

INSIDE

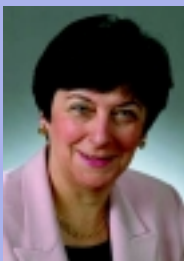
President's Report
 PAGE 3

**ASMR Election of
 Directors**
 PAGE 2

**Australian Health
 and Medical
 Research
 Congress**
 PAGE 6

**ASMR Research
 Award Winner 2001**
 Dr Pat Mote reports
 PAGE 7

SPECIAL FEATURE



**Senator Kay
 Patterson**
 PAGE 4

The Physician-Scientist in Australia - An Endangered Species?

*David S. Celermajer PhD FRACP, Professor of Medicine,
 University of Sydney.*

Although the major basic building blocks for understanding human health and disease have usually come from fundamental science discoveries, the translation of these discoveries into clinical practice and the improvement of human health have almost invariably involved the active participation of medical doctors who are involved in research. Over the past 10 years or so, however, it is clear that far fewer doctors are devoting time to clinical or translational research, with a number of "market pressures" driving medical graduates into either full time or nearly full time research (without seeing patients), or much more commonly into busy clinical practice where the demands of patient care do not allow the time or contemplative space for a meaningful contribution to the research endeavour.



Even though there has rarely been a time of greater excitement in basic biological research than this new century, with the tantalizing potential of genome and proteome research amongst other areas of interest, it is also clear that this explosion of basic knowledge threatens to overwhelm our ability to apply these discoveries meaningfully to patient care. In my own area of cardiovascular medicine, the greatest benefits to human health in the last decade have actually come from large scale clinical trials, testing "old" compounds in new ways. There seems little doubt that in the next decade, the most important advances in patient care will come from translational research, taking basic findings into the clinical arena and testing their worth or otherwise, and in the areas of effective health services delivery. The involvement of clinician researchers in these kinds of research is indispensable.

Indeed physician-scientists are critical to health research, because the questions they ask are derived from their experiences taking care of sick patients. Unfortunately, however, their numbers are dwindling rapidly (1), a subject provoking much unease internationally (2).

Why then are physician-scientists a "dying breed"? The most important issues seem to be practical ones, in that it has become increasingly difficult for practicing doctors to devote time to meaningful research. The minority who do continue with basic research usually sacrifice their clinical practices, as the demands of patient care are constant and unremitting, and the energy required to practice medicine in our current political climate is almost all consuming. The other very real issue is the enormously disparate salary scales between medical

*Invitation to all members to attend
 the*

Annual General Meeting

of

**The Australian Society for
 Medical Research**

on

29th November, 2002

at the

**Melbourne Exhibition and
 Convention Centre**

**Cnr Flinders and Spencer Streets,
 Melbourne, Vic.**

Meeting to commence at 12:30pm

The Physician-Scientist in Australia - An Endangered Species?

continued from previous page

graduates and scientists. Many doctors find that their remuneration for their "research time" is only a small fraction of that spent in their "clinical time", and this drives many to forgo research altogether, or nearly so.

Finally, attempts to "marry" basic science with translational research require differences in "mind set" to be set aside. The human model of disease is often much less precise than molecular, cellular and even animal experiments, and many basic scientists with whom I have worked have initially been frustrated at our inability to "control" the human organism for experimentation.

Meaningful collaborations between scientists and clinicians (rather than the latter just providing sample material for the former) requires a lot of flexibility and learning on both parts, and is often difficult to achieve.

Encouragingly, a significant number (but not all) of recently awarded NHMRC Program Grants appear to involve both basic and clinical scientists working together towards solving disease-related problems, and such a move towards coherent and long standing programs may persuade more clinicians to continue with research. Unless recent trends dissuading clinicians

away from research commitments are addressed, however, it is possible that the gap between scientists and physicians will continue to widen rather than narrow over time.

