









Department of Epidemiology & Preventive Medicine

**Annual Report 2006** 

# Location

DEPM is based at the Alfred Medical Research and Education Precinct (AMREP) of The Alfred Hospital, close to the City of Melbourne with easy access to public transport. The Department also has a Clinical Trials Centre at the Caulfield General Medical Centre, Kooyong Road, Caulfield, where large scale clinical trials are conducted and a Clinical Epidemiology Unit at Cabrini Hospital Malvern.

### Mail address

Department of Epidemiology and Preventive Medicine Monash University Alfred Hospital, Melbourne 3004

### Street address

Department of Epidemiology and Preventive Medicine Level 3, Burnet Building, 89 Commercial Road, Melbourne 3004

Melway Map 58, 2L, B9 Phone +61 3 9903 0555 Fax +61 3 9903 0556

Email enquiries.epidemiology@med.monash.edu.au



www.med.monash.edu.au/epidemiology

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The Department of Epidemiology & Preventive Medicine (DEPM) is one of the largest research and teaching departments in the Faculty of Medicine, Nursing and Health Sciences at Monash University.

It has an extensive research and teaching program and a large and enthusiastic support staff!

### Areas of research include -

- Biostatistics
- Cardiovascular medicine
- Clinical epidemiology
- Clinical pharmacology
- Clinical registries
- Clinical trials
- Emergency medicine
- Environmental health
- Epidemiological modelling
- Health policy development
- Health economics
- Health promotion
- Health risk assessment

- Health services management
- Human rights and bioethics
- Infectious diseases
- Intensive care research
- International public health
- Occupational health
- Prehospital care
- Preventive medicine
- Primary health care in developing countries
- Respiratory epidemiology
- Rheumatology
- Sports injury prevention
- Veterans' health









# Research Centres based at DEPM

The Australian Centre for Human Health Risk Assessment

NHMRC CCRE for Circulatory Disorders in Urban Indigenous People

NHMRC Centre for Clinical Research Excellence in Therapeutics

NHMRC Centre for Research Excellence in Patient Safety

NHMRC Australian & New Zealand Intensive Care Research Centre

Monash Centre for Occupational & Environmental Health

Cooperative Research Centre for Water Quality and Treatment



# Report from Head of Department



Another year has gone by and our Department has continued to grow at an amazing rate.

We are now the home of four NHMRC Centres: the NHMRC Centre for Clinical Research Excellence in Therapeutics; the NHMRC Centre for Research Excellence in Patient Safety; the NHMRC Australian & New Zealand Intensive Care Research Centre and the NHMRC CCRE for Circulatory Disorders in Urban Indigenous People.

Other major research Centres in the Department are The Australian Centre for Human Health Risk Assessment; Monash Centre for Occupational & Environmental Health and the Cooperative Research Centre for Water Quality and Treatment (Public Health Program).

We increased our collaborative links with other research groups in Australia and internationally. With the arrival of Professor Brian Oldenburg as Chair of International Public Health, we will further increase our overseas links and research. Brian is also Regional Director of the Asian Pacific Academic Consortium for Public Health – an international non-profit organisation with almost 60 academic public health institutions as members, who are dedicated to improving their public health education and research programs. In his new role at Monash University, Brian is keen to develop the university's reputation in international health and to improve the health research linkages among the various campuses, including those in Malaysia and South Africa.

Other new staff included Professor Robert Burton. Robert was Director of the Cancer Council of Victoria until 2002 and has been a visiting scientist at Oxford University, Walter and Eliza Hall Institute, and International Agency for Research on Cancer in Lyon, to name a few. Robert is an invaluable asset to the Department, and particularly to our teaching program.

Malcolm Sim was promoted to Professor and Director of The Monash Centre for Occupational and Environmental Health (MonCOEH). The Centre grew in 2006 to 30 research, professional, teaching and administrative staff. MonCOEH staff began several new research projects in 2006, including a study looking at occupational exposure to lead compounds and human cancer. Also Deborah Glass and Malcolm Sim, in collaboration with Lesley Rushton of Imperial College London and Rob Schnatter of ExxonMobil Biosciences in the US, secured a grant for 618K Euro from CONCAWE, the health and safety arm of the European oil industry to carry out a pooled analysis of petroleum worker case control studies.

The Pre-Hospital and Emergency Trauma Group headed by Professor Peter Cameron is responsible for several registries including the Victorian State Trauma Outcomes Registry and Monitoring (VSTORM), and the Victorian Orthopaedic Trauma Outcomes Registry (VOTOR), and the Haemostasis Registry. Research outcomes from this unit are translated into practice with the arrival in 2006 of lan Patrick, a Metropolitan Ambulance Service employee based at DEPM whose role is to work with colleagues at MAS, Monash and other healthcare institutions to actively promote knowledge of advances in Ambulance and prehospital practice across Australia, and internationally, and assess the relevance for Victorian Paramedical practice.

The CRE in Patient Safety (CRE-PS), also headed by Professor Cameron, took on more staff, including Professor Joseph Ibrahim and Associate Professor Peter Sprivulis. Joe Ibrahim commenced Health Services Research in this Department in 1999 after completing a PhD examining the epidemiological principles of performance measurement and quality in health care. He is an inaugural member of the Clinical Liaison Service at the State Coroner's Office and the Victorian Institute of Forensic Medicine investigating the system failures associated with health care related deaths. Peter Sprivulis is an internationally respected expert on patient flow in acute settings who spent 2004-2005 undertaking a Harkness Fellowship mentored by Donald Berwick at the Institute for Healthcare Improvement and

David Bates at Harvard Medical School. Peter is an active researcher into the relationship between patient flow, hospital overcrowding and patient safety. CRE-PS also held the first of a series of national seminars on patient safety. This seminar discussed the quality indicator data which are currently being collected, how they are used and where gaps exist in monitoring performance in hospitals. Professor Stephen Duckett and Professor Diana Horvath were among the presenters.

Bebe Loff, the Head of our Human Rights and Bioethics Unit, was promoted to Associate Professor and awarded a second round of funding from the National Institutes of Health to support students from countries in the Asia Pacific Region to study the Master of International Research Bioethics which Bebe coordinates.

We also acknowledge the invaluable contribution of staff from the Centre for International Health, Burnet Institute to our postgraduate international health teaching.

For the NHMRC Centre for Clinical Research Excellence in Therapeutics, 2006 was a year of substantial progress with several new research projects beginning, including a study of clozapine-associated myocarditis. Louise Shiel was appointed in January to manage the Community Clinical Trial Centre at the Caulfield General Medical Centre. This centre was set up in conjunction with our collaborative partners: Cardiovascular Disease Prevention Unit, Baker Heart Research Institute and the Melbourne University Department of Ophthalmology. The activity at the Centre increased exponentially throughout 2006 with a number of new trials approved to commence - including the ACTIVE (Atrial fibrillation Clopidogrel Trial with Irbesartan for prevention of Vascular Events) study, EPLILONG investigating a new drug for insomnia, a study investigating a new anti LpLa, drug, the ANBP2 cohort 10 year follow-up study and ASPREE.

Our Research Governance program continued to audit research projects and train new staff and students in research governance practice. Early in 2006 we farewelled Stephanie Poustie, our Research Governance Officer, who moved to Canberra – and we welcomed Giuliana Fuscaldo, who has taken over this role. She brings to this role a strong interest in ethical review processes and its development in facilitating good research practices.

We now have an established Data Management Centre, one of few medical research groups in Australia with extensive expertise in the management of large databases. Associate Professor Chris Reid is Director of the Clinical Informatics and Data Management Centre whose clients include the Malaysian Ministry of Health, the Burnet Institute, Cabrini Hospital, Alfred Hospital Department of Anaesthesia and pharmaceutical companies. Staff are involved in large scale projects from clinical registries to community based trials and major cohort studies.

We welcomed several new Honorary DEPM staff members including Nick Crofts, Richard Osborne, Terri Allen, Anne Bruce, Carol George, Christopher Clements, David Pilcher, Juliet Gale, Masha Fridman, John Mills, Robyn Berry, Shelley Cox, Susan Montgomery, Stephen Duffy, Peter Kruger, Jacqueline Martin, Ian Millar, Dr Peter Stow, and Ms Louise Turnour. We farewelled one of our longest standing Honorary staff members when Dr Edwin Knight retired after more than ten years as Honorary Senior Lecturer. We have greatly valued his role within the Department and are most grateful for his input, particularly his assistance with the occupational health training of our students. We wish Dr Knight all the best in his retirement.

We were very successful with new research grants last year, being awarded several NHMRC grants, including funding for a study of the risk of bleeding in patients receiving warfarin therapy; a trial of atorvastatin therapy in intensive care patients with severe sepsis; fitness versus fatness – disentangling their effects on disease outcomes; and factors that affect knee structure in health women. We were also awarded an ARC Linkage Project Grant for epidemiological modelling of cardiovascular disease and diabetes in Australia and an ARC Discovery Project Grant to study caring for asylum seekers in Australia.

Among the new staff we welcomed in 2006 were Maximilian De Courten, Lisa Higgins, Peta McLaughlin, Giuliana Fuscaldo, Rosa Schattner, Joseph Ibrahim, Peter Sprivulis, Molly Bond, Andrew Briggs, Jane Williams, Desmond Gul, Sue Edwards and Gillian Syres. We farewelled Liz Moon, Anna Sutjiadi, Natalie Holsinger, Joanne Croucher, Adam Meehan and Stephanie Poustie.

I thank all our staff for their dedication and enthusiasm in the continuing success of this Department.

John McNeil

Je J Mar

# DEPM at a glance

Head of Department - Professor John McNeil

Deputy Head of Department - Professor Michael Abramson



# **Teaching**

# **Doctoral program**

65 students enrolled in 2006

### Postgraduate courses

Grad Cert/ Grad Dip / Masters

- Biostatistics
- Clinical Epidemiology
- Health Services Management
- International Health
- Occupational & Environmental Health
- Master of Public Health

# Undergraduate courses MBBS

- Population Health (1st year)
- Health Promotion (2nd year)
- Occupational & Environmental Health (3rd year)
- Evidence Based Clinical Practice
- Health Services Management (4th year)

# BBiomedSc

- · Biomedical Sciences and Society
- Introduction to the Health System
- Research Electives

### **Honours**

BBiomedSc(Hons)

# **NHMRC Research Centres**

NHMRC Centre for Clinical Research Excellence in Therapeutics Professor Henry Krum

NHMRC Centre for Research Excellence in Patient Safety Professor Peter Cameron

NHMRC Australian & New Zealand Intensive Care Research Centre Professor Jamie Cooper

NHMRC Centre for Clinical Research Excellence in Circulatory Diseases in Urban Indigenous Populations
Professor Brian Oldenburg

# Other Centres and organisations based at DEPM

Cooperative Research Centre for Water Quality & Treatment Public Health Program Dr Karin Leder

Monash Centre for Occupational & Environmental Health Professor Malcolm Sim

Australian Centre for Human Health Risk Assessment Professor Brian Priestly

Asia Pacific Academic Consortium for Public Health Professor Brian Oldenburg

Australian Institute of Health Policy Studies Professor Brian Oldenburg





# **Commercial services**

Clinical Informatics & Data Management Centre - A/Professor Chris Reid

Biostatistical Consulting - A/Professor Andrew Forbes

# **Research Units**

Biostatistics Unit A/Professor Andrew Forbes

Cardiovascular Research Unit Professor Andrew Tonkin

Clinical Epidemiology Unit Alfred Hospital Professor Michael Abramson

Clinical Epidemiology Unit Cabrini Hospital Professor Rachelle Buchbinder

Clinical Pharmacology Unit Professor Henry Krum

Health Services Management Unit Professor Just Stoelwinder

Human Rights & Bioethics Unit A/Professor Bebe Loff

Infectious Disease Epidemiology Unit Dr Karin Leder

International Public Health Unit Professor Brian Oldenburg

Kidney Disease Prevention Unit Professor Robert Atkins

Musculoskeletal Disease Unit Professor Flavia Cicuttini

Preventive Medicine Unit Professor John McNeil

Pre-Hospital & Emergency Trauma Unit Professor Peter Cameron

The Understandascope A/Professor Frank Fisher







# Highlights of 2006

# John McNeil celebrates 20 years at DEPM

In 2006 Professor John McNeil celebrated 20 years in this Department. In 1986 when John arrived, DEPM was a small department, then called the Department of Social and Preventive Medicine and based in the Medical School building at The Alfred Hospital.

At the end of 1993, there were approximately 41 staff and 8 PhD students. In 1995 we became the Department of Epidemiology & Preventive Medicine and moved to new premises at 553 St Kilda Road in the US Consulate Building. Here we could spread out over two floors which gave us more room to grow.

In 2004 we moved to the Burnet Building, part of the Alfred Medical Research and Education Precinct,and in 2006 we had 180 staff, 65 PhD students, and over 100 honorary staff members.

John McNeil has led the Department through a period of extraordinary growth and successfully managed the associated challenges.

An initially small contribution to the undergraduate medical course has expanded to a theme that comprises 15% of the curriculum.

