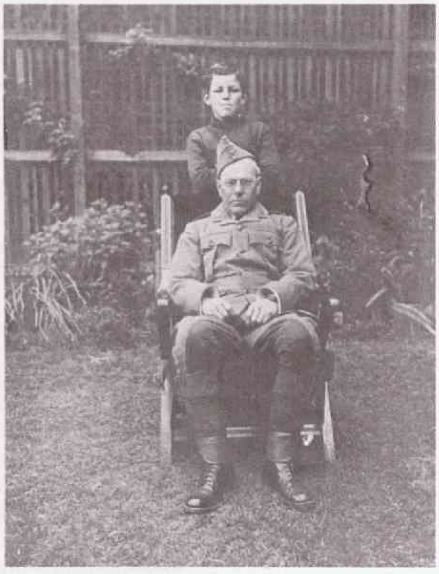
He too played competitive volley ball for six or seven years, was a member of the Victorian State Championship Team, Heidelberg, in 1985 and has a University Blue (Monash). He captained the Australian Volley Ball Team at the Maccabiah Games in 1985 and represented Australia overseas on another occasion.

Philip Cohen

THE SYME FAMILY

George Adlington Syme		Grad. 1881
George Robin Adlington Syme	son of G.A.	Grad. 1926
Graham Adlington Syme	son of G.R.A.	Grad. 1955
Rodney Robin Adlington Syme	son of G.R.A.	Grad. 1959
Duncan Adlington Syme	son of Graham	Grad. 1987

G.A. Syme (at 30)



In the back garden at 19 Collins Street, 1914, G.A. Syme (at 55), G.R.A. Syme (at 12)

G.R.A. Syme (at 58)

In writing this summary of the Syme family, I am impressed by how much material, either written or substantive, remains from earlier generations, in contrast to the current generation. Significant events were recorded in documents or chattels of crafted quality, leading to their retention, whilst today's achievements are marked by a photograph or a cocktail party. I have no wish to eulogize the Victorians and their assumptions, but our society seems deficient in its creation of commemorative material for posterity, highlighted by one's financial credibility being universally apparent in a plastic card.

A 400 ml china christening mug, bearing two English rural transfers, commemorates the birth of George Adlington Syme, on 13 July 1859. He was the only son of George Alexander, a Baptist minister, and Susannah, nee Goodier, a Quaker, then living at Basford, Nottingham.

George Alexander had been studying to take theological office in the Church of Scotland before doctrinal differences led to his appointment at Nottingham. He was the second eldest of five surviving children born to George Syme, a church schoolmaster and Clerk of session at North Berwick. His younger brother,

Ebenezer, also found difficulties in accepting the Church of Scotland dogma. George Alexander became involved in the support of European nationalist movements then finding nurturing conditions in England, but poor health, and his nervous nature, persuaded him to consider joining his brothers Ebenezer and David, in Australia. He journeyed to Melbourne in 1858, and stayed for twenty weeks before he returned to resign from his pastoral office in 1860. With his wife and son, he migrated to Melbourne in 1863, finding employment with his brothers at *The Age* ultimately serving as editor of *The Leader.* He lost his savings in the 1890s crash and died in 1894, six years after his wife.

First Generation: George Adlington Syme

George attended Wesley College where he proved a diligent and careful student, comfortable with words. Sixth Form prizes: *The English Essayists* (for English), *The Book of Days* (for an essay on 'Sapere aude') and the Charles Richardson Dictionary (for 'All the work of the Form') attest to his success and, possibly, this predilection. The studio photographs of this period illustrate a composed but reserved child. In 1876, he gained the Exhibitions at matriculation for English, French, History and Geography, his performance earning a half-holiday for his fellow Collegians.

His study at the Medical School, The University of Melbourne, was rewarded with regular honours and Exhibitions, and he graduated first in First Class Honours. He was elected a Resident Medical Officer at the Melbourne Hospital until he left for England in 1884, where he passed the examination for Fellowship of The Royal College of Surgeons, and subsequently worked in various London hospitals until 1886.

Following his return to Melbourne, his surgical and social interests broadened. He succeeded Fred Bird as Demonstrator in Anatomy at The University of Melbourne and occupied several teaching positions. He was appointed Editor of the [then] *Australian Medical Journal,* with Jerry Moore. He held positions at the Melbourne Hospital, the Women's Hospital, the Melbourne Dental Hospital, St Vincent's Hospital and the Queen Victoria Hospital. He was a member of the Beefsteak Club, as well as one of the early members of the Wallaby Club — 'an assembly of good fellows, meeting under certain conditions' — who had to be fond of walking. His interest in rambling stemmed from earlier trips to Mts Buffalo, Bogong and Howitt and Wilson's Promontory, in company with Fred Bird, Mollison, Willie Wood and Muirhead Collins.

George established a practice in various locations in Collins Street, with other confreres — R.R. Stawell, Charles Ryan, L.L. Smith, A.L. Kenny and J.W. Springthorpe. He was appointed Secretary to the Royal Commission to inquire into sanitary conditions in the city of Melbourne ('Smelbourne', as it was known), headed by Harry Brookes Allen, in 1888. The next decade was occupied with building the foundation of his developing practice, ultimately moving his rooms to number 19 Collins St, which he shared with the radiologist, F.J. Clendinnen and surgeon A. Jeffreys Wood. It is understood that his marriage to Mabel Berry in 1901 was delayed because of commitment to expunge his father's debts. His letters to Mabel display a keen sense of humour and emotion rarely apparent publicly, as he was popularly regarded as taciturn, phlegmatic and shy. It was said that, asked for his professional opinion by Julian Smith on a journey to the Melbourne Hospital from Collins Street in Smith's car, he gravely considered the question and delivered his one word answer, after prolonged silence, on arrival at the hospital gates. George and Mabel had four children, born between 1900 and 1905 — Hope (married Dr John Holmes Shaw), George Robin Adlington (Bob), Alison (married Dr Malcolm Cockburn) and Theodosia (married Hon. Sir Gordon Stewart McArthur).

After his appointment as Honorary Surgeon to In-Patients at the Melbourne Hospital, George's formal teaching role expanded when he joined the Faculty of Medicine in 1906, as representative of the Hospital. He became a member of the Council of The University of Melbourne in 1912, and continued as a Councillor until his death.

His personal standard of performance, professional honesty and punctuality were apparent in his clinical teaching. His presidency of the Victorian Branch of the British Medical Association in 1908 saw the development of a rapprochement with the Medical Society of Victoria, resulting in union. The Federal Committee of the British Medical association in Australia was formed in 1912, with W.T. Hayward as first Chairman and G.A. Syme as Vice-Chairman. In the light of subsequent events, the outcome of these associations could be seen to be inexorable.

Despite his fifty-five years, George Syme enlisted at the outbreak of the Great War, was appointed Lt.-Col. and Senior Surgeon of the 1st AGH, and left for Egypt in December 1914. His letters disclose his frustration with the military bureacracy and the waste of time over the next few months, until he sailed, on H.M. hospital ship *Gascon* to Lemnos, thence to Gallipoli. His service was halted when his right hand became infected from a bone fragment, and severe cellulitis required his repatriation to London. He ultimately returned to Melbourne in 1916, but his surgical dexterity was limited for some time. Turning sixty, he retired from his Honorary position at the Melbourne Hospital and was appointed Consulting Surgeon. He served on the Medical Advisory Committee of the Repatriation Commission to advise on the medical policy to be applied to returned servicemen.