David S. Celemajer PhD, FRACP

References

1. Ley TJ, Rosenberg LE. Removing career obstacles for young physician-scientists. *N Engl J Med* 2002;346: 368-72
2. Rosenberg LE. The physician-scientists: An essential - and fragile - link in the medical research chain. *J Clin Invest* 1999;103: 1621-6

Events

Australian Health & Medical Research Congress

Melbourne, November 25 - 29

www.ahmrcongress2002.conf.au

Email: congress@asnevents.net.au

The 41st ASMR National Scientific Conference

will be held this year as part of the

Australian Health and Medical Research Congress 2002

The theme for the ASMR National Scientific Conference is

"The Molecular Basis of Human Disease"

Third Asia Pacific Symposium on Neural Regeneration

3rd-5th December 2002

Sheraton, Perth

Contact:

A/Professor Sarah Dunlop:
sarah@cyllene.uwa.edu.au

Election Results - ASMR Board of Directors

Six nominations were received to fill the five vacancies occurring in November 2002. One nominee withdrew immediately after the closing date, leaving the five remaining nominees to fill the available vacancies without the requirement for election by ballot.

Directors to be appointed or re-appointed to the Board of ASMR following the AGM on November 29, 2002 for a period of two years (til November 2004) -

- Dr Rohan Baker (ACT)
- Dr Maria Kavallaris (NSW)
- A/Prof. Levon Khachigian (NSW)
- A/Prof. Andrew Sinclair (Vic)
- Dr Chris Semsarian (NSW)

Directors incumbent until November 2003 -

- Dr Alaina Ammit (NSW)
- Dr Anthony Armson (WA)
- Dr Moira Clay (Vic)
- Dr Ricky Johnstone (Vic)
- Dr Bronwyn Kingwell (Vic)
- A/Prof. Mike McGuckin (Qld)

Directors retiring November 29, 2002

- Professor Peter Schofield
- Dr Catherine Coulter

Dr Giuseppe Simonetta, elected to the Board in 2000, resigned for personal reasons in June 2002; replaced by co-opted Director, A/Prof. Levon Khachigian.

Congress

The inaugural Australian Health and Medical Research Congress will be held in Melbourne from November 25th to 29th. The Congress organising committee, including representatives of the 8 partner societies who are holding their full national scientific meetings and 25 participating scientific societies, has organised an outstanding program. The Congress has been enthusiastically received by delegates and sponsors with over 1300 registrations to date. Registration remains open and I encourage all members to participate in this exciting scientific venture.

National Research Priorities

The National Research Priorities exercise is now well advanced with the panel of experts reviewing nominations for consideration by the government. Given Australia's clear strengths and leadership in medical research, this is an area of vital concern to all ASMR members. The ASMR has nominated improvement to the nation's health and well being as a national priority area; a priority area that can deliver exceptional returns. Specific initiatives include the prevention of life threatening diseases, reduction in the impact of the major burdens of disease, and the development of biotechnology, pharmaceutical and public health programs.

In meetings with the Minister for Science, the Hon Peter McGauran, several areas of concern were allayed. The Minister stated that the government intends to select 'big picture themes' and does not plan to claw back funds for a new research fund. Rather they would require government agencies such as NHMRC to develop plans for its research profile to be responsive to the new priorities. I continue to encourage members to write to

Minister's McGauran, Nelson and Patterson as well as their local members, supporting health as a National Research Priority.

Gene Technology

The implementation of the Gene Technology Act is causing some concern in the biomedical research community. ASMR has made formal submissions on behalf of members on both the issues of cost recovery and draft laboratory certification guidelines (www.asmr.org.au/news/submissions/). In particular, we have stressed the inappropriate cost recovery structures suggested and have highlighted the public good components of the role of the Office of the Gene Technology Regulator. We are also seeking more logical and consistent procedures based on risk assessment as it appears that contained laboratory dealings with genetically manipulated organisms are being adversely affected by the current system. One such practical example would be the reclassification of transgenic mice to an exempt status as currently exists for knockout mice.