We are now also teaching biomedical science students. From being the only provider of an MPH in Victoria, we are now part of a consortium that trains hundreds of postgraduate students in public health. Doctoral training has expanded to over 60 PhD candidates.

Many of our graduates hold prominent positions in universities, research institutes, the Health Department and elsewhere.



Above, John McNeil wearing a medal presented by staff at a morning tea to celebrate his 20 year anniversary in the Department. With him is Joan Roberts, who was his personal assistant for many years.

John has also made a substantial contribution to the University, Alfred Hospital and broader community.

He has Chaired the Ethics Committee at the Alfred, the Victorian Public Health Research & Education Council and serving on numerous DHS and NHMRC committees.

We look forward to another exciting 20 years.



Above, John in the early days.

# Rachelle Buchbinder promoted to Professor

Rachelle is Director of the Monash Department of Clinical Epidemiology at Cabrini Hospital. She is a rheumatologist and clinical epidemiologist. Her current research program covers the management of soft tissue disorders, particularly the shoulder, elbow, knee and heel. She has led clinical trials of innovative new therapies in each of these areas.

# Brian Oldenburg takes up Chair of International Health

In August we welcomed Professor Brian Oldenburg to the Department as Chair of International Public Health. Brian is also Regional Director of the Asian Pacific Academic Consortium for Public Health (APACPH), a consortium comprising many of the largest and most influential schools of public health throughout the Asia-Pacific Region. In his new role at Monash University, Brian is keen to develop the university's reputation in relation to international health and to improve the health research linkages among the various campuses, including those in Malaysia and South Africa.

# Michael Abramson leads Spirometry Study

A study examining the role of spirometry in managing chronic respiratory diseases in general practice began late in 2006. The study is trialling spirometry as an intervention for the management of asthma and chronic obstructive pulmonary disease in a general practice setting. Patients aged between 8 and 70 with doctor diagnosed asthma and/or COPD are recruited through general practices. The study could result in better health outcomes for many patients with chronic respiratory disease. Professor Michael Abramson is one of the lead investigators of the study.

# NIH funding for Master of International Research Bioethics

The National Institutes of Health, US, awarded Bebe Loff US\$944,776 over four years to continue to support students from countries in the Asia Pacific Region to complete the Master of International Research Bioethics course, which Bebe coordinates.

# Malcolm Sim promoted to Professor

Malcolm Sim was promoted to Professor and Director of the Monash Centre for Occupational and Environmental Health (MonCOEH). Malcolm's research investigates the effects of workplace and environmental chemical and other hazards on chronic diseases, eg cancer and respiratory disease. MonCOEH has more than thirty research, teaching and administrative staff.

# REACH study rated as 5th best internationally for recruitment

The REACH study - (Reduction of Atherosclerosis for Continued Health) - was rated as 5th best for recruitment into a registry internationally, with 1 year follow-up achieving a 92.3% retention rate, expected to increase to 95% when data are included from Japan. This remarkable rate means that more than 58,000 of a potential 63,000 patients have been followed up and indicates the commitment of investigators and the success of the Registry globally. Australia achieved the highest retention rate of 98%, followed by the Middle East (96%), Asia (94%) and Europe (93%). REACH is an international prospective observational registry of subjects at increased risk of atherothrombotic events and was established to investigate the

# CRC for Water Quality & Treatment Tankwater Study began in Adelaide

The increasing proliferation of rainwater tanks in urban areas is likely to lead to increased rainwater consumption, because of the "pure and natural" image of this water source. Rigorous data on the safety of drinking untreated rainwater is lacking, so the CRC for Water Quality & Treatment at DEPM is undertaking this double-blinded randomised trial to determine whether microbial pathogens in untreated rainwater make a significant contribution to gastroenteritis in people who consume tank water. The study has been primarily funded by the NHMRC, with additional funding for the water quality testing component being provided by the CRC for Water Quality and Treatment. The South Australian Department of Health is also involved in the study and will host the study office in Adelaide.

# Senior staff 2006



Professor John McNeil MBBS, MSc, PhD, FRACP, FAFPHM

### Head of Department

John's principal interests include cardiovascular epidemiology, drug safety and toxicology. He retains a clinical involvement as a vascular physician in the Vascular Medicine Unit at the Monash Medical Centre.

#### Member -

- •National Blood Authority: Clinical Advisory Council
- •National Blood Authority: Haemovigilance Project Working Group
- •International Society of Cardiovascular Pharmacotherapy (Scientific Secretary, Board)
- •Food Standards Australia & NZ (Fellow)
- •NHMRC Program Grants Committee
- •Therapeutics Goods Administration: Adverse Drug Reactions Council
- Metropolitan Ambulance Service Board of Management
- •Sir Edward Dunlop Research Foundation: Scientific Advisory Committee (Chair)
- •Alfred Hospital Ethics Committee (Chair)



Professor Michael Abramson MBBS, BMedSc(Hons), PhD, FRACP, FAFPHM

# Deputy Head of Department Head - Clinical Epidemiology Unit - Alfred

Michael is a visiting medical officer in allergy, immunology and respiratory medicine at the Alfred Hospital in Melbourne. He also provides epidemiological expertise to the Australian Centre for Radiofrequency Bioeffects Research. Michael currently teaches epidemiology and evidence based clinical practice to medical students and coordinates the Graduate Diploma / Master of Clinical Epidemiology and Doctor of Public Health at Monash University.

#### Member -

- •NHMRC Research Fellowships Committee Peer Review Advisory Panel
- •Australian Lung Foundation COPD Evaluation Committee (Chair)
- •CRC for Asthma & Airways Scientific Review Committee

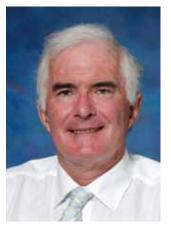


Professor Robert Atkins AM, MBBS, MSc, DSc, FRACP

# Head - Kidney Disease Prevention Unit

Bob is one of Australia's most eminent nephrologists. He was Director of the Department of Nephrology at Monash Medical Centre until 2005 and was a founding editor of "Nephrology". His work has been widely recognised. He won the inaugural Priscilla Kincaid-Smith Award of the Australian Kidney Foundation, Medal for Excellence in Kidney Research (1994), a Centenary Medal for Australia in 2003 and received the Order of Australia (AM) in 2003.

- •Director of the International Diabetes Institute
- •Chairman of the National Chronic Kidney Disease Strategy Programme
- Head of AusDiab Kidney
- •Reviewer for the WHO Chronic Kidney Disease Programme



Professor Robert Burton MBBS, BMedSci, PhD, MD, BA, FRACS, FRACP, FAFPHM

### Professor of Public Health

From 1977 to 1980 Robert Burton was a Research Fellow in Surgery and in 1981, Assistant Professor of Surgery at Harvard University. For his research on cancer he was awarded the inaugural John Mitchell Crouch Fellowship of the Royal Australasian College of Surgeons in 1980, and in 1981 the Colleges' Alan Newton Prize. From 1995 to 2002 he was Director (CEO) of the Cancer Council Victoria. His main research interests are the cellular immunology of cancer and transplantation, and the epidemiology and behavioural science of the control of chronic non-communicable diseases (NCD), with particular interests in cancer control planning, prevention and screening.

### Member -

- •Council of the International Union Against Cancer (UICC)
- •National Cancer Strategies Group (Chair), Commonwealth Department of Health and Ageing
- •Victorian Trauma Foundation Evaluation Committee



Professor Rachelle Buchbinder MBBS(Hons), MSc, PhD, FRACP

### Head - Clinical Epidemiology Unit - Cabrini Hospital

Rachelle is Director of the Monash Department of Clinical Epidemiology at Cabrini Hospital. She is a rheumatologist and clinical epidemiologist. Her current research program covers the management of soft tissue disorders - particularly the shoulder, elbow, knee and heel and she has led clinical trials of innovative new therapies in each of these areas.

#### Member -

- •Medical Advisory Committee for the Medical Research and Technology of Victoria Program
- Cochrane Back Group Advisory Board
- •Editorial Board, BMC Musculoskeletal Disorders
- Australian Rheumatology Association Database (ARAD) Scientific Advisory Committee (Chair)
- Coordinating Editor Cochrane Musculoskelelal Group (Chair)



Professor Peter Cameron MBBS, MD, FACEM

# Head - Pre-Hospital, Emergency and Trauma Unit

Peter is also Academic Director of the Emergency and Trauma Centre, The Alfred Hospital; Head of the Victorian State Trauma Registry and Associate Director of the National Trauma Research Institute. His main research interests include trauma epidemiology, injury prevention and management, prehospital care and health services and systems research.

- Victorian Emergency Access Reference Committee (Chair)
- Patient Access Taskforce Alfred Hospital (Chair)
- •International Federation of Emergency Medicine (Vice-President)
- •Senior Examiner Australasian College for Emergency Medicine
- Editorial Boards Injury, Emergency Medicine Australasia

# Senior staff 2006 continued



Professor Flavia Cicuttini MBBS(Hons), PhD, MSc, DLSHTM, FRACP, FAFPHM

#### Head - Musculoskeletal Unit

Flavia graduated in medicine from Monash University in 1982, completed a PhD at the University of Melbourne, then completed an MSc at the University of London looking at risk factors for osteoarthritis. Flavia completed further study at the London School of Hygiene and Tropical Medicine in 1996. Current research includes using Magnetic Resonance Imaging to understand factors that affect joint cartilage in healthy and diseased states. Flavia is also Head of the Rheumatology Unit, Alfred Hospital.

#### Member -

- •Royal Australasian College of Physicians Research Advisory Committee (Chair)
- National Arthritis and Musculoskeletal Conditions Advisory Group
- Monash University Professorial Promotions Committee
- · Victorian Consortium of Public Health



Associate Professor Maximilian de Courten MD, MPH

### Chronic Disease Epidemiology

Max obtained his medical degree at the University of Basel in 1990 and undertook clinical research in the area of hypertension and insulin resistance. He then obtained a MPH from the University of Arizona while working at the NIH in Phoenix on the epidemiology of diabetes with the Pima Indians. He has worked with the WHO in Switzerland and in Fiji for WHO South Pacific. His role there was to coordinate non-communicable disease prevention and control programs across 22 island nations. His current research interest is in the chronic disease epidemiology area in order to translate scientific evidence into community-based prevention activities, and evaluate them to turn the lessons learnt into evidence again.

#### Member -

- Medical Screening Society
- International Insulin Foundation (Co-founder)



Associate Professor Frank Fisher BE(Elec)(Hons), BA(Hons), MEnvSt(Hons), FEIANZ, FAIE, MIEA

# Head - The Understandascope

Frank is founder of the Understandascope, a research and demonstration unit and website. It is a multi-interest open forum hosted by Monash University. While the Understandascope's staff members are based primarily at Monash University, the site intends to generate input from non-academic participants.

Frank is an Engineer (industry 1965-75) and was Director of Monash University's Graduate School of Environmental Science. Long-term lecturer and developer of Science and Systems Theory, Frank currently teaches and convenes a graduate sustainability program in the Swinburne University of Technology National Centre for Sustainability, teaching Principles of Sustainability and Energy for the Future.

He was also involved in the development of the innovative Health, Knowledge and Society course for the new Monash five year medical curriculum.



Associate Professor Andrew Forbes BSc(Hons), MSc, PhD

#### Head - Biostatistics Unit

Andrew joined Monash University in January 1992 after completing a PhD at Cornell University in 1990 and then working at Ciba-Geigy Pharmaceuticals in the USA as a postdoctoral fellow until 1991. He heads the Biostatistics Unit, which consists of 4.5 full-time staff. He has active roles in applied biostatistics coursework development and teaching for postgraduate students in health / clinical research, undergraduate students in medicine and biomedical science, and postgraduate students in biostatistics. He is a chief investigator on a number of major research projects in the Department, pursues methodological research in applied statistics, and is active in statistical consulting within the Faculty of Medicine, its affiliated institutes, and for external bodies.

#### Member -

- · Biostatistics Collaboration of Australia Steering Committee
- Biostatistics Collaboration of Australia Teaching Committee (Chair)



Professor Henry Krum MBBS, PhD, FRACP

# Head - Clinical Pharmacology Unit Director of the Centre of Research Excellence in Therapeutics

Henry is also Head of Clinical Pharmacology at the Alfred Hospital; Adjunct Assistant Professor of Medicine, Division of Circulatory Physiology at Columbia University College of Physicians and Surgeons, Consultant physician at the Alfred Heart Failure Centre, the Alfred Baker Medical Unit and the Alfred Healthcare Group.

#### Member -

- Pharmacy & Therapeutics Advisory Committee, Alfred Hospital
- Research Ethics Committee, Alfred Hospital
- Division of Medicine, Quality and Audit Committee
- Organising Committee 4th Asian Pacific Conference on Heart Failure (Chair)



Dr Karin Leder MBBS(Hons), FRACP, MPH

# Head - Infectious Disease Epidemiology Unit

Karin graduated in medicine from Monash University in 1990 and undertook her medical specialist training in infectious diseases at Fairfield Hospital and Monash Medical Centre. She spent 3 years as an Infectious Disease Fellow at the Beth Israel Deaconess Medical Centre in Boston and completed a Master of Public Health at Harvard University. Her specific areas of interest include traveller's health, health issues in immigrants and refugees, and waterborne infections. Karin is also a visiting specialist physician at the Royal Melbourne Hospital.