A growing concern about the standards of surgical performance and teaching emerged in the 1920s. George Syme became increasingly involved in the establishment of standards in medicine, through appointments to various committees. He became President of the Royal Commission on Health which was of benefit in establishing interstate contacts as a precursor to the formation of The College of Surgeons of Australasia. Steady progress in the building of the foundations, with Hamilton Russell, Hugh Devine, assisted by many others, and the visit of W.J. Mayo and Franklin Martin, the first Director-General of The American College of Surgeons, resulted in meetings that ultimately led to the election of forty delegates to establish the Australasian College. The formation was not without some controversy. Syme was elected President of the College, Louis Barnett of Dunedin and Alexander MacCormick Vice-Presidents and A.L. Kenny, the Honorary Secretary and Treasurer.

George Syme retired from practice in 1924 and moved to a house in Malvern. He was created a Knight Commander of the Order of the British Empire in 1924 and elected to Honorary Fellowship of The American College of Surgeons in 1928. He was attending The University of Melbourne commencement dinner when he suffered a stroke and died on 19 March 1929.

Second Generation: George Robin Adlington Syme

'Bob' was born in 1902, and imbibed the medical life at an early stage in Collins Street, the front rooms of the house serving as professional rooms. He started his schooling at Trinity Grammar, transferring to Melbourne Grammar in 1917 and matriculating in 1920, together with John Begg, Orm Smith, Tom Travers and followed, a year later by Ian Wood. He was a diligent if average student, but a good sportsman, representing his school in football and The University of Melbourne in hockey, playing Inter-varsity between 1924 and 1926. Success in the Inter-varsity competition in 1925 (defeating Sydney, 7-0, and Queensland, 10-0) by a team that included Ian Wood, John Begg, L.L. Smith and Ward Farmer, led Bob's father to establish a perpetual hockey trophy for Inter-varsity competition.

He graduated MBBS from The University of Melbourne in 1926, with First Class Honours in Medicine and Surgery and was appointed a resident to the Melbourne Hospital, although his experience was interrupted by a bout of pulmonary tuberculosis. He left for England with his new wife, Meredith, daughter of Dr Charles Sutton, just before Sir George died. Meredith had been a regular visitor to the Syme house as a friend of Bob's sisters, and represented Australia in hockey. Their flat in London was a popular rendezvous for other Melburnians (Ward Farmer, Reg Crisp, Orm Smith and Alan Lendon) attempting the English Fellowship in 1930-31. Bob was successful in 1931 and returned and completed the Australasian Fellowship in 1932. He was appointed surgeon to Out-Patients at the Melbourne Hospital in 1934 and worked as an assistant to Sir Alan Newton, from whom he learnt much in his specialty, thyroid surgery.

He served as Honorary Secretary to the College for two years and as Honorary Librarian for ten years. He was on the Council of the Medical Defence Association for many years, being President for

eight years before his death, a position his father had occupied for thirty-four years. In addition to his work in general abdominal surgery at The Royal Melbourne Hospital, Bob regularly operated at St Ives, Freemasons, The Mercy, St Andrews and Bethesda. Consulting rooms at Parliament Place also housed Clive Fitts, 'Weary' Dunlop, Paul Jones, Les Gleadell, Don and Doug. Duffy and Kelvin Churches. His professional career was characterised by thoroughness and calm reliability. Whilst he never worked with his father, the 'genes' were undoubtedly present in his manner, and in the respect he earned for his modest and direct responses and proficient performance. He was a well-regarded clinical teacher who valued deeds rather than words and whose punctuality could be relied upon.

Bob did not see service in the Second World War, due to the limited staff remaining at the Melbourne and his earlier illness; but he provided surgical services and teaching at The Royal Melbourne during that period. He was posted to Kure, Japan in 1946-47 as Captain to the 130th AGH, BCOF. On his return to practice, he obtained the services of Sister 'Bella' Walsh as his operating sister, an association that continued for twenty-six years until his death.

Bob retired from his appointment as Honorary Consulting Surgeon at the RMH three years early, as he believed that younger men should be given opportunities. In the latter years, his private practice continued, with his sons assisting and performing locums for him.

He valued his friendships greatly, sustained as they were either professionally, on the golf course or tennis court, the latter sports being his preferred relaxations in later years. The tennis court at Malvern provided regular weekend entertainment for a mixed doubles competition in which Zeddie Zwar, John Begg, Russell Howard and Clive Fitts were the only medicos to play for over thirty years.

Meredith was a perfect foil to balance his quiet and reticent nature, which understated his wisdom, judgement and determination. In contrast to his father, Bob found writing uncomfortable and preferred reading, mainly biographies of contemporaries, the theatre and bridge. In latter years, he became very interested in carpentry. Bob died, two months after Meredith, of pancreatic cancer, which he accepted with equanimity.

Third Generation: Graham Adlington Syme Rodney Robin Adlington Syme

The eldest of four sons, Graham was born in England in 1931, educated at Adwalton (Malvern) and then Melbourne Grammar, where he matriculated in 1948. During his medical studies, he gained the Stirling Prize for Surgery in 1954 and the Ryan Prize for Medicine in 1955, graduating MBBS in that year. He served three years as a resident at RMH before sailing to London to attempt the Fellowship, which he gained in 1960. He married Elizabeth Ironmonger, who had been theatre sister at the RMH for Bob Syme, and gained experience at Fulham, Shooter's Hill and Guy's Hospital, before returning to Australia and qualifying for the Royal Australasian Fellowship in Surgery in 1962. After a period as an Assistant Surgeon at RMH and the Queen Victoria, Graham was appointed to the staff of the RHM in 1969, at the same time as Bruce Crawford and Frank Ham. He was also assistant to his father from 1962 until the latter's death in 1975, the experience probably ensuring that surgical techniques, as well as genes, were perpetuated. A general surgeon, with a particular interest in thyroid surgery, his method owes much to his parentage.

Graham's determination is apparent in his approach to sport, which, despite a short playing career in district football league, was a frustration, evident in irregular tennis and golf games. His mid-life crisis was arrested by solicitous anaesthetic and surgical colleagues who directed his attention to skiing.

In 1965, Graham was a member of the RMH medical team, including Alan Cuthbertson, Peter Scott, Ken Hardy and Bob Thompson, which was posted to Long Xuyen, Vietnam, for several months.

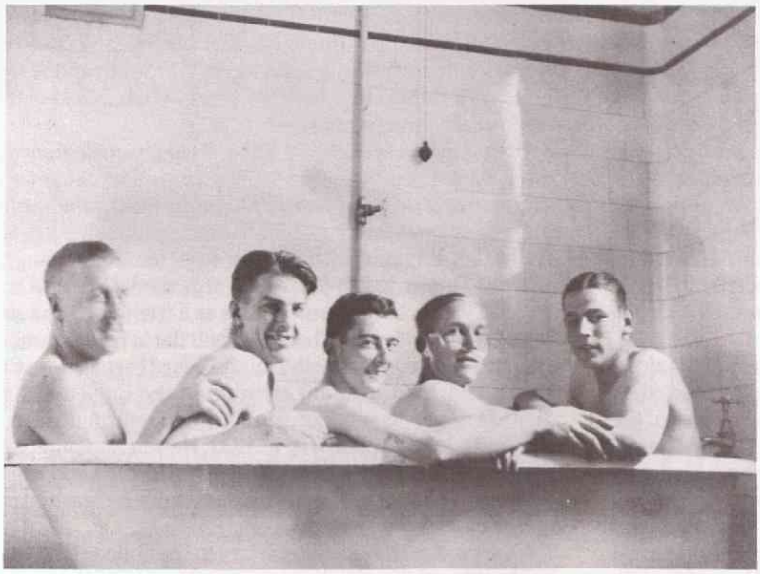
Rodney, born in 1935, was the third of the four boys attending, like his eldest brother, Adwalton and Melbourne Grammar, where he matriculated in 1952. He was awarded a Senior Government Scholarship in 1953 and was selected in the school's cricket and football teams. He graduated MBBS in 1959, with First Class Honours in Obstetrics and Gynaecology, and was a resident at the Melbourne Hospital for three and a half years. He was a regular cricketer, and captain-coach of the Power House hockey team in 1956 and 1957, having only taken up the game in 1953; over four years he helped to raise the Club to the second strongest team in the Victorian competition.