NHMRC Grant Outcomes

The Minister for Health, Senator Kay Patterson recently announced the successful recipients of New Program Grants and I congratulate all



*Professor Peter Schofield
ASMR President*

of the successful teams. Changes in the NHMRC processes now allow individual research grant areas to be awarded separately with the aim of more timely communication of outcomes. The NHMRC Research Committee's September meeting finalised the recommendations for Project Grants, Fellowships, etc and on your behalf I have spoken with the Minister on the need for rapid communication of these outcomes so as to enable proper forward planning for research projects and staff. The Minister stressed her commitment to a rapid turn around of grant outcomes and I look forward to outcome announcements in the next few weeks.

Continued page 7

Performance Indicators

ASMR is collecting examples of current and recent NHMRC funded research projects which have led to significant outcomes in either basic, clinical or public health or in terms of IP and commercial development (to support the current increased investment in HMR and to develop a case for increased HMR funding).

We also aim to develop more detailed cost-benefit analyses of the economic, health and social benefits of health and medical research

Email : asmr@world.net

Fax: 02 9252 0294

Thirty years ago, none of us could have imagined the dramatic acceleration in health research and the innovative way in which these advances have been translated into life saving medical treatments. Australian researchers should take pride in the breadth and the quality of those achievements and the high international standing our research community enjoys as a result.

This Government is committed to continuing to invest in Australia's health and medical research capability, injecting more than \$614 million over six years in the 1999-00 Budget and doubling the funding available through the National Health and Medical Research Council (NHMRC) to more than \$410 million by 2005-06.

Not surprisingly, almost half of this investment is being allocated to national health priority areas of cancer, cardiovascular disease, injury, mental health and respiratory diseases. The NHMRC is also expanding its research efforts in areas which are currently underdeveloped, or where there are gaps in research being undertaken, such as palliative care, oral health and systems of care in chronic disease.

Last month I was pleased to announce over \$123 million in health and medical research funding through NHMRC Development and Program Grants which will enable further investigation into cures and treatments for cancer, heart disease, depression and chronic or recurring mental disorders.

The fifteen new Development Grants will assist researchers working in human health related fields such as diagnostics, medical devices or pharmaceutical product development, biotechnology, bioinformatics and biomaterials to further develop their research and commercialise their discoveries.

In conjunction with the Ministers for Education and Science, I recently announced the results of the first survey into the commercialisation of Australian research. Australia is only the third country in the world to complete a survey of the commercialisation of its research.

The impact of translating research knowledge into commercial reality provides apparent benefits for the health and wellbeing of all Australians. It is exciting to note that in recent years the research community has become more interested in finding ways to

develop Australian innovations and discoveries here in Australia rather than seeking opportunities overseas.

Australian health and medical researchers perform at the highest international standards across many fields, contributing to improved health outcomes and providing the foundation for new knowledge and discoveries which underpin future economic prosperity - both from an industry point-of-view and the wellbeing of the population.

As a researcher myself, I recognise the importance of a strong and vibrant research community which has both the intellectual and strategic capacity to conduct internationally competitive, leading edge research. I believe our researchers are poised to deliver upon that exciting promise which can only benefit the health of all Australians.



*Senator Kay Patterson
Minister for Health & Ageing*

Before entering Parliament, Senator Patterson was Chairman and Principal Lecturer of the School of Behavioural Sciences at the Lincoln Institute of Health Sciences, teaching health professionals. She has a PhD in psychology and an academic specialisation in aged care and health.

ASMR Submissions to Government 2001/2

- **Guidelines for Certification of Facilities/Physical Containment Requirements OGTR**
- **Nominations to National Research Priorities**
- **Office of the Gene Technology Regulator Review**
- **National Research Priorities Framework**
- **Pharmaceuticals Industry Action Agenda**
- **Protection of Human Genetic Information Issues Paper**
- **Human Stem Cells Research**
- **Human Reproductive Cloning and the Trans-Species Fertilisation Bills NSW**
- **External Review of the Child Health Research Institute SA**
- **Inquiry into matters arising from the Post Mortem and Anatomical Examination Practices of the Institute of Forensic Medicine (NSW)**
- **Review of the NSW Cancer Council Act**