#### Member -

- NHMRC representative on Joint Steering Committee for National Guidelines on Water Recycling
- NHMRC Water Quality Advisory Committee
- NHMRC Training Awards Committee

# Senior staff 2006 continued



Associate Professor Bebe Loff. BA LLB, MA(Med Law & Ethics), PhD

#### Head, Human Rights and Bioethics Unit

Bebe coordinates the Master of International Health and the Master of International Research Bioethics. Prior to joining Monash she was responsible for the legislative programmes of Ministers of Health in Victoria. Bebe has worked in various capacities for a number of United Nations agencies including WHO, The Office of the High Commissioner for Human Rights and UNAIDS. She has been a member of several ethical review committees including that of the World Health Organization, the Australian Health Ethics Committee (a principal committee of the NHMRC). In addition, she was for a time an Australian correspondent for The Lancet and a regular human rights commentator.

#### Member -

•Standing Committee on Ethics in Research involving Humans, Monash University



Professor Brian Oldenburg BSc(Hons), MPsych, PhD

#### Chair of International Public Health

Brian is also Regional Director of the Asia-Pacific Academic Consortium of Public Health (APACPH). His research focus spans the social/behavioural sciences and public health, with the major focus on health policy, global health and the primary and secondary prevention of non-communicable diseases and associated social and behavioural risk factors. His current research interests also include socio-economic health inequalities, social disadvantage and research with Aboriginal and Torres Strait Islander populations, as well as a broader interest in translational and policy-relevant research.

#### Member -

- National Heart Foundation Strategic Research Working Group
- NHMRC CCRE Review Panel
- New Zealand Health Research Council Review Committee
- International Health Advisor Beijing Health Department & Beijing Organising Committee, 2008 Beijing Olympics
- International Advisor in Public Health, Centres for Disease Control, Beijing Health Department



Professor Brian Priestly BPharm, MPharm, PhD

# Head - Australian Centre for Human Health Risk Assessment (ACHHRA)

ACHHRA is a consortium of four Australian Universities with expertise in toxicology and environmental health sciences. It is hosted by the Department of Epidemiology & Preventive Medicine with partners from EnTox (UQ), the Department of Environmental Health (Flinders University) and the Faculty of Environmental Sciences (Griffith University). ACHHRA's objective is to provide a national focus for human health risk assessment, primarily in the area of food and environment pollutants, and to contribute to workforce development in HHRA.

Prior to leading ACHHRA, Brian was Director of the Laboratories Branch in the Therapeutic Goods Administration (TGA) from 2001-2003. From 1992-2001, he was Scientific Director of the Chemicals Toxicology and Chemicals Risk Management Programs of the Commonwealth Health Portfolio.



Associate Professor Chris Reid, BA, DipEd, MSc, CertHealthEcon, Phd

# Associate Director - NHMRC Centre of Clinical Research Excellence in Therapeutics

Before coming to DEPM, Chris was Director of the 2nd Australian National Blood Pressure Study and Program Director of the Australian Society of Cardiothoracic Surgeons Victorian database. Over the past ten years, his work has led to the development of a series of clinical tools for general practitioners to assist in the uptake of evidence-based management of both primary and secondary prevention of cardiovascular disease. He has been invited to give 8 international and 26 national lectures and has participated as a WHO consultant for prevention of cardiovascular disease in both Mongolia and Vietnam.

#### Member -

- Steering Committee REACH International Registry
- Steering Committee HOPE 3 Study
- ANBP2 Management Committee
- ASPREE Steering Committee



Professor Malcolm Sim BMedSc, MBBS, MSc, GDipOccHyg, PhD, FAFOM, FAFPHM, FFOM

### Director - Monash Centre for Occupational and Environmental Health (MonCOEH)

Malcolm's research investigates the effects of workplace and environmental chemical and other hazards on chronic diseases, eg cancer and respiratory disease. He has interests in occupational disease surveillance, veterans' health and exposure assessment. He is Principal Investigator for the Healthwise and Health Watch cohort studies of lead and agricultural workers and the SABRE respiratory disease surveillance program. In 2006 Malcolm was invited to give the Ferguson-Glass oration at the Annual Scientific Meeting of the Royal Australasian College of Physicians in Cairns.

#### Member -

- Management Group of the Epidemiology Committee of the International Committee of Occupational Health
- Human Research Ethics Committee of the Cancer Council Victoria
- Advisory Group on Chemical Safety of the Commonwealth Government Office of Chemical Safety.
- Associate Editor, Journal of Occupational and Environmental Medicine



Professor Just Stoelwinder MBBS, MD, FRACMA, FACHSE, FAFPHM

# Head - Health Services Management Unit

His past appointments include Professor and Head of the Health Service Management Development Unit at Flinders University and formerly a Board Member of the Private Health Insurance Administration Council. For over 16 years, he was Chief Executive Officer of the Southern Health Care Network, and its antecedent teaching hospitals, the Monash Medical Centre and the Queen Victorian Medical Centre.

- Director, Medibank Private Limited, Chair of Product, Benefit and Innovation Committee and Member of the Audit and Risk Management Committee and of the Nomination, Remuneration & HR Committees.
- Member, Research Committee, The Actuarial Research Centre of Australia

# Senior staff 2006 continued



Professor Andrew Tonkin MBBS, MD, MRACP, FRACP

#### Head - Cardiovascular Research Unit

Andrew has chaired a number of NHMRC and NHF cardiovascular guideline groups. He has recently retired from the position of Chief Medical Officer of the National Heart Foundation of Australia.

- · Chair of the Steering Committee for National CVD Monitoring Systems
- Chairman of the Management Committee of the LIPID study, conducted since 1990 in over 9000 heart disease patients, and the largest cardiovascular clinical trial conducted in this country.



Associate Professor Rory Wolfe, BSc, PhD

### Biostatistician & Doctoral Program Coordinator

Rory has been with the department since 2000 and is responsible for providing statistical support to a wide range of epidemological and clinical research studies. His research interests are spread broadly across biostatistical methods and include analysis of ordinal outcomes, longitudinal data analysis, development of prediction models, methods for complex reliability studies, and methods for monitoring quality of care. He teaches biostatistical methods to postgraduate students of the department and probability distribution theory through the Biostatistics Collaboration of Australia program. Rory gained his PhD in Applied Statistics from Southampton University, UK, in 1996 and subsequently was a postdoctoral research fellow at the Royal Children's Hospital in Melbourne before joining the department.

#### Member -

- Royal Statistical Society (UK)
- Statistical Society of Australia
- Australasian Epidemiological Association.

# Overview of research in 2006

In 2006 DEPM had over 110 research grants, including 41 NHMRC grants and 5 NHMRC scholarships.

This overview is a brief look at some of our research.





# Cardiovascular disease prevention

Low dose aspirin has been shown to reduce the risk of vascular events and there is evidence of its potential to reduce the rate of intellectual decline in older people. The ASPREE study will help determine the effect of low dose aspirin not only on cardiovascular disease, but dementia, hemorrhagic stroke, preservation of cognitive function, depression and other health issues. Professor John McNeil leads this project.

The CCRE in Therapeutics is studying clozapine associated myocarditis. Clozapine is the most effective treatment available for schizophrenia but its use is limited because of serious adverse reactions, including myocarditis or inflammation of the heart muscle. 165 cases of myocarditis with clozapine have been reported to ADRAC. This study hopes to identify risk factors which will exclude high risk patients from clozapine treatment, or at least allow closer monitoring. Professor John McNeil leads this project.

The CHAT study is a randomised trial of telephone support for chronic heart failure patients at high risk of rehospitalisation funded by the NHMRC and the Medical Benefits Fund. Chronic heart failure is a major public health problem in Australia. This project is implementing the first Australia-wide randomised clinical trial of telephone support for CHF patients provided by trained nurses to enable patients and their familiies to maintain their health in as stable a manner as possible, in their homes. This strategy has significant implications for providing equity of access for rural and remote Australians. Professor Andrew Tonkin leads this project.

The chance of survival from cardiac arrest decreases on average by 10-15% for every minute that elapses prior to defibrillation. The HAT, or Home Automated External Defibrillator trial, is following 7000 patients world wide who have previously been hospitalized with myocardial infarction. Families of half of these patients have been trained by study personnel to recognize cardiac arrest and use a defibrillator before calling emergency services. The HAT study is funded by the National Institutes of Health and has 180 hospitals taking part in Australia, the US, UK and New Zealand. Professor Andrew Tonkin is the Principal Investigator in Australia.

Another study looking at cardiac arrest is the RICH study. Despite a highly trained ambulance service, only 30% of cardiac arrest patients respond to resuscitation by paramedics and most are unconscious on arrival at hospital due to lack of oxygen to the brain during the arrest. Lowering body temperature improves outcome and research suggested that the earlier therapeutics hypothermia was used, the better the outcome. Research from Melbourne showed that a rapid infusion of ice-cold saline could safely induce hypothermia. The Rapid Infusion of Cold Hartmann's or RICH study is being undertaken by the Metropolitan Ambulance Service and DEPM in all major Melbourne hospitals. Funded by the NHMRC the study has been in progress for 18 months.

# Overview of research in 2006

# Health Services Management Research

A study looking at predictors influencing the health status change of the elderly in a community care setting was funded by Baptist Community Care. Investigators are Dr Deborah Roberts and Associate Professor Christopher Reid.

An article by Dr Catherine Joyce and Professor John McNeil in MJA (2006;15:102-104) discussed possible future shortages in the general practice workforce as fewer medical graduates, particularly female graduates, are choosing general practice.

# International health

The National Institutes of Health in the US awarded further funding to continue support for students from countries in the Asia Pacific region to study the Master of International Research Bioethics (MIRB) at DEPM. Associate Professor Bebe Loff, Head of the Human Rights and Bioethics Unit at DEPM, is coordinator of the MIRB course, along with Associate Professor Mike Toole of the Burnet Institute and Associate Professor Jim Black from the Nossal Institute. Students from Nepal, Vietnam, Papua New Guinea and Pakistan enrolled in 2006 to study in 2007.

Professor Brian Oldenburg joined the Department as Chair of International Public Health in 2006. Brian is also Regional Director of the Asian Pacific Academic Consortium for Public Health, an international organization with sixty public health institutions as members.

# Obesity prevention

Obesity is known to be associated with diabetes, cardiovascular disease, cancer, osteoarthritis and other health problems. Anna Peeters, a Senior Research Fellow at DEPM, is funded by a VicHealth Fellowship to study these issues. Anna is also on the Council of the Australasian Society for the Study of Obesity, the Parents Jury Steering Committee, and is Program Head of Public Health Studies at CORE, a Monash University Centre which is a collaboration of renowned international and national researchers and educators studying every facet of obesity.

In October 2006, Tony Abbott announced several new NHMRC grants to focus on preventing obesity. Associate Professor Bebe Loff is Chief Investigator of one of these grants which is taking a regulatory approach to obesity prevention. Laws related to the provision, marketing and labeling of food, urban planning, transport, taxes and subsidies will all be analysed and practical reforms suggested.

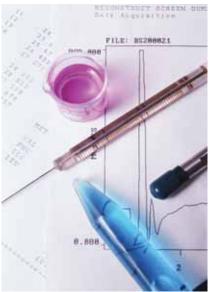
Associate Professor Maximilian de Courten is an investigator in another study looking at the emotional burden of obesity, with Professor Paul Komesaroff and Dr Samantha Thomas from the Department of Medicine, Monash University. The study aims to shed light on how overweight people feel about themselves and society's attitudes to them. The study will contribute directly through better understanding to the development of effective new public health and clinical strategies.













# Occupational and environmental health

Healthwise is one of many research projects being carried out by the Monash Centre for Occupational and Environmental Health (MonCOEH) at DEPM. Healthwise is a study of health and work in employees of Alcoa of Australia Ltd, Portland Aluminium and KAAL Australia and is in its twelfth year, comprising a Cross-sectional Study of Respiratory Health, an Inception Cohort Study and Cancer Incidence and Mortality Cohort Study.

Dr Deborah Glass and Professor Malcolm Sim from MonCOEH, are collaborating with Imperial College London to carry out a pooled analysis of data collected from studies of the workers in the petroleum industry from Australia, UK and Canada. The study will throw more light on the relationship between benzene exposure and leukaemia.

MonCOEH is also carrying out a four year study of risk factors for serious farm injuries in collaboration with the Monash University Accident Research Centre (MUARC). The study aims to analyse at least 300 cases of serious farm injury from hospitals throughout Victoria to investigate workplace and other risk factors, such as levels of training, for these injuries. This study is funded by the NHMRC.

ACHHRA, led by Professor Brian Priestly, hosted the Symposium 'Challenges in Environmental Toxicology in Australasia' in 2006, in conjunction with the Australasian College of Toxicology and Risk Assessment, and the Journal of Toxicology and Environmental Health.