He had determined a medical path at variance to his brother and worked at Whittington Hospital in London. After achieving the English Fellowship, he went to the Royal Infirmary, Cardiff, to work in urology under Dick Mogg, and later had six months experience with Reuben Flocks at Iowa City, before returning to Melbourne in 1968, to pass the Royal Australasian Fellowship. He was appointed Assistant Urologist at the RMH and St Vincent's, subsequent to appointment to the Austin Hospital in 1969 and, additionally, in 1976 to the Repatriation Hospital. His recreational pursuits now include bird-watching, golf, bridge and chess.

Fourth Generation: Duncan Adlington Syme

Duncan is the elder son of Graham, born in 1963 and educated at Melbourne Grammar, matriculating in 1981. He represented the school in cricket, football and athletics. He entered Monash University and graduated MBBS in 1987 and is a resident medical officer at the Alfred Hospital. Whilst being the first to 'cross the river', he has, as his domicile, his great grandfather's house, which has seen four generations of Melbourne medicine.

Marten Syme



E.R. Crisp, J. 'Orm' Smith, P.A.C. Kennedy, G.M.W. Clemons, G.R. (Bob) A. Syme.
Women's Hospital c.1925

The Editor and his Associate wish to convey a humble apology to Mr John Zwar and the Zwar family for the incorrect legend beneath the portrait of Dr B.T. Zwar, printed in the last issue. The editorial gremlin identified the portrait as John Zwar instead of his father, and we apologize for the chagrin this must have caused both John and the family.

The Mildura Experience

There were no stone cloisters or spires in this university, only rows of iron huts and hangars, crossed by roads of red dust, and fringed by the gnarled scrub of a plain which shimmered in the heat of day and softened in the glow of lavish sunsets.[1]

The 1988 issue of *Chiron* published a letter from Bill Lawrence (MBBS 1953) about the ceremonies held in 1987 at Mildura and at The University of Melbourne, to commemorate University of Melbourne Mildura Branch, which functioned from 1947 to 1949.

The possibility of a University College in a Victorian country district had been first raised in 1945 by the Vice-Chancellor Mr (later Sir) John Medley, but by 1946 with the sudden influx of ex-servicemen and women (enrolments rose to a peak of 2,600 in 1947) Mr Medley said the University could no longer afford to wait for a proper proposal: 'It is a matter of providing for our own urgent necessities by drastic means and without delay — for whatever is done must be ready by March 1947.'[2] Sites were investigated, the State government provided $112,000, the Council decided and the Branch was created out of a former RAAF training camp at Mildura. After enormous difficulties and pressure, University of Melbourne Mildura Branch opened on 9 April 1947 (less than a month late) to admit 558 students, including 280 servicemen, into the first year of their courses in medicine, architecture, dentistry and engineering. In the following two years other faculties were accommodated. This is Bill Lawrence's story. (MM)

. . . . . .

It is December 5th 1987, as I collect my thoughts following a telephone call from the editor of *Chiron* in Melbourne, requesting an article about University of Melbourne Mildura Branch. This call triggered off a remarkable response, coming as it did forty years to the day we departed Mildura, after a year which no one who experienced that adventure could ever regret or forget. Whether the call came on that date by chance or by design, I guess I will never know.

In May 1946, the Vice-Chancellor commenced preliminary negotiations to establish a University of Melbourne Mildura Branch. In July of that year the University Council announced the State Government purchase from the Commonwealth of the RAAF Base at Mildura, and that in 1947 all first year undergraduates in medicine, dentistry, architecture and engineering would be transferred to Mildura.

In August 1946, the University Council appointed Dr J.S. Rogers as Warden of the Mildura Branch. By September, the building conversion had begun, undertaken by the Public Works Department and A.V. Jennings Construction Company. RAAF living quarters were converted into flats, the dining rooms and kitchen rebuilt and an aircraft hangar transformed into two large lecture theatres. The biology laboratory was built in the former 'link trainer' hut, four flight huts were joined together to form a chemistry laboratory and a parachute drying hut became the prosthetics laboratory.

At last the day of reckoning came and on 8 April 1947 those selected for this new and exciting adventure set off by train from Spencer Street Station headed for Mildura and university. Amongst them were many undergraduates who, after demobilisation, undertook revisionary and/or qualifying study in particular subjects, frequently at coaching colleges such as Taylor's — often working in the daytime in a variety of jobs and going to 'school' most week nights. There were fire crackers, toilet paper rolls, streamers, distraught parents, lovers and leavers; but we were finally underway — the females, if you please, in separate carriages — at least at the beginning!

On the following morning we arrived and bussed out to our new quarters, allotted, in many cases, three students to a two-student flat; cupboard shortages and other problems arose. Seventy-two staff (50 unmarried and 22 married) to be housed, was a problem without precedent at Melbourne University, but was overcome by considerate planning and universal tolerance by everyone involved. A flat consisted of two compact single bedrooms, and a shared sitting room — this total area you shared with your 'wife' — mine was an old school friend from earlier pre-war days. At 2.15 pm Dr Rogers formally welcomed the staff and undergraduates to their new venture, and lectures commenced at 9.00 am the following morning. Seats were numbered and at most lectures a roll was called.

The Council of The University of Melbourne will never fully realise the wisdom of their choice of 'Doc' & Mrs Rogers as 'foster parents' for their Mildura offspring, and how practical they and their senior staff were — especially Margaret Blackwood (Sub-Dean of Women), Ben Meredith (Sub-Dean of Men) A.A.C. Carter (Officer in Charge of Plant and Equipment) and catering manager, Tom Wheelaghan — each their own specialist and when welded to many others, made an alloy of dedicated, loyal and trustworthy team members to both themselves and the students.

The campus had its own Post Office, hairdressers for both men and women; and a hospital with 10 male and 4 female beds, two nursing sisters plus two local medical practitioners, Mr J.S. Bothroyd