These documents may be viewed at:
www.asmr.org.au/news/submissions

Federation Fellowships 2002

ASMR congratulates recipients of Federation Fellowships announced by the Minister, Dr Brendan Nelson, Minister for Science, Education and Training on 29 July 2002

Professor Hugh Durrant-Whyte (The University of Sydney)
Project - Information fusion in autonomous systems

Dr Ronald Ekers (CSIRO - Australia Telescope National Facility)
Project - A clearer view of the evolving universe

Professor Terence Hughes (James Cook University)
Project - Science for sustainable management of coral reef biodiversity: a multi-disciplinary approach to global-scale processes and patterns

Professor Graeme Hugo (The University of Adelaide)
Project - The new paradigm of international migration to and from Australia: dimensions, causes and implications

Professor Yuri Kivshar (The Australian National University)
Project - Nonlinear photonics and all-optical technologies

Professor Trevor Lamb (The Australian National University)
Project - The first stage of vision: transduction and adaptation in retinal photoreceptors

Dr Catherine Stampfl (The University of Sydney)
Project - Application of first-principles theory in condensed matter physics, surface physics, chemistry, and engineering: coatings, catalysis, and devices

Professor David Trimm (CSIRO - Petroleum Resources)
Project - The conversion of remote location natural gas to fuels and chemicals

Professor Rodney Tucker (The University of Melbourne)
Project - Towards an all-optical internet

Dr Simon Turner (Macquarie University)
Project - The time scales of geochemical cycles and earth processes

Professor Mark von Itzstein (Griffith University)
Project - Carbohydrates and carbohydrate-recognising proteins as drug discovery targets

Further information on Federation Fellowships:

<http://www.arc.gov.au/ncgp/fellowships/default.htm>



“All the ingredients exist for the first Australian Health and Medical Research Congress to set a new benchmark in meeting excellence”

The Australian Health and Medical Research Congress combines interests from 25 different societies and has something for everyone (see Page 8 for list of participants).

This inaugural meeting offers -

- 42 international and 194 national speakers
- Daily plenary by outstanding international researchers
- Five day program covering a broad cross section of topical areas in a thematic structure.
- Currently over 1300 registrants and more than 600 abstracts
- A venue providing the ideal environment for scientific exchange
- Free oral and poster communications
- Merck Sharp & Dohme “Best of the Best Poster” Prize. Open to post PhD scientists. \$8000 in travel and cash

*Dr Bronwyn Kingwell
Convenor*

*Australian Health and Medical Research Congress 2002
ASMR Director*

**Register now
at**

www.ahmrcongress2002.conf.au

**Melbourne Convention Centre
25th -29th November 2002
www.ahmrcongress2002.conf.au**

**Full program available from
website**

Plenary Speakers are:

- ***Michel Bouvier***
University of Montreal, Canada
“Oligomeric Assembly of G Protein-coupled Receptors: Roles in Trafficking and Signalling”.
- ***Arya Sharma***
Franz-Volhard Klinik, Germany
“Pathophysiology and management of obesity hypertension”
- ***Gemma Fruhbeck***
Clinical University of Navarra, Spain
“The adipocyte: rediscovering a pivotal node in endocrine and energy metabolism control”
- ***Ed Harlow***
Dept of Biological Chemistry and Molecular Pharmacology, Harvard Medical School, Boston MA, USA
“DNA tumour viruses and cancer”
- ***Bertil Hille***
University of Washington, USA
“How do G-protein coupled receptors rule the mind?”