DEPM is also a partner in the Australian Centre for Radiofrequency Bioeffects Research (ACRBR). Other partners in this consortium include RMIT University, Swinburne University of Technology, Telstra Research Laboratories in Melbourne, and the Institute of Medical and Veterinary Sciences in Adelaide. ACRBR brings together basic sciences, clinical and public health disciplines. The Centre conducts a broad program of research into possible biological or health effects of exposure to radio waves, particularly from mobile telephones. One of the studies being carried out by DEPM staff involved with ACRBR is a groundbreaking study of teenagers from Year 7. These young people are being monitored for symptoms, physiological and cognitive factors for an initial period of three years. This age group is ideal since these are generally the years of first uptake of mobile phones. Professor Michael Abramson is one of the Chief Investigators.

# Patient safety

The NHMRC CRE in Patient Safety (CRE-PS)held several seminars through 2006, including an April seminar looking at the monitoring of quality of care in hospitals in 2006. Presenters included Professor Stephen Duckett, Professor Diana Horvath and Professor John McNeil.

# Overview of research in 2006

# Prehospital and trauma research

The Victorian State Trauma Outcomes Registry (VSTORM) is a collaboration between Monash University, the University of Melbourne, the Royal Melbourne Hospital, the Alfred Hospital and the Victorian Department of Human Services. The Registry was developed to capture information on all major trauma patients in Victoria in order to monitor the performance of the State's trauma system and designed to reduce preventable death and permanent disability resulting from major trauma.

The HOLLT study, a trial of hyperbaric oxygen in severe lower leg injury, was announced in a media release by the Minister for Health in September. Professor Peter Cameron and Mr Owen Williamson from DEPM, and Dr Ian Millar, Director of the Hyperbaric Unit at The Alfred Hospital, are co-investigators. Other hospitals trialling the treatment are Karolinska Hospital Sweden; BG Unfallklinik, Germany; University of Graz Hospital, Austria; Policlinico Umberto 1, Rome and Eugene Marais Hospital, South Africa.

Dr Donna Urquhart and Professor Peter Cameron secured funding from the HCF Research Foundation to evaluate the nature, extent and outcomes of orthopaedic admissions to all Victorian public and private hospitals using the Victorian Admitted Episodes Dataset.



A new study of spirometry in general practice is being carried out to trial spirometry as an intervention for management of asthma and chronic obstructive pulmonary disease (COPD. Victoria has the lowest rate of Medicare claims of any state for spirometry and complex lung function tests, particularly office based tests, despite having similar prevalences of asthma and COPD to other states of Australia. Therefore there is a unique opportunity in Victoria to investigate the role of spirometry in improving the management of chronic respiratory diseases. Michael Abramson, who is a Visiting Respiratory Physician at The Alfred Hospital, is also involved with several other research projects at DEPM, including those being carried out by MonCOEH where respiratory outcomes are one of the health issues being studied. Professor Michael Abramson is Principal Investigator.

# Rheumatology - arthritis

Osteoarthritis is a common disease which is predicted to become an increasing economic burden as the population ages and the major reason for people needing joint replacements later in life. Professor Flavia Cicuttini's research team is looking at whether testosterone has a beneficial effect on knee cartilage and whether low perimenopausal testosterone levels could be a predictor of osteoarthritis. Another study is attempting to identify life-style factors that affect knee cartilage volume in healthy subjects, identifying potential targets for prevention of osteoarthritis.











Orthopaedic surgery for progressive OA is a 'last resort' management option when more conservative treatments no longer control the symptoms. New Zealand uses a weighted scoring system that includes clinical indications, function and social factors to prioritise joint replacement for patients. Professor Rachelle Buchbinder leads a research team which will determine whether the NZ system promotes better care and accountability. Professor Buchbinder is also evaluating vertebroplasty, a new procedure that involves injection of a type of 'bone cement' directly into a spinal fracture. The trial is being carried out at Cabrini, Alfred and Royal Melbourne Hospitals, and Monash Medical Centre.

# Water research - water quality

Water issues are currently a top priority in Australia, and water quality has been identified as one of twelve major national health issues by the National Health and Medical Research Council. Widespread water shortages mean that use of non-traditional sources, such as recycled water from sewage, are now being contemplated in many cities and towns across the country.

DEPM is a leading centre for health-related water research and is a partner in Australia's national water research organisation - the Cooperative Research Centre for Water Quality and Treatment. Several projects are underway, including a study funded by the NHMRC to determine whether microorganisms in untreated rainwater contribute to gastroenteritis. The study, involving 300 households, will be carried out in Adelaide where more than 12% of residents use rainwater as their usual source of drinking water. Other water related research includes population surveys and laboratory studies to better characterize exposure to recycled water during non-potable (non-drinking) household uses, and through irrigation of public parks. Dr Karin Leder and Dr Martha Sinclair are Chief Investigators.

# Clinical Informatics and Data Management Centre (DEPM-DMC)

Over the past few years there has been an enormous upsurge in interest around the establishment of clinical registries.

DEPM has taken on a leadership role in developing a critical mass of expertise around the establishment, management and analysis of clinical registries.

The Clinical Informatics and
Data Management Centre at
DEPM is one of few medical
research establishments in
Australia with extensive
expertise in the management
of large databases.

A number of trends in health care have led to an increased demand for these specialist skills.

They include -

- a rapid increase in provision of health related data driven by the increasing ability to collect large volumes of data within IT systems;
- an increased requirement to provide evidence of effectiveness and longterm safety of medical & surgical interventions;
- growing emphasis and financial incentives for prevention of illness.
   Evidence of the effectiveness of preventive interventions is often dependent on the data from large scale trials;
- increased emphasis on measuring and benchmarking quality of health care through data from disease and procedure registries;
- increased concern about long term hazards of medical and surgical interventions leading to an increase in long-term surveillance programs.

# Some of our current clients include -

Australian Rheumatological

Association

Alfred Hospital Department of

Anaesthesia

ANZ Intensive Care Research Group

**Baptist Community Care** 

**Brisol Myers Squibb** 

**Burnet Institute** 

Cabrini Hospital

**HBA** 

Malaysian Ministry of Health

Melbourne Internventional Group

**Nucleus Network** 

# How to contact the Data Management Centre

Email

dmc.depm@med.monash.edu.au Phone 03 9903 0752

www.med.monash.edu.au/ epidemiology/data-mgmt-centre.html

Below from left Basia Duig, Douglas Wong, Chris Reid, Emily Kelly, Angela Brennan, Molly Bond, Nick Andrianopoulos, Nino Hay, Roseanne Freak-Poli, Colin Wood, Phillipa Loane





Registries and clinical trials managed by the Data Management Centre include -

- Australian Society of Cardio-Thoracic Surgeons Database Project
- Australian Rheumatology Association Database (ARAD) Project
- Bosentan Patient Registry
- · Haemostasis Registry
- Melbourne Interventional Group (MIG) Interventional Cardiology Registry
- REACH Registry
- ASPREE
- ANBP2
- HOPE3
- ATACAS

Other registries maintained by Research Units within the Department include -

- Surveillance of Australian workplace
   Based Respiratory Events (SABRE)
- Victorian Cardiac Arrest Registry
- Victorian Orthopaedic Trauma
   Registry
- VSTORM Monitoring and Evaluation
   of the Victorian State Trauma System

#### ASCTS Database Project

The Victorian Division of the Australian Society of Cardio-Thoracic Surgeons appointed the CCRE in Therapeutics to act as the Data Management and Analysis centre to identify key performance indicators for cardiac surgical outcomes.

### Australian Rheumatology Association Database (ARAD) Project

The ARAD database is an initiative of the Rheumatology Society. The CCRE in Therapeutics provides the data management for the activity. This is a Teleform based project with baseline and follow-up data for patients receiving new biological agents for the management of rheumatoid arthritis. Professor Rachelle Buchbinder is a key collaborator on this project which incorporates hospital and private specialists across Australia.

### Bosentan Patient Registry

This is a unique registry established as part of a risk sharing arrangement with the Pharmaceutical Benefits Advisory Committee and the Pharmaceutical industry for the listing of medication (Bosentan) on the Pharmaceutical Benefits Scheme. Outcome data from randomized trials in patients with pulmonary arterial hypertension is not available and the

establishment of a registry to monitor survival outcomes in patients receiving PBS subsidised medication will enable the PBAC to evaluate current drug pricing models.

# Haemostasis Registry

The purpose of this Registry is to gain information on safety, efficacy, appropriateness of use and dosages of recombinant activated factor VII (rFVIIA, NovoSeven). Establishment of a register of users will provide valuable observational data touching on efficacy, adverse events, effective dosage and cost-effectiveness.

### Melbourne Interventional Group (MIG) Inverventional Cardiology Registry

The Melbourne Interventional Group is a collaborative project of interventional cardiologists practicing at eight major public and private hospitals in Victoria - The Alfred, Royal Melbourne, Austin, Box Hill, Frankston, Geelong, Northern and Peninsula Private - and the Centre for Clinical Research Excellence, Department of Epidemiology and Preventive Medicine, Monash University.



# Research governance

# What is research governance?

"Research governance is the framework by which institutions support, monitor and attest to the safety, ethical acceptability and quality of the research they undertake." 1

"The purpose of research governance is to ensure research integrity through accountability, transparency and responsibility. Good governance also seeks to ensure that research is carried out with the highest scientific and ethical standards, appropriate use of finances, and robust monitoring, review and evaluation processes."



Giuliana Fuscaldo
Research Governance Coordinator

DEPM has developed and implemented a research governance framework which is underpinned by four components:

- a risk management plan,
- the publication of departmental guidelines on responsible research conduct,
- training and education of staff and students in responsible research conduct
- and the appointment of a Research Governance Coordinator.

Ms Stephanie Poustie was our Research Governance Coordinator until March 2006 when she moved to Canberra and we welcomed Dr Giuliana Fuscaldo into this role. The Research Governance Coordinator and the Research Governance Committee provide researchers with resources, advice and assistance to ensure that research at the DEPM continues to meet high standards of research conduct.

One of the key operational 'governance tools' adopted by DEPM is routine random audits of HREC approved research. The areas audited are the research protocol, the participant information and consent forms, HREC approval, relevant study documentation, data management, data confidentiality procedures and overall study management. The audit process is promoted as an opportunity for researchers to reflect on and check their "work in progress". The Research Governance Coordinator also provides training and education to researchers about ethical research conduct. The Department regularly holds short courses in Clinical Research Practice and Ethics and all DEPM students and new researchers are encouraged to attend.

### **The Research Governance Committee**

A/Prof Andrew Forbes (Chair), Dr Giuliana Fuscaldo, Dr Elizabeth Douglas Ms Marina Skiba, Dr Owen Williamson, Dr Danny Liew, A/Prof Bebe Loff. Mr Ewan MacFarlane and Ms Rwth Stuckey are student representatives.



Above, some Committee members from left, Elizabeth Douglas, Marina Skiba, Andrew Forbes, Owen Williamson, Bebe Loff

#### **Footnotes**

- <sup>1</sup>W P Anderson, C D Cordner and KJ Breen (2006) Strengthening Australia's framework for research oversight. MJA 184 (6): 261-263 p262
- <sup>2</sup> S J Poustie, D McD Taylor, A B Forbes, M A Skiba, M R Nelson and J J McNeil (2006) Implementing a research governance framework for clinical and public health research. MJA 185: 623-626
- <sup>3</sup> Details of the DEPMs research governance framework are given in, S J Poustie, D McD Taylor, A B Forbes, M A Skiba, M R Nelson and J J McNeil (2006) Implementing a research governance framework for clinical and public health research. MJA 185: 623-626.

# Biostatistical consulting service

Biostatistics is a fundamental requirement for both routine practice and research in public health, health services research and clinical medicine.

Staff of the the Biostatistics
Unit provide a Biostatistical
Consulting Service available to
Monash University research
staff, research students, and to
external clients.

In 2006, over 100 clients utilized this service, with services provided ranging from advice on data collection and instrument design to performing complex data analyses using modern methods.



### We aim to

- facilitate access to appropriate and modern statistical methods in health research
- offer specialist services in the areas of biomedical, clinical and epidemiology data analysis
- provide training in the application of statistical methods for health researchers

### Available Services

- · Statistical Analysis
- Research Study Design
- Assistance with the statistical requirements for research grant applications
- · Assistance with the preparation or revision of scientific manuscripts

We anticipate that the needs and statistical knowledge of clients will vary and are happy to discuss individual requirements.

# Our expertise enables us to

- · advise on study design options
- · determine appropriate sample size
- · advise on database design and management
- · advise on data collection strategies
- determine appropriate analysis techniques to answer key research questions
- perform data manipulation and relevant statistical analyses as required
- provide advice to researchers wishing to perform their own analyses
- use modern methods to analyse complex data structures (eg clustered and longitudinal data)
- provide reports on statistical analyses that include interpretation of results

For general enquiries, or to make an appointment please email biostats.consult@med.monash.edu.au

# Research Centres at DEPM

# Monash Centre for Occupational and Environmental Health (MonCOEH)

Since making the transition from Unit to Centre in 2005, MonCOEH has grown rapidly, and in 2006 employed approximately 30 research, professional, teaching and administrative staff.