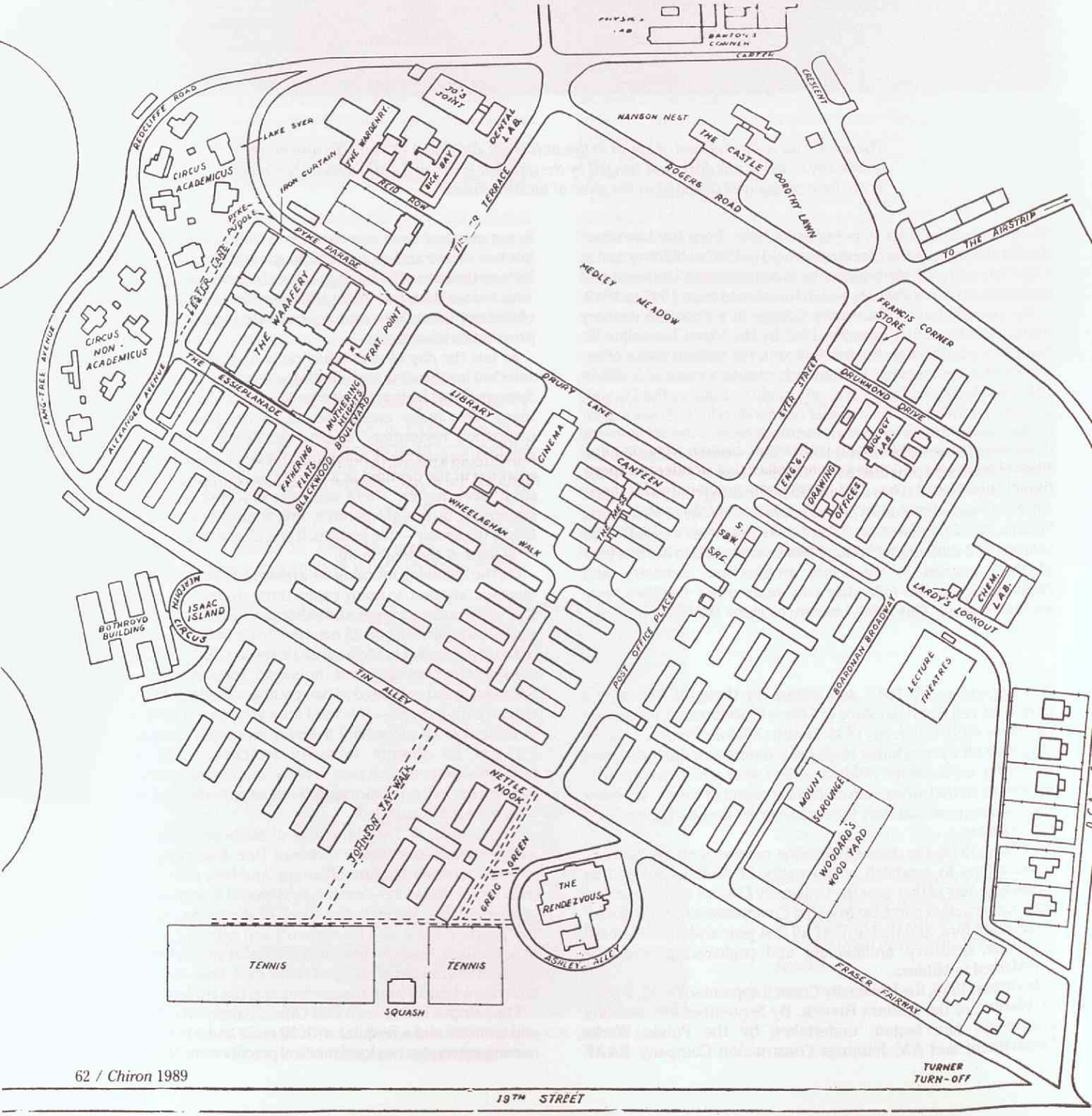
and Dr Malcolm Curwen-Walker, as our caring medical staff. We had our own theatre-cum-Town Hall which is now the Nangiloc Community Hall, situated today some 35 kilometres south of Mildura; tennis courts, squash court, sports ovals, and our swimming pool was the Department of Civil Aviation dam, which still exists at Mildura Airport; a library, and physics, chemistry, and biology laboratories. A multiplicity of clubs and societies, flourished: Faculty Clubs, Camera Club, Music Society, Drama Club, Ex-Service Association, World Student Relief, Labour and Liberal Clubs, Newman Society and the Melbourne University Mildura Masons Club. In fact, if one wished, one would never have to be at home with one's 'wife' if attending extracurricular activities. It should be realised that at all 'normal' universities, clubs and societies are run, in the main, by students in second and subsequent years — at Mildura these were all organised and basically administered by first year students, often only one year out of school.

On our first Anzac Day the gathering was addressed by Ben Meredith, a Middle East veteran and a most respected senior member of staff. In May 1947 Sir Charles Lowe opened the Branch, in part saying: 'It is ninety-two years since the Government of Victoria declared open The University of Melbourne and in all that time, there has been no more important event in the world of Victorian education than the opening of this Branch.'

As the Branch grew and developed its own personality, titles for campus areas abounded. We all recall the *Castle* where administration flowed, separated from *Medley Meadow* by *Rogers Road,* across the *Meadow* to *Drury Lane,* which fronted our Cinema-Town Hall. Next door was our 'canteen-mess' seating seven to a table, each taking a duty turn collecting meals for the day, thus avoiding congestion at the servery. Some weekly food consumption figures are revealing:

> 720 gallons milk, 215 lbs butter, 64 gallons ice cream, 2,100 lbs bread, 3,600 eggs, 2,700 bread rolls, 100 lbs cheese, 5,600 lbs butcher's meat, 5,000 lbs fresh vegetables, 180 lbs fresh fish, 255 gallons fruit juice.

For 558 students plus staff, by any standards we were very well fed on a balanced diet; and obviously we were not hungry. ('Some of these students miss their breakfast — especially those ex-service chaps. I see they all get their vitamins, carbohydrates, fats and roughage — I give them rissoles once a week — they contain everything.' Tom Wheelaghan, Catering Chief.)



Circus Academicus, the staff quarters behind the *Waafery*, the women's quarters, all overlooked by *Mothering Heights*, the Sub-Dean of Women's home — the latter two areas surrounded by high fencing topped with barbed wire. The *Fraternization Point* was the only official point of entry to this zone, but having a sister in medicine with me, gave one extracurricular advantages.

Margaret Blackwood had her own 'baby' as well, *Henrietta Ford*, but was prepared to foster mother this other new Mildura child. Way across *Tin Alley* towards the *Dust Bowl* via *Johnson's Jay Walk* were the tennis and squash courts. For many months every Sunday, my 'wife' and I played men's doubles 'Davis Cup' matches; the trophy, an SPC peach tin mounted on a wooden block inscribed with a nail, was held by each winning pair for a week. Perhaps the plan shown will jog the memories of sports played by daylight, and moonlight, — maybe you can still find your 'house' which you shared with your 'wife' for those wonderful months in 1947.

Friday evenings were frequently highlighted by visiting lecturers on a variety of topics, followed by an invitation to the Warden's home for supper, where we relaxed with our 'Doc' Rogers and his charming wife. On Saturday evenings, we frequently attended the *Old Mill*, a 50/50 dance venue in Mildura. Some were fortunate enough to have their own transport via *Felicity*, a second-hand Army jeep.

By June 30th, the Student Representative Council had become a permanent group, and 'Paddy' Barrett was elected Chairman. Many outstanding sporting achievements took place — none more exciting than on September 6th: the football XVIII won the Sunraysia Football League Grand Final for the first and only time. In October the 'A' and 'B' Grade tennis teams won their respective premierships and on November 1st we had our Annual Swimming Carnival in the Department Civil Aviation dam, yabbies and all.

Our hospital was also kept busy — some cases of malaria occurred among the ex-service persons, along with football injuries and minor illnesses. 99 In-patients were treated (average stay was 6 days) and 4,500 out-patients were seen. For modern medics the dispensary list is really most interesting, reading like something from last century rather than 1947; in six months — 25 pints of APC Mixture, 2 pints Bromide Mixture, 155 Phenobarb Tablets, 150 Vegenin Tablets, 55 Cascara Tablets, 32 pints of Senegae and Ammonia, 10 Fluid ounces of Linctus Heroin. What a concoction for headaches and hangovers!