ASMR Research Award Winner

Dr Pat Mote, ASMR Research Award Winner reports on how the ASMR Research Award enabled her to work for two months in the heart of Paris

I am currently working as a postdoctoral research scientist with the Westmead Institute for Cancer Research, having completed my doctoral studies, in the same department, in 1999. During this time I developed a method of dual immunofluorescent staining to simultaneously visualise progesterone receptor isoform proteins, PRA and PRB, in tissue sections. Initial observations of our results proved very interesting, yet it was difficult to expand the project due to a lack of suitable resource materials available within Australia. The ASMR award allowed the initiation of an exciting collaboration with French scientists from the Hospital Hotel-Dieu, Paris, to examine the relationship between levels of PRA and B expression in primary breast tumours and patient survival. A collaboration that I hope will continue for several years, combining Australian expertise with access to a unique tissue cohort with detailed clinical follow-up. The project has begun well and analysis of the initial data is currently underway.



My host laboratory in Paris was situated in the Hotel-Dieu, a magnificent eighteenth century hospital located adjacent to the famous Notre Dame, and I am sure that there are not many laboratories in the world that can claim such spectacular views as those overlooking the River Seine. The laboratory staff were kind and helpful, though each day brought the challenge of communicating closely with people who spoke very little English, and severely tested my limited ability to converse in French. My language skills improved slowly during my stay, but nevertheless the dictionary was always close by!

Working and living in Paris was a remarkable and extremely worthwhile experience, and very successful from both a scientific and personal perspective. My sincere thanks to the ASMR for their support with this project.

Patricia Mote

President's Report

continued from page 3

Federation Fellowships

Following representations from ASMR we were delighted to receive notification from the Hon Dr Brendan Nelson, the Minister for Education, Science and Training that medical researchers are now eligible to apply for the innovative and highly prestigious Federation Fellowships. Unfortunately, being administered by the ARC, researchers working in the areas of clinical medicine and dentistry remain ineligible, but this is an area that we hope the NHMRC will seek to support. Dr Nelson also assured us that the selection committees will include members with expertise in medical research.

I look forward to seeing you at the Congress in November.

*Professor Peter R Schofield
President
October, 2002*

***The winner of the ASMR
Research Award 2002
will be announced at the
ASMR National
Scientific Conference.***

***The NSC this year is
being held as part of the
Australian Health and
Medical Research
Congress
in
Melbourne,
November 25 - 29, 2002***

Science Prizes recognise outstanding achievement

■ Professor Frank Fenner

Visiting Fellow at the John Curtin School of Medical Research
Prime Minister's Prize for Science

■ Professor Marcela Bilek

The Sydney University
Malcolm McIntosh Prize - Physical Scientist of the Year

■ Dr Joel Mackay

The Sydney University
Science Minister's Prize - Life Scientist of the Year

The vision of the following participating Societies has been integral to the development of the 1st Australian Health & Medical Research Congress

Australian Physiological & Pharmacological Society
Australasian Research Management Society
Australasian Society of Clinical & Experimental Pharmacologists & Toxicologists
Australian Society for Medical Research
Australasian Society for the Study of Obesity
High Blood Pressure Research Council of Australia
National Association of Research Fellows
Victorian Breast Cancer Research Consortium
Australian Atherosclerosis Society
Australian Diabetes Society
Australian & New Zealand Society of Nephrology
Australian Rheumatology Association
Australian Society for HIV Medicine Inc
Australasian Society for Infectious Disease
Australian Society for Parasitology
Australian Vascular Biology Society
Cardiac Society of Australia & New Zealand
Fertility Society of Australia
Human Genetics Society of Australasia
International Society for Heart Research
Matrix Biology Society of Australia & New Zealand
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Society for Reproductive Biology
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Dr Rohan Baker, Hon Treasurer
Dr Catherine Coulter
A/Prof Prof Mike McGuckin

Dr Moira Clay, Pres- Elect
Dr Alaina Ammit
Dr Ricky Johnstone
A/Prof Prof Levon Khachigian

A/Prof A Sinclair, Hon Sec
Dr Anthony Armson
Dr Bronwyn Kingwell

145 Macquarie Street, Sydney 2000. ACN 000 599 235 ABN 18 000 599 235 Ph: 02 9256 5450, Fax: 02 9252 0294, Email: asmr@world.net
Website: www.asmr.org.au Snr Exec. Officer Catherine West Newsletter Ed: A/Prof Andrew Sinclair