In March 2006, Malcolm Sim was appointed as Professor of Occupational and Environmental Health in DEPM and Director of MonCOEH. The Australian Centre for Human Health Risk Assessment, (ACHHRA), headed by Prof Brian Priestly, has become closely affiliated with MonCOEH.

MonCOEH undertakes mainly epidemiological research, investigating the role of workplace hazards and environmental exposures as risk factors for chronic diseases, such as cancer and respiratory disease. The Centre also has research interests in occupational disease surveillance, exposure assessment and the physical and psychological health of war veterans.

# New research projects in 2006

Occupational exposure to lead compounds and human cancer – Malcolm Sim, Geza Benke, Lin Fritschi. Two year NHMRC project grant. This is an historical cohort study examining the relationship between



Staff - back row from left, Ewan MacFarlane, Martine Dennekamp, Anthony del Monaco, Malcolm Sim, Dean McKenzie, David Goddard. Front row from left - Carla Trone, Melissa Friesen, Vanessa Murray, Christina Dimitriadis, Mahendra Arnold, James Cui

cancer and occupational lead exposure in workers in Australian lead-related industries. Identifiers for about 5,000 lead exposed workers are being extracted from government records and matched against the National Death Index and the National Cancer Statistics Clearing House.

NHMRC Public Health Postdoctoral Fellowship - Helen Kelsall

Helen is spending the first two years of her Fellowship at the Cancer Epidemiology Centre of The Cancer Council Victoria, undertaking research on the Melbourne Collaborative Cohort Study and other aspects of the work of the Cancer Epidemiology Centre, under the supervision of Professor Graham Giles. Helen's Fellowship research program includes investigating factors influencing survival in women diagnosed with breast cancer and the relationship between socioeconomic status and cancer survival.

Advanced statistical analyses and associated computing programs for epidemiological longitudinal studies –

James Cui, Andrew Forbes, Malcolm Sim. Monash University Strategic Grant. This project aims to apply the advanced statistical analysis method - Growth Mixture Models - to data from epidemiological longitudinal studies and to document the analysis procedure in such a way as to make it available to the wider research community.

AusJEM - Australian Job Exposure

Matrix – Geza Benke, Malcolm Sim. This was a 'near miss' seeding grant from Monash University for an unsuccessful NHMRC project grant which aims to develop an Australian Job Exposure Matrix (AusJEM). Job Exposure Matrices are widely used in occupational epidemiology to assess workplace exposures, but at the present time no JEM is available for Australian workplaces.

# Ongoing research projects in 2006

Healthwise: a study of health and work in employees of Alcoa of Australia Limited, Portland Aluminium and the KAAL Rolling Mill

- Malcolm Sim, Lin Fritschi, Bill Musk, Nick de Klerk. Alcoa of Australia. This is a retrospective and prospective cohort study of cancer, mortality and respiratory disease in workers in the Australian aluminium industry which has been running for more than ten years. Sites including three bauxite mines, three alumina refineries and two aluminium smelters in Victoria and WA. During 2006 the main focus of activity was the analysis of data relating to a group of about 1000 new starters who have been followed annually with interview, respiratory function tests and methacholine challenge. A detailed exposure assessment for seven work hazards, based on hygiene monitoring data, was also completed.

**Health Watch Cohort Study** – Malcolm Sim, Deborah Glass. Australian Institute of Petroleum.

This study was transferred to MonCOEH in 2005, and is a prospective cohort study of about 19,000 petroleum industry employees recruited since 1981. It is investigating the relationship between types of cancer and causes of death and exposure to hazards, such as benzene. During 2006, preparations were made for a further search of the National Death Index and National Cancer Statistics Clearing House to be undertaken in 2007.

Australian Gulf War Veterans' Health

Study – Malcolm Sim, Helen Kelsall, Dean McKenzie, Karin Leder, Jill Blackman, Andrew Forbes, Mark Creamer, Alexander McFarlane.
Department of Veterans' Affairs.
Although this study was completed in 2003, the veteran health research group has continued to do follow-up analyses. During 2006, the main analyses were a study of the temporal relationship of psychological disorders, and a validation study of the vaccination data.

Farm injury risk in males (FIRM)

Study – Lesley Day, Don Voaklander, Malcolm Sim, Rory Wolfe. NHMRC project grant. This is a four year study of risk factors for serious farm injuries in collaboration with the Monash University Accident Research Centre (MUARC), which was completed during 2006. The study has recruited over 300 cases of serious farm injury from hospitals throughout Victoria to investigate workplace and other risk factors, such as levels of training, for these injuries.

Improving Occupational Exposure
Assessment – Lin Fritschi, Geza
Benke. NHMRC project grant.
This project is being conducted in
collaboration with the Western
Australian Institute for Medical
Research and aims to develop the
methodology for using artificial neural
networks to improve the reliability and
consistency of retrospective
occupational exposure assessment in
occupational health aetiological
studies.

Mobile Phone Users Surveillance

**Study** – Michael Abramson, Geza Benke, Malcolm Sim, Rodney Croft. NHMRC funded Australian Centre for Radiofrequency Bioeffects Research (ACRBR), of which DEPM is a partner. This is a prospective study of neuropsychological health outcomes in teenagers using mobile phones. Year Seven students are being recruited from secondary schools to take part in the study and are being administered a wide range of neuropsychological tests.

**Orchardists Cancer and Mortality** 

Study - Malcolm Sim, Geza Benke. Cancer Council of Victoria. A historical cohort study of about 12,000 pesticide-exposed workers in Victoria and New South Wales. The cohort has been assembled from archive records of routine state government surveys from the 1960s-1980s. By record-linkage to the Australian cancer and death registries, this study aims to determine if cancer incidence in this cohort differs from the incidence in the general Australian population, and to investigate any relationships between specific pesticide exposures and cancer outcomes.

SABRE – Surveillance of Australian Workplace Based Respiratory

Events – Malcolm Sim, Michael Abramson, David Elder.

SABRE is a surveillance scheme providing the first comprehensive data on occupational respiratory disease in Victoria and Tasmania. We are also collaborating with colleagues at the Dust Diseases Board in Sydney to run SABRE in New South Wales.

AUS-ALL (Acute Lymphoblastic Leukaemia) Study – Lin Fritschi, Liz Milne, Deborah Glass. NHMRC Project grant. This study is run in collaboration with the Western Australian Institute for Medical Research and the University of Western Australia Centre for Child Health Research and is investigating the causes of acute lymphoblastic leukaemia in children.

# Research Centres at DEPM continued

# MonCOEH continued

# International research collaborations

Pooled analysis of petroleum case control studies - Deborah Glass, Rob Schnatter, Lesley Rushton, Malcolm Sim. Conservation of Clean Air and Water in Europe (CONCAWE). The aims of this study are to estimate the exposure-response relationship for benzene and leukemia and its subtypes, and to investigate the induction period from first exposure to leukaemia diagnosis or death. Cases of leukemia and selected controls drawn from three similar petroleum industry cohorts based in Canada, the United Kingdom and Australia will be pooled. The exposure to benzene from specific jobs, operations and activities is to be individually estimated for the cases and controls.

Occupational risk factors for occupational asthma – Geza Benke, Michael Abramson. This is one phase of the multi-centre European Community Respiratory Health Survey. This multi-centre study is investigating several predictors of asthma, including workplace factors. We are providing input to the occupational exposure assessment phase of this study, based on the analysis of data from all the international centres.

Musculoskeletal disorder multicentre study (CUPID) – with the MRC Unit of Environmental Epidemiology, Southampton England – Malcolm Sim. We have been invited to participate in an international multi-centre study coordinated by the UK MRC Unit which will investigate the role of psychological and cultural factors in the development of work-related musculoskeletal disorders and associated work disability in several countries.

### Staff

#### **Director**

Professor Malcolm Sim

#### Research Staff

Dr Geza Benke
Dr James Cui
Dr Deborah Glass
Dr Helen Kelsall
Ms Jill Blackman
Ms Martine Dennekamp
Dr Melissa Friesen
Mr Ewan MacFarlane
Mr Dean McKenzie
Ms Elisa Wood
Ms Christina Dimitriadis
Mr Peter Ittak

### Data Managers

Mr Anthony Del Monaco Ms Koraly Giuliano

### Teaching Staff

Dr Neville Betts Dr James Chan Dr David Elder Dr David Fish Dr David Goddard

### Honorary Staff

Dr Mahendra Arnold, Visiting Academic Dr Bruce Hocking Dr Jan Hoving Dr Narges Khanjani Dr Richard Lunz Dr Samia Radi

#### Administrative Staff

Ms Vanessa Murray, Centre Manager Ms Jane Ball, Administrative Assistant Ms Rosalie Clementson, Administrative Assistant



# **Doctoral students**

MonCOEH has an active research program, with eight full or part time doctoral students enrolled in 2006 supervised by MonCOEH staff. One student, Dr Narges Khanjani, submitted her thesis 'Organochlorines and breast cancer' and passed with only minor changes required. Dr Khanjani was an international student from Iran who returned home in late 2006 after successfully completing her PhD. Mr Dean McKenzie was also awarded a two-year NHMRC Public Health Postgraduate Research Scholarship for his study titled 'Building brief screening and diagnostic tests of mental health', to commence in 2007.

# Other major activities and Undergraduate and achievements of MonCOEH Staff

Dr Geza Benke received the 3M award for the best paper presented at the Australian Institute of Occupational Hygienists conference (Dec 2-6 2006, Surfers Paradise, Queensland) for his paper titled 'The Ageing workforce: Implications for Occupational Hygienists.'

Dr James Cui attended the summer school program at the John Hopkins Bloomberg School of Public Health. This enabled Dr Cui to further his research in the analysis of longitudinal epidemiological datasets, particularly in the use of cutting edge techniques such as multi-level models, and advanced survival analysis methods.

Martine Dennekamp completed the requirements for her PhD. Martine was enrolled at the University of Aberdeen, Scotland. The title of her thesis was: 'Personal exposure to particulate air pollution, assessed by number and mass.'

Malcolm Sim made four invited addresses during 2006: at the annual conference of the Royal College of Physicians of Thailand; the Ferguson-Glass Oration at the Annual Scientific Meeting of the Royal Australasian College of Physicians in Cairns; an invited keynote address to the Defence Health Symposium in Brisbane and at the International Congress of the International Commission on Occupational Health in Milan, Italy.

# postgraduate teaching

MonCOEH coordinates several postgraduate programs in the area of occupational and environmental health, all of which are suitable for part or full time study. These include the Masters and Graduate Diploma in Occupational and Environmental Health, a Graduate Certificate of Occupational Health and a Short Course program.

MonCOEH has coordinated the occupational medicine program in the third year of the undergraduate medical course for several years, and in 2006 also took over coordination of the environmental medicine program, taught in the third year of the undergraduate medical course.

In 2006, the occupational and environmental medicine teaching programs were successfully delivered to 230 medical students located at six metropolitan and five regional clinical teaching sites.



Photo - metal being tapped at Wagerup - photo courtesy of Alcoa of Australia

# Research Centres at DEPM continued

# NHMRC Centre for Research Excellence in Patient Safety (CRE-PS)

# Research is focussed on three main areas -

- The use of data to improve quality of care
- Improving information transfer
- Improving medication management

Since its inception in 2005, CRE-PS has developed an extensive research agenda and has received in excess of \$4.2 million in competitive research grants. Fourteen projects are currently underway, of which eleven are externally funded.

In 2006 staff included a Director, two Associate Directors and three post doctoral research fellows. In addition, a Project Coordinators and a Program Coordinator were appointed to manage a larger work portfolio.

CRE-PS is governed by a Management Committee which includes all principal investigators from the CRE-PS grant application and the Chief Executive Officer of the funding body.

# Promotion of Patient Safety

Research must be accompanied by promotion if it is to guide and drive change in health care practice. Since its inception, CRE-PS has focused on promulgating patient safety research by -

• providing a forum for discussion and dissemination of ideas and research through seminars, each attracting more than 150 delegates and aimed at clinicians working at the coalface. We will continue to host these popular and informative forums in states and territories across Australia;

- providing a forum for clinicians to learn how to do good quality research. A workshop was conducted at the 2006 Australasian Conference for Quality and Safety in Health Care and one will be provided in 2007 to enable clinicians to learn about the importance of human factors for patient safety, gain knowledge of some practical examples of the impact of poor design and appreciate how a key human factors method can help to control risk;
- disseminating good research through the Australian Patient Safety Bulletin, released three times per year to over 5000 clinicians via email, through collaboration with the Royal Australian College of Surgeons and the International Society for Quality in Health Care and through being featured on the World Health Organization website. Regular dialogue via email is supported by CRE-PS for interest groups around Australia;
- supporting future leaders of patient safety. CRE-PS coordinates a Master of Health Services Management subject on principles of quality improvement in health care through Monash University.

CRE-PS is also supporting five PhD students.

A very important role has been to support clinicians undertaking research in their workplace by providing advice on study design and statistical methods and providing guidance when developing grant applications and seeking funding. We will continue to support clinicians by promoting and promulgating research and seek funding to expand our work program.