By 4th December 1947 the examinations had all been completed, and on the following day we departed for Melbourne — the end of our epoch-making era — the Branch went on for a further two years, but nothing could replace that wonderful experimental time in our lives. The closure was precipitated by three major factors: Tailing off of the Commonwealth Reconstruction Training Scheme for ex-service persons, thus a number deficiency began in 1949 (see table); increasing staff difficulties — remembering that all the teaching staff were scientifically trained and, at Mildura, were isolated from research, fellow lecturers and tutors located at Melbourne University; and financially it would have been irresponsible to continue with depleted numbers of both undergraduates and staff.

1947	Male	Female	Total
Architecture	30	1	31
Dentistry	79	7	86
Engineering	164	—	164
Medicine	241	36	277
			558
Ex-Service			
Architecture	23	—	23
Dentistry	48	—	48
Engineering	94	—	94
Medicine	111	8	119
			284

	Total Students	Ex-Service
1948	442	117
1949	328	55

The examination results were as good at Mildura as they were in Melbourne. The Branch revived opportunities for many students which had not existed for centuries in Western style tertiary education. Co-operation, independence, mutual respect between students and staff, discussion between students, tutors and demonstrators, literally at any time and any place — at sporting venues, social functions and formally during and after lectures. Clubs and societies flourished in abundance. Ex-service students naturally gave the lead in all these activities, being older and a little more wordly wise than the school-leavers. The latter were very quickly taught that any lack of home comforts could be overcome by ingenuity. Friendships were forged for life; mutual help, in study and social life, abounded; 'co-operation and tolerance' was almost a University Branch motto.

By 30 March 1950 the site had been reclaimed by the Department of Immigration for use as a migrant camp, and the huge experiment was over. We had returned to the city life and, as Bruce Truscott stated: We'll have to put up with father's politics, mother's radio serials, Mary's piano practice, and little John's homework.'

Today the former RAAF camp turned university is the venue of an extremely busy domestic air terminal for locals and tourists. All that remains is a few concrete stumps half-buried in the grass. There is nothing at the site to record that at its opening 'the Chancellor, Sir Charles Lowe, said there had been no more important event in education since the founding of the University in 1855.'[3] Those of us who came and went will forever remember all the fun, enjoyment and experiment in alternative living, learning and playing together, and none would be able to forget, or regret, being a participant.

W. Lawrence

Epilogue

Upon graduation, I spent a most wonderful year at the Alfred Hospital, Melbourne, as a junior RMO, learning general practice from such greats as Kennedy Burnside, Robert Officer, Harry Phillips, Ian McLean and 'Mossie' Davis — plus a one-month stint as dental resident for Professor Amies. With these and other teachers I felt reasonably confident at the end of one year, to go out for twelve months and do locums in Victoria and Tasmania — an experience I would urge any budding GP to undertake as a form of apprenticeship. Almost all of these locums were in rural settings — including a month in my RMO year at the Alfred as Regimental Medical Officer at Puckapunyal Military Camp. It was there I met my future wife, Betty Crocker, who had only recently returned from Korea and Japan as a theatre sister with the UN forces in a mobile army surgical hospital (MASH) team.

At the conclusion of my locum year, Betty and I were married. I did a three-month locum in Geelong, then migrated to Red Cliffs, where we have remained ever since. I had chosen a rural area in preference to the city 'rat race' which, even then, I could see developing. Red cliffs was available at the time and I knew the area from my Mildura experience. I also had the advantage of a 'country girl' for a wife, and prewar I had visited the Murray Valley with my father who was a senior engineer with the State Rivers and Water Supply Commission.

Perhaps all these factors combined to play some part in our decision to settle in the Sunraysia area. I suppose, also, that as an ex-serviceman I liked the community attitude of the largest soldier settlement in the British Commonwealth — Red Cliffs irrigation settlement after the First and Second World Wars. (WL)

1. Geoffrey Blainey, *A Centenary History of The University of Melbourne*, Melbourne University Press, 1954, p.184.
2. Stephen Johnson, 'Mildura remembered' in *The University of Melbourne Gazette*, Vol. 43, No. 4, Summer 1987, p.7.
3. Ibid.

News

Australia Day Honours 1989

Professor G.D. Burrows, A.O.
Mr J.L. Connell, A.O.
Dr A.S. Ferguson, R.F.D., V.R.D., A.M.
Dr P.D.G. Fox, O.A.M.
Dr T.H. Hurley, O.B.E., A.O.
Dr W.M.C. Keane, A.M.
Professor V.D. Pleuckhahn, O.B.E., E.D., A.M.
Dr B. Widmer, O.A.M.

Chairman of Medical Research Ethics Committee retires

Prof. Em. R.R.H. Lovell

Professor Emeritus Richard Lovell, after seven years as Chairman of the Medical Research Ethics Committee (MREC) of the National Health and Medical Research Council (NH&MRC), retired from the committee at the end of 1988. At its meeting in November 1988 the NH&MRC adopted the following Minute of Appreciation for inclusion in the record of the meeting.

Richard Lovell — An Appreciation

It is not given to many people to put their stamp upon an important undertaking by being the inaugural holder of an office. Professor Lovell was the first holder of the James Stewart Chair in Medicine in The University of Melbourne, and over twenty-eight years left his stamp on that Chair. Tribute has been paid elsewhere to that achievement. For the last seven years he has been Chairman of the Medical Research Ethics Committee of the NH&MRC, and his influence upon the workings of that Committee and the policies adopted by the Council have been unmistakable.

The methods adopted owe much to Professor Lovell's perception that there is only one starting point for any discussion of a bioethical problem, namely the facts of the case. He made sure that every member of the Committee, whether trained in medical science or another discipline, had as full an understanding as possible of the procedures involved. He was also aware that no-one enters a discussion of this sort without some moral presuppositions; without some experience in handling ethical questions. He himself was keenly aware of, and very well informed in, the tradition of ethical thought and action in which the medical profession stands. Many of the allusions in the reports of the Committee to historical precedents and instances have their origin in remarks made by him for the illumination of other members of the Committee. Not everything in bioethics is so entirely new as is often supposed. This sense of a moral tradition in medicine was, in Professor Lovell's mind, to be supplemented by the contributions which come from other quarters; from the law, from traditions of philosophical and theological thought, from experience of life and of dealings with people. Hence his insistence on members of the Committee being recruited from many walks of life.

Not the least of Professor Lovell's contributions to the work of the Committee and of the Council has been his mastery of clear, lucid English. Many a paragraph was improved by his pen. The ordinary intelligent reader must not be left in any doubt about what the Committee has thought on any matter. Ambiguities were to be avoided, jargon was to be eschewed, and technical terms used where necessary, but in an understandable way. Above all Professor Lovell knew that little progress will be made in an exercise of this sort unless those taking part become friends, men and women who have learnt to think and work together, and to trust each other. The MREC in its formative years gained greatly through its members all being accepted into the friendship of Dick Lovell.

For these and a number of other reasons those who served with Professor Lovell are grateful for the experience. The wider community in Australia is also in his debt.

Dr Ross McD. Anderson retires from the Department of Pathology

Ross McDonald Anderson was born in Melbourne in 1923. After war service he graduated MBBS in 1950 and did his residencies at the Alfred Hospital. His interest in neurological medicine was stimulated by Dr L.B. Cox and Mr Hugh Trumble and in 1953, with an E.H. Flack Scholarship, informal training in general pathology and neuropathology began. Drs L.B. Cox and A.V. Jackson were his mentors. However, his clinical training in neurology continued for twelve years as clinical assistant to Dr Cox and, later, as assistant neurologist to Dr J.A. Game.