We will use established links with organisations including the Australian Commission on Safety and Quality in Health Care, the International Society for Quality in Healthcare (ISQua), Royal College of Surgeons, Royal College of Nursing, and Royal College of General Practice, in addition to our website, seminars, peer-review publication and the Australian Patient Safety Bulletin to diffuse our work and influence across Australia.



The Centre regularly publishes the Australian Patient Safety Bulletin. If you would like to receive the bulletin, please register on the webpage.



# Staff

### Director

Professor Peter Cameron

### Executive Officer

Dr Sue Evans

### Research Staff

Professor Joseph E Ibrahim Clinical Associate Professor Peter Sprivulis Dr Sue Evans Dr Shelly Jeffcott Dr Deborah Roberts

# PhD students

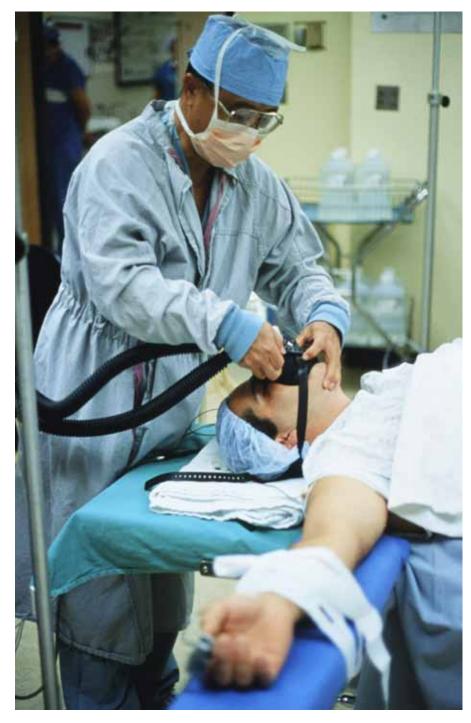
Cameron Willis Georgiana Chin Carolina Weller Basia Diug Tobias Grundgeiger

# **Project Coordinator**

Judy Lowthian

# **Program Coordinator**

Peta McLaughlin



Email - CREinPatientSafety@med.monash.edu.au

www.crepatientsafety.org.au

# Research Centres at DEPM continued

# NHMRC CCRE in Therapeutics

The CCRE in Therapeutics was established in 2003 and provides a national resource for the evaluation of new and existing drugs. The CCRE works closely with other units in the Department, including Cardiovascular Epidemiology, Clinical Pharmacology and Biostatistics. Professor Henry Krum is Director, and Associate Professor Chris Reid is Associate Director.

2006 was a year of substantial progress and activity within the CCRE in Therapeutics with the major foci of activity in the areas of multi-centre clinical research, registry activities and pharmacoepidemiology.

In the area of clinical trials, an exciting development has been the funding of the large ASPREE study which has now commenced in Australia. This is a study of over 20,000 patients testing whether aspirin is beneficial (or otherwise) in elderly patients with regard to cardiovascular disease and cognitive function as well as other outcomes. Following on from major NHMRC funding, there has been substantial cash and in-kind support from Bayer and a formal NIH application has been invited and submitted.

Other multi-centre investigator initiated trials performed in 2006 include the HAT, CHAT and HOPE 3 studies. Furthermore, Professor Paul Myles has initiated his major NHMRC sponsored ATACAS study, of tranexamic acid and aspirin under our umbrella as well as the ENIGMA II study.

A rapidly expanding focus of activity has been that of registries, particularly those to do with drugs and therapeutic procedures, such as PCI. The MIG registry has exploded in activity with over 4,000 patients receiving PCI currently documented. Important and novel data have been extracted from this dataset.

Dr Danny Liew has led activities in the area of pharmacoepidemiology, particularly looking at cost-effectiveness and modelling of drug therapies such as statins, aspirin and anti-obesity agents. Dr Kathlyn Ronaldson is investigating causes of clozapine-induced myocarditis.

In concert with the expanded CCRE research activity has been the establishment of a dedicated community based clinical trials facility at our Caulfield site. This facility is ideal as a hub for multi-centre studies and community-based chronic disease trials. This site is the location of our large cohort studies including the ANBP2 follow-up study and SCReening Evaluation of the Evolution of New Heart Failure (SCREEN-HF) study.

An important component of activity has been the training of young clinicians in clinical research methods. Drs Will Kemp and Hendrik Zimmet have been our first Transitional Fellows. Both have subsequently received competitive scholarship support to continue their studies. Dr Maros Elsik, a cardiologist from Sydney, is also undertaking PhD studies with us and has received NHMRC/NHF scholarship support.

The CCRE in Therapeutics has very rapidly become a favoured training ground for young clinical researchers, as attested to by the large number of



inquiries regarding future training opportunities within the institution. We very much look forward to 2007 as a year of further expansion.

# Study Overview

#### **SCREEN-HF**

This is a prospective, cross-sectional cohort study designed to assess the utility and cost-effectiveness of brain natriuretic peptide (BNP) in the determination of LV dysfunction in patients at high-risk for this condition but without known cardiac dysfunction, symptoms of heart failure or previous diagnosis of either condition.



# http://www.ccretherapeutics.org.au/

Studies have shown that BNP is a useful screen tool for heart failure during acute presentations of shortness of breath to the Emergency Room. Additional studies in General Practice have confirmed the ability of BNP testing to improve accuracy of diagnosis of heart failure in this setting. However, little is known about the peptide as a screening test for LV dysfunction in patients at high-risk for subsequent development of this condition and/or overt heart failure. To the knowledge of the investigators, this is the first study that addresses one of the key issues in utility of screening of high-risk patients for subsequent heart failure using a simple blood test.

The cost-effectiveness of such an approach has major implications for healthcare providers, particularly insurers. Approximately 3500 participants will be recruited for this study. To achieve this recruitment it is estimated that about 10,000 HBA members over 60 years will be contacted by letter and invited to be

screened. Participants identified as having plasma levels in the highest 20% of NTproBNP will undergo further evaluation including echocardiography, ECG and further bloods for cardiovascular biomarker measurement. This study has now been approved by Alfred Ethics and recruitment commenced.

#### **UNIVERSE**

Despite the widespread use of statins in cardiovascular disease, it is not known whether these agents are of benefit in patients with established chronic heart failure (CHF). The UNIVERSE study is examining the effect of statins on ventricular remodelling, an important surrogate for clinical outcomes in CHF. The study compares a high dose of rosuvastatin (40mg/day) versus placebo additional to best practice background therapy. The results were presented at the American College of Cardiology Meeting in 2006 and will be published in J Cardiac Failure in 2007.

#### **CHABLIS**

The CHABLIS study compares the addition of angiotensin receptor blocker (ARB) versus an increase in ACE inhibitor dosage in patients with systolic chronic heart failure currently receiving low to medium dose ACE inhibitor. Although ARBs have been found to be useful in heart failure it is not established whether this utility is merely on the basis of increasing renin angiotensin system blockade which can also be achieved by an increase in ACE inhibitor dose. Therefore these two strategies have been compared head-to-head in CHABLIS with the endpoint of brain natriuretic peptide being used to assess efficacy of these strategies. The study has now recruited approximately 100 patients and will be presented at the Cardiac Society of Australia and New Zealand meeting in 2007.



# Research Centres at DEPM continued

# NHMRC Australian and New Zealand Intensive Care Research Centre (ANZIC-RC)



The ANZIC-RC is a national centre for intensive care research which was established in 2005, with NHMRC and Monash University funding.

2006 was a year of rapid expansion, with key staff being appointed, including an executive officer, a senior research fellow, a research fellow and a statistician. In addition, numerous studies were initiated, with three programs concerning sepsis in progress.

A successful NHMRC project grant in collaboration with intensivists in Brisbane enabled development of a multicentre randomised trial (STATInS) testing statin therapy in ICU patients with severe sepsis.

ARISE investigates early goal- directed therapy for severe sepsis patients and included a study from the national intensive care database, a prospective observational study and an NHMRC project grant submitted for a large randomised trial.

Heparin therapy for sepsis is also being investigated by three studies leading to a future major grant.

Translational research concerning albumin resuscitation is being conducted in collaboration with the George Institute for International Health in Sydney.

The ANZIC-RC has also provided methodological support to intensivist investigators in Sydney, Perth, Darwin and Queensland to complete studies and grants.

During 2006, the ANZIC-RC had eight papers published or in press, and also had successful grants from the NHMRC, Intensive Care Foundation and Victorian Neurotrauma Initiative.

#### Staff

Professor Jamie Cooper Professor Rinaldo Bellomo Dr Lisa Higgins Dr Daryl Jones Ms Lucinda Gabriel

### Honoraries

A/Professor Simon Finfer A/Professor John Myburgh Dr Peter Kruger Dr David Pilcher Ms Carol George

The services provided by the ANZIC-RC are available to all Australian and New Zealand intensive care researchers (clinicians, JFICM trainees, nurses, allied health professionals) and include -

- statistical support (including study design, power and sample size calculation, statistical analysis and interpretation);
- advice on study design;
- assistance with study protocol development;
- CRF design and development;
- · database design;
- advice on ethical hurdles in ICU research:
- full project coordination.

The first four hours of ANZIC-RC services are provided free of charge (once per year per researcher), following approval of the project by the Scientific Review Committee.

The cost of additional work is on a cost-recovery basis only and is approximately AUD\$70 per hour.

email anzicrc@med.monash.edu.au

www.anzicrc.monash.org.au



# Cooperative Research Centre for Water Quality and Treatment (Public health program)



The Cooperative
Research Centre for
Water Quality and
Treatment is Australia's
national drinking water
research organisation.
The Centre's mission is
to assist the Australian
water industry to deliver
high quality drinking water
at an affordable price.

The Infectious Disease Epidemiology Unit in DEPM has cordinated the CRC's public health research program since the Centre was founded in 1995. The objective of the CRC research conducted at DEPM is to apply epidemiological techniques to characterize human health risks from microbial and chemical contaminants in drinking water and alternative water sources. Techniques employed in this research include specific investigations measuring health outcomes in human participants, the development of methods to provide improved estimates of individual exposure levels, and the use of risk assessment for evaluation of perceived health risks. This work also considers the broader public health context of water-related risks in order to facilitate cost-effective use of public resources in risk management.

Another important facet of DEPM activity in the CRC is the provision of expertise to a range of committees and advisory bodies involved in the regulation of water supplies - including drinking water, recycled water and recreational water. These activities help to ensure

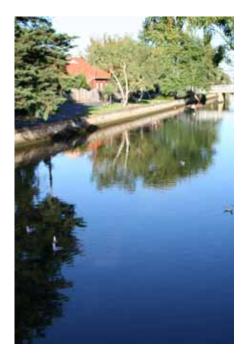
that water quality management in Australia is informed by contemporary research knowledge.

Recent water shortages in Australia have seen the rapid development of alternative water sources such as rainwater, stormwater and recycled water from treated sewage as a substitute or supplement for conventional tap water supplies. While much attention has been focused on water quantity, increased utilisation of such water sources also requires careful management of water quality to ensure that public health is not compromised by exposure to microbial and chemical contaminants.

Water-related research projects at DEPM are aimed at filling information gaps and reducing uncertainty in health risk assessment for waterborne contaminants by providing improved human exposure data for a range of domestic water uses. This is being done through characterization of household water use habits and conducting experimental studies of specific water use scenarios. The health impact of pathogens in rainwater is also being assessed using a rigorous randomised controlled trial methodology. Outcomes from this research will feed into regulatory processes and permit health authorities to make better informed decisions about requirements for water quality and management options for domestic use of alternative water sources.

DEPM staff also produce the CRC's newsletter Health Stream, with an international circulation in excess of 4000 readers. Current and past issues are available at: www.waterquality.crc.org.au/

hscurrent.htm



### Staff

Dr Karin Leder Dr Martha Sinclair Ms Pam Lightbody

#### Doctoral students

Ms Joanne O'Toole BAppSc, MBA, PhD student Ms Shelly Rodrigo, BSc(Hons), MFoodTech, MPhil, PhD Student



Dr Martha Sinclair (left) & Dr Karin Leder

### Research Centres at DEPM continued

# Australian Centre for Human Health Risk Assessment (ACHHRA)

**ACHHRA** was established in 2002 as a consortium of four **Australian Universities** with expertise in human health risk assessment. Its establishment was funded by a grant from the Australian Government Department of Health and Ageing through the Innovations Program of the Public Health Education and Research Program (PHERP).

Other partners were the Department of Environmental Health, Flinders University, the National Research Centre for Environmental Toxicology (En Tox), and the School of Environmental Studies, Griffith University. Following completion of the PHERP-funded project in 2006, ACHHRA became associated with the Monash Centre for Occupational and Environmental Health (MonCOEH).

Professor Brian Priestly has been the ACHHRA Director since December 2003. Prior to leading ACHHRA, Brian was Director of the Laboratories Branch in the Therapeutic Goods Administration (TGA) and previously, Scientific Director of the Chemicals Toxicology and Chemicals Risk Management Programs of the Commonwealth Health portfolio.



Below from left, Professor Brian Priestly, Dr Roger Drew, Dr Peter Di Marco, Professor Michael Moore at the July symposium.