In 1953 he joined the Pathology Department, The University of Melbourne, as part-time Lecturer and, until his retirement at the end of 1988, his association with the Department continued as Lecturer (1955), Senior Lecturer (1961) and Reader (1968), and Chairman (1987-88). During this time he spent two separate years at the National Hospital for Nervous Diseases, Queen Square, London (1957-8 and 1970). In the second period in London he studied electron microscopy with Dr W.G.P. Mair.

His clinical and academic backgrounds made him the ideal consultant neuropathologist and, as such, he served all the major teaching hospitals in Melbourne. It is unlikely that anyone ever again will serve this Department and the teaching hospitals in such a capacity for so long and so well.

Ross Anderson is also renowned as a teacher who gave unstintingly to his students, both undergraduates and postgraduates, numbered now in their thousands. His unusually likeable personality has given much joy to students, colleagues and his many friends.

NH&MRC grants up 10 per cent

Researchers at The University of Melbourne will receive a total of $8,179,560 from the National Health and Medical Research Council in 1989 — an increase of more than 10 per cent on the amount received last year.

The Dean of the Faculty of Medicine, Professor Graeme Ryan, said the result was very satisfactory and reflected the considerable effort the Faculty puts into seeking research money from outside funding bodies: 'It is particularly notable because the total NH&MRC research allocation, leaving aside the margin allowed for inflation, increased by only about $1 million. While we can therefore be well pleased with our success, we cannot afford to be complacent, particularly when the University faces severe cuts in recurrent funding. The Faculty will have to make even greater efforts to seek outside funds in future years to maintain its leadership position in Australia as a centre for medical research.'

The University has received 41 new Project Grants for 1989 (compared with 25 for 1988) totalling $2,211,139 — a 61 per cent increase on last year's figure of $1,367,094. The largest new Project Grant went to Dr John Ludbrook for research into endogenous opiate mechanisms and the haemodynamic responses to acute blood loss. Dr Ludbrook will join the University's Department of Surgery at The Royal Melbourne Hospital in 1989.

Dr John Hamilton, an NH&MRC Principal Research Fellow in the University's Department of Medicine at The Royal Melbourne Hospital, has received a new Project Grant of $504,225 per year for biochemical studies on the pathogenesis of leukemia and arthritis. Project Grants worth $2,128,576 ($1,690,004 in 1988) were continued for six projects.

A Special Initiative Grant of $25,892 went to Drs Douglas Brown, Gerald Ungar and Geoff Donnan of the Department of Surgery at the Austin and Repatriation General Hospitals, to study thyrotropin-releasing hormone as therapy for acute spinal cord injury. Three Special Initiative Grants for $103,598 were continued for 1989 ($70,141 in 1988).

In addition to the $8.1 million of NH&MRC grants administered through the University, associates of university departments working in affiliated hospitals and the National Vision Research Institute, received a total of $1,791,339.

George Porter farewelled

After eighteen years as porter at the Medical Centre, aptly named George Porter, who had seen dignitaries come and go, returned in style to the Centre for a farewell party in September 1988. Accompanied by Mrs Ruby Wellington, the tea lady/cleaner in the Department of Pathology for twenty-six years until her retirement in 1987, George arrived in a chauffeur-driven Rolls Royce to be greeted at the Grattan Street entrance of the Medical Centre by former colleagues. Later at a function on the seventh floor, George was presented with a book on the history of the Porter family.

RMH Medical Research Centre opened

On 9 September 1988 the Premier, Mr Cain, opened The Royal Melbourne Hospital Centre for Medical Research, established in redeveloped premises once occupied by The Walter and Eliza Hall Institute of Medical Research. The redevelopment, costing $10.5 million, included adding an extra floor, its second extension since it was built as a four-storey building in 1942.

The new Centre provides improved laboratory and clinical research facilities for many Royal Melbourne Hospital departments and The University of Melbourne's Departments of Medicine, Surgery and Psychiatry. The top two floors are occupied by the Melbourne branch of the Ludwig Institute for Cancer Research.

Profile - Albert Kennedy

Albert Kennedy, far right, Victoria Centenary Master Singles, 1976. From the collection of W. Foster, Victoria Bowling Club.

Albert Cameron Kennedy was born on 4 March 1916. His father was in charge of the workshop of our Engineering School. As a consequence when young Albert left school he came as lab boy to the Department of Physiology in May 1930. His senior was Mr Barnes, who had been in the laboratory of Sir Victor Horsley in London and had been persuaded to come to Melbourne by Alan Newton who, with Sydney Sewell, planned to employ him as their research technician in the Department of Physiology. When this plan failed to mature Mr Barnes became the technician in charge of Professor Osborne's laboratories.

Mr Barnes (he always attracted the Mister) was of middle stature, wide construction and choleric disposition whose steely blue eyes actually protruded when driven by anger. His basic knowledge of the laboratory procedures was not great but his sergeant-major approach to carrying out those procedures was rigorous. I was relieved when I was recognised by him as a worthy recipient of a well-constructed twin stimulating electrode, previously used by Sir Victor and brought by Mr Barnes from London. It had been a going away present from Sir Victor.

It was into this presence that young Kennedy came. He washed up the messes that students left after experiments on frogs, dogs and such like. He ran the messages and brought Mr Barnes his tea in his retiring room, a laboratory which he had selected for that purpose. And throughout the next nine years young Kennedy kept his temper, did Mr Barnes' bidding, and grew in stature. I suspect it was the necessity of keeping a job in the 1930s which developed an impressive imperturbability.

I became head of the Department in 1939. Mr Barnes and Albert were the only technical staff. With the reorganisation of timetables and increase in student and research experiments, both of them had to get busy and, with Mr Barnes' health failing, Kennedy had to accept greater responsibility and performance. No problem! He enrolled at RMIT (Melbourne Technical College in those days) and learned photography. When Mr Barnes died in 1942 Albert was formally appointed senior technician in charge and during the war years ran the place with the help of Ernest Matthaei and part-time young ladies. From his father he had learned the rudiments of metal work and now undertook a course in glass-blowing. He became my 'Admirable Crichton', a splendid surgical assistant, and gained a Diploma in Medical Laboratory Technology.

As the work of the laboratory expanded so did the technical staff under his charge and he was promoted to Laboratory Manager in 1957. His duties are cited in the official file: Control of technical staff (15%), Control of animal house, photography and workshop (15%), Control of teaching and research facilities (60%), orders and invoices (20%). In 1971 the technical staff numbered 30. His management was thrifty, good and cool. It was fascinating to watch his handling of staff members who tried to absorb him into their orbit of activity. 'Yes, sir, I'll see whether that fits into the Professor's program' was the opening gambit, 'No, I've got other work to do for the Professor' was the final answer. But to those who did not seek to take him over he was most obliging.

He shared similar characteristics in his recreation which was lawn bowls. He started in the Doutta Galla Club where he excelled, but transferred to the Victoria Club in 1959 because he was ambitious to play in first division. He was club champion in 1959-60, 1968-69 and 1970-71, pairs champion 1976-77 and winner of the Memorial Century Handicap, 1969-70, and 1976-77. He lead the top Captain's Pennant averages and in 1974-75, when the VBC was premiers, his rink finished the season 17 shots up, winning 15 of the 19 games. He represented Victoria in interstate competition. 'He was one of the most enthusiastic bowlers imaginable, helping and playing with newcomers and in numerous tournaments. He was respected and known to all the top bowlers in Victoria,' wrote the secretary of VBC. And his style is shown by him continuing to give annual donations after election to Life Membership in 1972. He was also a very reliable, if somewhat slow batsman and a safe pair of hands in the Department cricket matches.

When he retired in 1976 he continued his bowls, shifted house a couple of times, and remained devoted to his wife and daughter. He was on a subscription mission for his club when at twilight, he was hit by a fast car and died shortly afterwards, on 16 December 1981.

He served his University and his Club with loyalty and high capacity.

R. Douglas Wright

Obituaries

Alan Brownlie Gilroy, O.B.E. 1927-1988

This obituary first appeared in the British Medical Journal, 9 July 1988, Vol.297, p.130 *and is reproduced here with the kind permission of the publishers.*

Dr A.B. Gilroy, MBBS, DT&H, formerly a malariologist to the government of Nigeria and president of the Assam branch of the BMA, died on 30 April [1988] in his 86th year.

Alan Brownlie Gilroy was born in Bairnsdale, Victoria, in Australia and graduated in Medicine in Melbourne in 1927. Appointed Medical Officer in the Deparment of Public Health for the territory of New Guinea for seven years, he then went to be Medical Officer to the Terai Medical Association, north Bengal, India. At the outbreak of the war he was commissioned in the Indian Medical Service and posted to Freetown, Sierra Leone, but he was soon transferred to a malaria field laboratory in Lagos, Nigeria, as commanding officer with the rank of Lieutenant-Colonel. Losses of men in that area were largely due to malaria, and protection from it became urgent. This problem and its solution were described in Alan's small book *Malaria Control by Coastal Swamp Drainage in West Africa* (1948) which showed that the methods used could decrease the annual incidence of the disease by 90 per cent or more. The book was introduced in these words: 'The value of this achievement for the war effort, for the general health of the civilian population and as a guide to similar work in future is incalculable.' In connection with his work in Nigeria, Alan had a variety of mosquito named 'gilroyi' after him.

At the end of the war Alan accepted an appointment with the Colonial Development Corporation in Nigeria, and in 1947 he became principal of the India branch of the Ross Institute and returned to Assam. In 1950 he was nominated a member of the World Health Organisation's expert panel on malaria and in 1960 he became president of the Assam branch of the BMA.

Alan retired from the Ross Institute in 1971 and settled with his wife Gwyneth, at Cadmore, Buckinghamshire. He worked for twelve years as an examiner for the Department of Health and Social Security and as a consultant at the psychiatric detention unit at Grendon. The past few years were overshadowed by a serious neurological disorder, which he bore with indomitable courage and dignity.

Soft-spoken and precise, Alan had a clear way of seeing the world and judging people. He was generally reticent with strangers, but his friendship once given was generous. His changes of mood were at times disconcerting and varied from taciturnity to loquaciousness; his opinions were often irreverent or even cynical; but he was a romantic at heart and music, particularly that of Bach, moved him deeply. He is survived by Gwen. (L.J.B-C.)

. . . . . .

TN writes: Alan Gilroy returned to India in 1947 as principal of the India and Pakistan branch of the Ross Institute and refounded the branch on entirely new lines. It had formerly been mainly concerned with controlling malaria, but to this Alan added such diverse projects as the control of *kala-azar*, the treatment and control of tuberculosis, and surveys into the nutritional state of children on tea estates. He also helped to introduce a birth control program in the tea industry. His greatest service to the tea industry, hardly recognised and totally unacknowledged, was as an intermediary with the central government in New Delhi, where he was on terms of personal friendship with all those who mattered. It was due to his diplomacy that the tea industry's medical services remained within practicable bounds and were not swept off to Utopian heights that would have bankrupted the companies.

Photograph courtesy
Leader Newspapers

Hilda Burn Kershaw 1889-1988

Dr Hilda Kershaw will be remembered by members of faculty and UMMS for her gracious and lively appearance, at the age of ninety-eight, as the senior graduate and an honoured guest at the 125th celebration dinner held in Wilson Hall on 19 August 1987 (see *Chiron*, 2,1,pp.22,36).

The second daughter of a mining engineer in a family of three girls and two boys, she was born in Yackandandah, Victoria on 12 May 1889. She attended and was dux of 'Oberwyl', a private school for girls in St Kilda, later going on to The University of Melbourne where she resided in Trinity College (before the founding of Janet Clarke Hall) graduating MBBS in 1917, a year in which there were only five women in a graduating class of 55. In an interview given to the *Nunawading Gazette* in July 1988, Dr Kershaw remarked that she did not consider her desire to enter what was then considered to be a male profession, as a significant achievement. She noted that in 1987 there were 81 women graduates out of a total 213.

After graduating Dr Kershaw went to Western Australia to become the first female doctor to work at the Fremantle General Hospital. In the 1920s she worked in Brookton, a town to the south-east of Perth, moving later to a surgery in Perth. During the Second World War she joined the Army, working at a base in Western Australia where she supervised the health of women in the forces. She married in 1928, keeping her maiden name for professional purposes, and was widowed in 1948.

Dr Kershaw returned to Melbourne and for the last twenty-five years lived in quiet retirement in Vermont where she died peacefully on 6 September 1988. (MM)

Curator
H.D. Attwood

Medical History Unit

Museum Hours
Weekdays 8.30am-10pm
Saturdays 8.45am-12noon

Enquiries 344 5885

Report for 1988

Visits and Discovery Day

On 17th March, in keeping with a now well established custom, members of Faculty after the first meeting of the year visited the Medical History Museum to view a display on the centenary of the entry of women into the medical course. This display demonstrated the richness of our archives.

The museum was open on Discovery Day when considerable interest was shown in the Savory and Moore Pharmacy.

On 24th August, to coincide with the conference Ven South 88, the combined Australian and New Zealand conference on the Sexually Transmitted Diseases, a display on 100 years of venereology in Australia was put on by Dr Di Tibbits. This very well illustrated display was appropriate because of the AIDS epidemic, but also highlighted the many problems, social, public health, therapeutic and preventive, of the sexually transmitted diseases.

The Curator conducted tours for the Baillieu librarians and for the members of the Wallaby Club. The museum also formed the venue for the reunion of the 1948 medical graduates before their 40th anniversary dinner in University House.

Dr Peter Edwards, Official Historian, Australian/Vietnam War, Dr Genevieve Miller, formed Editor of the *American Society of the History of Medicine Newsletter,* and Professor Frank Fenner were amongst the visitors to the Unit.

Lectures

During the year additional lectures on medical history were given to undergraduates as part of the course on Introduction to Medicine.

In August the Curator read a paper on 'Boswell's omission, Latham's false witness and Sam Johnson's lung' to the Medico-Legal Society of Victoria and in October gave the John Perry Oration at the Hobart meeting of the Royal College of Pathologists of Australasia.

Recent Acquisitions

Letters and photographs relating to Mr Preston, the legendary factotum in the Anatomy Department, have been donated by his grandson, Bill Preston. Dr Margaret Henderson donated books and instruments, including a handsome wooden stethoscope which belonged to her grandfather, Dr E.G. Figg. In addition she permitted photographs to be taken of a handsome silver cup inscribed in 1866 to her grandfather by that controversial figure, Dr James George Beaney.

Through the generosity of his grandson, Dr David Rodda, the Unit now holds the 1868 MB certificate and the 1871 MD certificate of Octavius Vernon Lawrence, who was the fourth graduate of this school and the first to take out the MD by examination. O.V. Lawrence's certificate from the Melbourne Hospital in 1873 gave an informatively clear picture of the hospital's seal, now sadly blurred by the years.

The seal of The Melbourne Hospital, 1864

The seal shows Hygeia, goddess of Health and daughter of Aesculapius, holding, in her left hand, the lamp of knowledge which sheds light over the other two figures. Above these figures are the stars of the Southern Cross. A pomegranate, a symbol of healing, lies close to Hygeia's right hand which rests on a table or altar the facade of which bears a caduceus. The two figures might best be regarded as a physician administering some medication to a sick woman.