ACHHRA offers a multidisciplinary approach to health risk assessment, with access to expertise in epidemiology, toxicology, environmental sciences, analytical chemistry, microbiology, communicable diseases, clinical evaluation and biostatistics. The main focus of ACHHRA is human exposure to hazardous chemicals and microorganisms arising from environmental or occupational media (air, water, soil, food). Hazardous chemicals and exposures may be of natural origin or result from anthropogenic activities.

ACHHRA has been active in supporting Commonwealth and State government agencies in managing environmental health risks through participation in expert advisory panels, preparation of risk assessment guidance documents and peer review of reports. It has

assisted HHRA workforce development for governments and the commercial sector through the development of training programs and workshops. In July 2006, ACHHRA hosted a 2-day symposium on Challenges in Environmental Toxicology in Australia. Selected papers from the Symposium will be published in the Journal of Environmental Toxicology to showcase the expertise of Australian scientists in environmental health issues. The Symposium also marked the inauguration of the Australasian College of Toxicology & Risk Assessment (ACTRA), an incorporated body which is developing accreditation and continuing education programs for toxicologists and risk assessment professionals.

# NHMRC CCRE in Circulatory and Associated Conditions in Urban Indigenous People

In 2005, Professor Brian Oldenburg (Chief Investigator) and a larger working group of coinvestigators were awarded NHMRC funding for a Centre of Clinical Research Excellence (CCRE) in Circulatory and Associated Conditions in Urban Indigenous Peoples.

No where else is the widespread disadvantage of Indigenous
Australians more dramatically highlighted than in the 20 year gap in the average life expectancy between the Indigenous peoples of Australia and other Australians. Much of this gap is accounted for by the large burden of disease attributable to circulatory and associated conditions in Australia's Indigenous Peoples; with diseases of the cardiovascular system is the biggest single cause of premature deaths in the Indigenous Australian Population.

This project is funded by the NHMRC for five years.

This project is managed by staff colocated at Monash University and the Queensland Aboriginal Islander Health Council in Brisbane.



Above, Brisbane staff from left Dallas, Audrey, Bronwyn and Leilani

### Staff

Professor Brian Oldenburg (Monash University)
Professor Wendy Hoy (University of Queensland)
Associate Professor Cindy Shannon
Dr Andrew Tonkin (Monash University)
Mr Traven Lee (National Heart Foundation Australia)
Professor Ian Ring (University of Wollongong)
Associate Professor Jacinta Elston (James Cook University)
Dr Mark Wenitong (Wu Chopperen Health Services
Ms Leilani Pearce (Queensland Aboriginal Islander Health Council
Mr Dallas Leon(Queensland Aboriginal Islander Health Council
Ms Audrey Deemal (Queensland Aboriginal Islander Health Council
Dr Bronwyn Fredericks (Monash University)

### Research Centres at DEPM continued

# Australian Centre for Radiofrequency Bioeffects Research

The Department is a partner in this Centre which is a consortium consisting of RMIT University, Swinburne University of Technology, Telstra Research Laboratories and DEPM in Melbourne, and in Adelaide - the Institute of Medical and Veterinary Sciences. ACRBR brings together basic sciences, clinical and public health disciplines.

The Centre conducts a broad program of research into possible biological or health effects of exposure to radio waves, particularly from mobile telephones.

Professor Michael Abramson from this Department is one of the Chief Investigators, along with Professor Irena Cosic (RMIT), Dr Rodney Croft (Swinburne), Associate Professor Andrew Wood (Swinburne), Dr John Finnie (IMVS), Mr Ray McKenzie (Telstra Research Laboratories), Associate Professor Malcolm Sim and Dr Geza Benke from this Department are Associate Investigators.

### MORPhEUS (Mobile Radiofrequency Phone Exposed Users Study)

As part of the Centre, investigators in this Department are conducting a cohort study of teenagers in Year 7 by monitoring these young people for symptoms, physiological and cognitive factors for an initial period of three years. This age group is ideal since these are generally the years of first uptake of mobile phones.

The Project leader is Professor Michael Abramson. Co-investigators are Dr Geza Benke, Professor Malcolm Sim and A/Professor Rodney Croft.

Other staff include Ms
Christine Dimitriadis, Mr
Steven Haas, Mr Imo
Inyang, Dr Richard Lunz,
and Ms Juliette Mutheu.

Although imperative for understanding health effects in the community, epidemiological research investigating associations of mobile

phone exposure and non-malignant health outcomes in the general community is virtually non-existant.

All subjects undertake a baseline (then annual) validated questionnaire, physiological (hearing, BP) and cognitive tests. Dosimetry and exposure assessment from mobile phone use and



An NHMRC Centre of Research Excellence



consequent emissions will be undertaken in collaboration with TRL and cognitive factors will be assessed in collaboration with Swinburne University.

We expect that about 300 subjects will be recruited with an expected loss to follow-up of less than 30%. The establishment of this cohort would also allow for future follow-ups in 5, 10 or 20 years, when any long-term effects may present.



### Research Units at DEPM

### **Biostatistical Unit**

Head of Unit Associate Professor Andrew Forbes BSc(Hons), MSc, PhD

#### Staff

Dr Michael Bailey
Dr Baki Billah
Dr James Cui
Dr Jahar Choudhury
Mr Dean McKenzie
Ms Pam Simpson
A/Prof Rory Wolfe

### Biostatistical methodological research

Staff of the Biostatistics Unit are involved in a number of methodological research activities, including assessment of methodology for meta analysis of short interrupted time series; methods for causal, latent variable and missing data modelling in longitudinal studies; methodology for inter-rater reliability studies with mutli-factorial designs; models and estimation for repeated ordinal

responses; statistical process control methods for monitoring of health systems; issues concerning baseline adjustment in randomised trials; development and application of classification tree methods for identification of subgroups or screening instruments; methods for handling recurrent event data; model selection methods with correlated data.

### Departmental Statistical Support

The Biostatistics Unit has significant input into design, data collection and analysis for the vast majority of research projects conducted in the Department. Members of the Unit hold chief investigator and/or associate investigator status on a numerous research projects within and external to the Department.

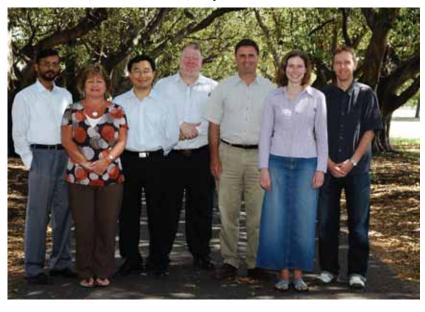
### Biostatistical Consulting Service

Staff of the Biostatistics Unit provide a Biostatistical Consulting Service available to Monash University research staff, research students and external clients. (See page

### Teaching

The teaching activities of the Unit consist of lectures and tutorials within and external to the Department, both by traditional face to face teaching as well as distance education learning. The Unit coordinates subjects in the Masters of Biostatistics program, and conducts statistics teaching in the undergraduate Medicine and Biomedical Science courses, as well as postgraduate teaching for the Master of Public Health and the Graduate Diplomas in Clinical Epidemiology, Occupational and Environmental Health, Clinical Health Management, International Health. Other activities include a series of short courses on basic statistics and the Stata statistical software package.

From left Baki Billah, Pamela Simpson, James Cui, Dean McKenzie, Andrew Forbes, Susan Shortreed, Rory Wolfe



### Research Units at DEPM continued

### Cardiovascular Research Unit

Head of Unit Professor Andrew Tonkin MBBS, MD, MRACP, FRACP

#### Staff

Dr Anna Peeters
Ms Joanne Croucher
Mr David O'Reilly
Ms Alison Beauchamp
Mrs Karen Duve
Ms Julie Yallop

### Doctoral students

Mr Linton Harriss
Ms Jessica Chellapah
Ms Lei Chen

### Current Research

Home Automated External
Defibrillator Trial (HAT study)
HAT is funded by the NIH and is being conducted in the US, Canada,
Australia, UK and New Zealand. In
Australia the study involves 34
hospitals. Professor Andrew Tonkin is
Principal Investigator, Julie Yallop the
Australian and New Zealand Study
Coordinator, and a member of the
Steering Committee for the study.

#### **ASPREE**

ASPREE is a large-scale double-blind controlled trial to determine the effect of low-dose aspirin versus placebo over a five year treatment period, for the prevention of cardiovascular events (fatal and non fatal) in subjects aged over 70 years without known cardiovascular disease. Additional aims are to investigate aspirin effects on all cause mortality, dementia, hemorrhagic stroke, preservation of cognitive function, gastrointestinal bleeds, and other clinical significant bleeding, carcinoma, thromboembolism, institutionalization, disability, cost-effectiveness, depression and quality of life.

Epidemiology of Chronic Diseases and DNA studies

Andrew Tonkin is Co-Principle Investigator of The Melbourne Collaborative Cohort Study established in the 1990s by the Anti-Cancer Council of Australia to investigate the role of diet and other lifestyle factors in cancer and diabetes. 41,500 people were recruited into the study and the cohort has been followed up 3-4 years after baseline.

In 2002, a NHMRC Program Grant was awarded to re-survey the surviving participants and expand the capture of outcomes to include cardiovascular disease and the metabolic syndrome. The data collected will aid the study of the determinants of heart disease with the aim of developing prediction tools.

#### CHAT

A randomised trial of telephone support for chronic heart failure patients at high risk of rehospitalisation funded by the NHMRC and the Medical Benefits

Chronic heart failure is a major public health problem in Australia. This project is implementing the first Australia-wide randomised clinical trial of telephone support for CHF patients provided by trained nurses to enable patients and their families to maintain their health in as stable a manner as possible, in their homes. This strategy has significant implications for providing equity of access for rural and remote Australians.

## Clinical Epidemiology Unit - Alfred

Head of Unit Professor Michael Abramson MB BS, BMedSc(Hons), PhD, FRACP, FAFPHM

### Staff

Geza Benke (MonCOEH)
Joan Raven (Alfred Hospital)
Rosie Gehrig-Mills (Research
Nurse)
Billy Skoric (Alfred Hospital)
Christina Dimitriadis (RA jointly
with MonCOEH)
Richard Lunz
Juliette Mutheu
Rosa Schattner
Bernadette Flanagan
Tom Lanigan

### **Students**

Charmian Bennett Imo Inyang Tom Jeavons Margaret Stebbing Clinical epidemiology is the application of epidemiological methods to the care of patients. It includes critical appraisal, evidence based medicine and the development of clinical practice guidelines. The activities of this unit include undergraduate and postgraduate teaching; short course; advisory work; clinical service and contributions to The Cochrane Collaboration.

The Respiratory Epidemiology Group is collaborating with the Alfred and CSIRO Marine and Atmospheric Research on NHMRC funded studies of the health effects of particulate air pollution.

We have now completed a study of fine particles and perhaps surprisingly found that higher levels were associated with fewer symptoms in mostly healthy young adults. A study of the cardiac and respiratory effects of ultrafine particles is continuing.

We are also collaborating with the Universities of Melbourne and Tasmania on the 36 year follow-up of the Tasmanian Asthma Survey. This is a unique study of over 8,500 children born in Tasmania in 1961 who were first recruited in 1968.

The Mobile Radiofrequency Phone Exposed Users Study (MoRPhEUS) completed the initial fieldwork in 20 secondary schools to examine the effects of mobile phones on cognitive function, blood pressure and hearing in 317 Year 7 students.

A randomised controlled trial of spirometry for the management of chronic respiratory diseases in general practice (SPIRO-GP) commenced recruitment of practices.

Below from left at front, Geza Benke, Richard Lunz, Michael Abramson. At back from left, Christina Dimitriadis, Juliette Mutheu, Imo Imyang





### Research Units at DEPM continued

### Clinical Epidemiology Unit - Cabrini

Head of Unit Professor Rachelle Buchbinder MBBS(Hons), MSc, FRACP

#### Staff

Dr Melissa Barber
Ms Lavonne Collins
Ms Miranda Cumpston
Ms Di Hirsh
Dr Renea Johnston
Dr Peter Kent
Dr Margaret Staples
Dr John Oldroyd
Ms Lainie Wengier

#### Students

Lucy Busija (jointly with Uni Melb)
Sabina Ciciriello (jointly with Uni Melb)
Jennifer Coghlan
Simon French
Joanne Jordan (jointly with Uni Melb)
Joel Radford (jointly with Uni West
Sydney)

The research program includes the management of soft tissue disorders - particularly the shoulder, elbow, knee and heel, and randomised controlled trials of innovative new therapies in each of these areas, including

vertebroplasty for the treatment of osteoporotic spinal fractures, physiotherapy after hydrodilatation for adhesive capsulitis and shock wave therapy for the treatment of tennis elbow and heel pain.

Professor Rachelle Buchbinder also has interests in the risk of malignancy in rheumatic diseases, prevention of disability from low back pain through public health mass media campaigns. Other current research concerns improving communication between health professionals and patients including a linguistic framework for improving the quality of written communication and understanding the role and impact of health literacy on health outcomes. This work has been supported by various local, national and international bodies.