Grants

By means of a grant from the Potter Foundation a start has been made on microfilming important archival material collected by Ann Tovell and housed in the AMA Library. The microfilms will be housed in the Brownless Medical Library and the duplication not only will make the material available to more researchers but will additionally ensure the preservation of the records.

Budget

The Unit has never had a separately identifiable budget. Built up almost as a family concern by the late Professor Russell, the curators have held established chairs in the University and carried out part-time duties in Medical History. Faculty this year has approved a budget for part-time curatorial, secretarial and cataloguing staff. This modest budget is a major step forward and is in keeping with increasing recognition of the Unit through the promised endowment of $250,000 for the Walter Winston Johnstone Fund by Dr Johnstone-Need, and the establishment of a Carl de Gruchy prize in Medical History by Miss Denise de Gruchy.

Preliminary announcement

30th ANNUAL AUSTRALIAN MEDICAL STUDENTS ASSOCIATION CONVENTION

2-9 JULY 1989

The University of Melbourne

The Convention is the largest academic gathering of tertiary students in Australia. Up to 350 students from the nation's ten medical schools are expected to attend. Organisational responsibility is shared by students from Melbourne and Monash Medical Schools.

A series of lectures will be presented concerning modern and pertinent topics not otherwise covered in the general medical syllabus. Details of lectures and accompanying social program will be announced at a later date.

The success of the Convention will rely substantially on financial assistance from the medical community. If you can assist the organisers in this way and would like further information, please write to:

A.M.S.A. Convention Committee
Faculty of Medicine
The University of Melbourne
PARKVILLE, 3052

MEDICAL STUDENTS SOCIETY

1988/89 Committee

President — Russ Gruen
Vice-President — Matt Croxford
Treasurer — Matt Snape
Secretary — Liz Uren
Third Year Rep. — James Fordyce
Second Year Rep. — Vince Yuen
Social Secretaries — Annete Ekanayake, Sara Cross
Overseas Medical Students' Society Reps.
— Ruth Hew, Eugene Neo

The newly structured committee will continue to implement ideas to enable a balanced representation of all medical students, better liaison with the Clinical Schools, and increase the effectiveness of the Society as a student body.

Editors
Gubernaculum
Dishan Chandrasekara, Paul Lawton
Counter Handbook
Jaqui Brown, Anne Gridley
Speculum
To be appointed.

Enquiries
Letters may be left at the Enquiries counter in the Medical Building foyer. Watch the M.S.S. notice-board (next to Sunderland Theatre entrance) for announcements.

MEDICAL HISTORY UNIT

2nd Floor, Brownless Medical Library

Curator
Professor Em. H.D. Attwood

The Unit includes a museum, rare book room and reading room. It has close ties with the Medical History Society, A.M.A. (Victorian Branch), which holds its meetings in the reading room.

The Unit and the Australian Society of the History of Medicine publish *Medical History Australia*, a quarterly newsletter which is distributed to members, related institutions and interested readers world-wide, and a series of books, *Occasional Papers on Medical History Australia*, with varying topics and editors.

The Museum houses a permanent exhibition as well as a series of changing special exhibitions.

Unit and A.S.H.M. Enquiries
Professor Em. H.D. Attwood, 344 5884

M.H.S., A.M.A. (Victorian Branch) Enquiries
The Secretary, Dr Alan Malcolm,
Restorative Dentistry,
The University of Melbourne

New Exhibition

FROM OUR COLLECTION

An interesting and provoking peepshow into the range of archival and instrumental material held in the Unit.

Visitors Welcome.
9 am — 5 pm weekdays
Free entry

Dates to Remember 1989

All Enquiries: Graduates & Community Relations (03) 344 5888

Dean's Lecture Series

Tuesdays at 5.30 pm
Sunderland Theatre
Ground Floor, Medical Building
The University of Melbourne

The Dean's Lecture Series is designed to illustrate current research activities in the Faculty of Medicine. All medical graduates, students and interested biological scientists are invited to attend. The lectures are free and open to the public.

21 March
Disability — containment and management
Professor Hugh Burry, Professor/Director of Rehabilitation Medicine, The Amalgamated Melbourne and Essendon Hospitals.

4 April
The link between Alzheimer's disease and slow virus diseases of the brain
Professor Colin Masters, Department of Pathology, The University of Melbourne.

18 April — 55th Beattie Smith Lecture
Clinical and biological types of depression
Professor Bernard J. Carroll, Professor and Chairman, Department of Psychiatry, Duke University, North Carolina, USA.

9 May
Hormones, mood and sexuality — from Freud to feminism
Dr Lorraine Dennerstein, Director, Key Centre for Women's Health in Society, The University of Melbourne.
This will be followed at 6.30 pm by the 1989 Annual General Meeting of the University of Melbourne Medical Society.

23 May
What decides what animals and humans eat and drink?
Professor Derek A. Denton, Director, Howard Florey Institute of Experimental Physiology and Medicine.

13 June
The monocyte/macrophage in health and disease — a molecular approach
Dr John A. Hamilton, NHMRC Principal Research Fellow, Department of Medicine, The Royal Melbourne Hospital.

27 June
The new era of forensic pathology in Victoria
Professor Stephen Cordner, Director, Victorian Institute of Forensic Pathology.

4 July
The impact of molecular biology and micro-instrumentation on medical science
Professor Richard Wettenhall, Department of Biochemistry, The University of Melbourne.

Continuing Medical Education

These continuing professional education courses are designed for doctors and those working in associated health professions. The Faculty also offers continuing medical education programs in Anatomy for Surgeons (in conjunction with the Royal Australasian College of Surgeons), Diagnostic Radiology and Psychiatry, Neurosciences and Behavioural Sciences. Enquiries to: Continuing Medical Education, Faculty of Medicine, The University of Melbourne, Parkville, 3052. Telephone (03) 344 5888.

Friday and Saturday 3-4 February
Introduction to hypnosis and psychosomatic medicine
Venue: Austin Hospital
Directors: Professor G. Burrows and Mr R. Stanley

Friday and Saturday 24-25 February
Psychiatry for non-psychiatrists
Venue: Austin Hospital
Director: Professor G. Burrows

Friday and Saturday 3-4 March
Update in upper gastro-intestinal surgery
Venue: St Vincent's Hospital
Director: Mr C. Martin

Friday 5 May
The health of doctors and their families
Venue: St Vincent's Hospital
Director: Professor J.R.B. Ball

Wednesday to Friday 7-9 June
Radiography for General Practitioners
Venue: University of Melbourne, and Essendon Hospital
Director: Professor Emeritus W.S.C. Hare

Friday 14 July
A women's health approach to gynaecology
Venue: Royal Women's Hospital
Director: Dr L. Dennerstein

Friday 11 August
Update in geriatric medicine
Venue: Royal Melbourne Hospital
Director: Professor R. Helme

Friday and Saturday 25-26 August
Update in paediatrics for General Practitioners
Venue: Royal Children's Hospital
Director: Dr M.J. Robinson

Friday and Saturday 20-21 October
Medical update for the family doctor and physician — new insights into management
Venue: Royal Melbourne Hospital
Directors: Dr G.P. Young and Dr S. Davis

Seminar Dean's Lecture Series

21 July (Friday) — 2.00 pm to 5.00 pm

Resource constraints and the practice of medicine: Everything that might be done can't be done

Convenor **Professor Emeritus Richard Lovell**