The department also coordinates the Australian Rheumatology Association Database (ARAD) and hosts the Australian Satellite of the Cochrane Musculoskeletal Group.

#### Current research includes -

- Australian Rheumatology
   Association Database (ARAD): A
   longitudinal study of the long-term
   effects of rheumatoid arthritis and
   its treatments in Australia.
- A 4-year NH&MRC-funded randomised double-blind placebocontrolled trial investigating the efficacy and safety of vertebroplasty for acute painful osteoporotic spinal compression fractures.
- A 3-year NH&MRC-funded randomised double-blind placebocontrolled trial investigating the efficacy of physiotherapy after hydrodilatation for the stiff painful shoulder.
- Functional health literacy of rheumatoid arthritis patients attending a community based private rheumatology practice.
- The efficacy of extra-corporeal shock wave therapy (ESWT) in the treatment of lateral epicondylitis (tennis elbow): a randomised double-blind placebo-controlled trial.
- Efficacy and cost-effectiveness of physiotherapy for chronic rotator cuff pathology.
- Can patient self-management education programs improve outcomes of people with osteoarthritis?
- The effectiveness of short-term treatments for plantar fasciitis.
- Cochrane reviews of interventions for shoulder pain and tennis elbow.
- Development of a linguistic framework to assess the quality of written patient information.
- Cross-sectional survey of the Victoria population to assess functional health literacy levels in the community.
- Quality of Life, disability and prioritisation of people waiting for joint replacement surgery.

Below from left Andrew Briggs, Fiona Pettigrew, Margaret Staples, Lainie Wengier, Renae



### Clinical Pharmacology Unit

Head of Unit Professor Henry Krum MBBS, PhD, FRACP

#### Staff

Dr Emma Ashton

Dr Andrew Kompa (Dept of Medicine)

Dr Bing Wang

Ms Marina Skiba

Ms Julie Yallop

Ms Joanne Croucher

Dr Danny Liew

Dr Dennis Wong (Alfred)

Ms Jane Brack (Alfred)

Ms Robyn Funston (Alfred)

Ms Rosie Gehrig-Mills (Alfred)

#### Students

Steven Haas (Doctoral student)

The Unit provides drug-related services to The Alfred, including advice to and membership of, the Drug and Therapeutics Advisory Committee and the Human Research Ethics Committee, leadership on the Adverse Drug Reactions Committee and consulting on drug and toxicology related clinical problems. Plans are underway for an Adverse Drug Reaction inpatient consulting service.

The Unit has an active program of basic and clinical research with regard to evaluation of new and established drug therapies.

Clinical Research is focused on drugs that may affect the cardiovascular system. Agents under current active research evaluation include COX-2 inhibitors, clozapine, angiotensin receptor blockers, statin therapies and beta-blockers, as well as various experimental agents.

Evaluations include assessment of autonomic and endothelial function in health and disease.

The unit also serves as a coordinating centre for multi-centre trials. Current ongoing trials include:

**UNIVERSE** - a study of statin therapy in the treatment of heart failure.

**CHAT** - NHMRC sponsored study looking at the utility of telephone support in rural and remote areas for the patient with heart failure to prevent rehospitalisation.

**TRIPLE R** - role of fibrosis in remodeling from biventricular pacing.

**SCREEN-HF** – prevalence of heart failure in subjects with risk factors and high BNP levels.

The Unit also conducts a number of basic research programs within the Monash Medical School research laboratories on The Alfred campus.

Current programs include -

- The role of urotensin II in cardiac disease (NHMRC supported).
- The role of p38 MAP kinase system in heart failure disease progression.
- The role of Rhokinase in cardiac fibrosis.



Below, Rosie Gehrig-Mills



### Research Units at DEPM continued

### Health Services Management Unit

Head of Unit Professor Just Stoelwinder MBBS, MD, FRACMA, FACHSE, FAFPHM

#### Staff

Dr Syd Allen (MBBS moderator)
Dr Peter Bradford (MBBS moderator)
Dr Sue Evans (Quality improvement)
Dr Jennifer Grafton (Accounting)
Dr Guy Haller (MBBS moderator)
Dr Catherine Joyce (Health policy)
Ms Helen Kemp (Clinical leadership and management)
Ms Elizabeth Kennedy (Health services

Ms Kelly Makarounas-Kirchmann (Finance and economic decision making)

Dr Deborah Roberts (Health system development)

Dr Lakshmi Sumithran (MBBS moderator)

The prime focus of the Unit is the delivery of high quality, flexible education programs in health services management including -

Undergraduate:

MBBS, Year 4, Theme II, Health Management BMSc, BMS3032, Health Policy and Management

Postgraduate:

Graduate Certificate in Health Services
Management
Graduate Diploma in Health Services
Management
Master of Health Services
Management
Master of Public Health, Health

Services Management stream

Staff of this unit also provide advisory and consulting services in health service organisation and program design and performance evaluation; economic evaluation; pharmaceutical pricing; health policy development; safety, quality and accreditation and senior health executive coaching.

#### Research:

The Unit is a partner in the NHMRC Centre of Research Excellence in Patient Safety, which was established at DEPM in 2005.

Participation in other projects includes:

- Clinician attitudes to clinical indicators ACHCS study
- COSMIC The Cost of Myocardial Infarction and Heart Failure in Australia
- PITCH Predictors Influencing The Change in Health Status of Elderly in Community Care

Below right - Professor Just Stoelwinder with Yao Zai Shan (Senior Lecturer, Faculty of Health Administration) and Xu Gang (Instructor Biostatistics, Department of Epidemiology & Biostatistics) of Shanghai Jiao Tong University. They will be involved in teaching the Monash MBA(Hospital Administration) in Shanghai and were in Australia for a couple of months to become familiar with the Monash teaching approach.





### Human Rights & Bioethics Unit

Head of Unit Associate Professor Bebe Loff BA LBB, MA(Med Law & Ethics), PhD

#### Staff

Mr Bradley Crammond *BA/LLB*Dr Deborah Zion *BA(Hons), MA, PhD* 

### Honorary Staff

Dr Jim Black
Dr Wendy Holmes
Assoc. Professor Mike Toole

The Human Rights and Bioethics Unit conducts teaching at both postgraduate and undergraduate levels.

The Unit offers a range of consultancy services in the areas of research ethics, bioethics, human rights and public health law. Consulting services have recently been provided to the Department of Human Services on the implementation of the Victorian Human Rights Charter of Rights and

Responsibilities and to the National Heart Foundation on a review of Victoria's planning provisions.

Major grants administered by the Unit currently include an NHMRC project examining regulatory responses to obesity and an ARC project looking at the ethical questions regarding the provision of healthcare to asylum seekers in detention centres.

The Unit is responsible for the Masters in International Research Bioethics, funded by the Fogarty International Centre of the United States National Institutes of Health. The Unit also coordinates the Graduate Diploma in International Health and the Masters of International Health.

Below, Bebe Loff at work, and right Deborah Zion, Bebe Loff and Bradley Crammond





### Research Units at DEPM continued

### Infectious Disease Epidemiology Unit

Head of Unit Dr Karin Leder MBBS(Hons), FRACP, MPH

### Staff

Dr Martha Sinclair Ms Naomi Cooke Ms Pam Lightbody

#### Students

Ms Joanne O'Toole Ms Samantha Rizak Ms Shelly Rodrigo

The work of the unit focuses primarily on the topics of water quality and public health, how risks of infectious diseases are related to environmental factors, and infectious diseases that are particularly relevant to travellers, immigrants and refugees. Our research activities also include issues affecting clinical practice such as studies on the occurrence and prevention of post-operative infections.

The Infectious Disease Epidemiology Unit is a leading centre for research on public health issues relating to water quality through its partnership in the Cooperative Research Centre for Water Quality and Treatment. Research in this area covers a number of different water types from conventional drinking water supplies through to use of alternative water sources such as rainwater, greywater and recycled water from sewage effluent. Specific projects employ a range of approaches from laboratorybased research through to the development of risk management systems and innovations in water quality monitoring strategies.

### Current and planned research -

- Exposure assessment in urban reticulation systems
- A series of exposure experiments: recycled water and alternative water sources
- Developing evidence-based strategic water quality monitoring systems.
- Health effects of rainwater consumption
- Health services utilisation and urban dual reticulation systems
- Health issues in travellers visiting friends and relatives

- Risk factors for surgical site infection (SSI) complicating coronary artery bypass graft surgery (CABG)
- · Infections in trauma patients
- Analysis of registry of splenectomised patients

Below from left, Joanne O'Toole, Martha Sinclair, Karin Leder, Naomi Cooke, Shelley Rodrigo



### Musculoskeletal Disease Unit

Head of Unit Professor Flavia Cicuttini MBBS(Hons), PhD, MSc, DLSHTM, FRACP, FAFPHM

#### Staff

Ms Judy Hankin Dr Kevin Morris Dr Donna Urquhart Dr Anita Wluka Dr Yuanyuan Wang

#### Doctoral students

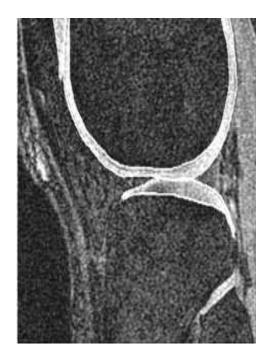
Zahid Ansari
Frank Buchanan
Mike Glisson
Fahad Hanna
Cassandra Szoeke (University of Melbourne)
Tina Racunica

The work of the unit centres on the development of outcome methods in musculoskeletal disease and the application of these methods in the prevention and management of musculoskeletal disease.

The Musculoskeletal Unit has five current NHMRC grants and through key personnel, is also an active participant in two NHMRC Centres of Clinical Research Excellence: the NHMRC Centre of Clinical Research Excellence in Therapeutics, based at DEPM, and the NHMRC Centre of Clinical Research Excellence in Women's Health based at the Women's Health Program, Department of Medicine, Monash University. These Centres will provide an opportunity for comprehensive and multidisciplinary research into the role of oestrogens and androgens in these disorders.

### Research

- The effect of modifiable behavioural factors (diet, physical activity and use of hormone replacement) on knee cartilage in healthy, community based subjects.
- The effect of hormonal and immunological changes on joint cartilage in healthy women.
- The effect of biomechanical factors on knee cartilage in healthy subjects and those who have previously undergone a meniscectomy.
- The mechanism of action of obesity in the pathogenesis of knee OA and how this can be reversed.



Below, Anita Wluka performing an MRI



### Research Units at DEPM continued

# Pre-hospital Emergency & Trauma Research Unit

Head of Unit Professor Peter Cameron MBBS, MD, FACEM

#### Staff

Deputy Head of Unit: Dr Belinda Gabbe

Ms Nadine Andrew

Ms Friyana Bhabha

Mr Travis Bloom

Ms Rosalie Clementson

Dr Sue Evans

Ms Georgina Galea

Mr Andrew Hannaford

Ms Melissa Hart

Dr Shelly Jeffcott

Professor Joseph Ibrahim

Ms Belinda Jackson

Ms Elvina Johnson

Ms Peta McLaughlin

Ms Sue McLellan

Ms Emily McMullin

Ms Mimi Morgan

Ms Emily Mulholland

Ms Vina Nyugen

Mr Andrew Palmer

Mr Ian Patrick

Dr Louise Phillips

Ms Natalie Picton

Mr M Pruksawongsin

Ms Emily Sims

Ms Natalie Silbert

Professor Peter Sprivulis

Ms Ann Sutherland

Dr Donna Urquhart

Mr James Westmore

Ms Lauren Wittrup

Dr Owen Williamson

#### Students

Ms Helen Ackland Dr Georgiana Chin

Mr Cameron Gosling

Mr Adam Dowrick

Ms Andrea Fradkin

Mr Paul Jennings

Ms Louisa Lam

Ms Marg Loughnan

Dr DeVilliers Smit

Ms Caroline Weller

Mr Cameron Willis

Ms Tsharni Zazryn

### Honorary staff

Dr Ian Millar

A/Prof Stephen Bernard Mr Alex Currell Ms Shelley Cox Ms Masha Fridman The Pre-hospital Emergency and Trauma Group now has fifty staff and students who specialise in research in a wide variety of areas including trauma epidemiology, injury prevention and management, pre-hospital care and health services and systems research.

The unit is responsible for a number of registries which are an important part of the trauma system and involve high level interaction with senior industry, government, specialist medical and other professional and academic personnel. These include The Victorian State Trauma Outcomes Registry and Monitoring (VSTORM) Group; the Victorian Orthopaedic Trauma Outcomes Registry (VOTOR) and the Haemostasis Registry.

The VSTORM Group is now in its sixth year of operation and further funding has been received to look at the functional and quality of life outcomes





outcome measurement following major injury, improving pre-hospital care and emergency department processes of care.

PhD research projects include:

- Ms Helen Ackland is looking at the correlation of clinical and radiographic findings in acute cervical discoligamentous injury with long term outcomes in road trauma patients.
- Ms Georgiana Chin is looking at the study, observation and improvements in obstetric clinical handover to improve the efficacy and safety of patients in this practice.
- Mr Cameron Gosling is investigating various training and lifestyle factors as risk factors for injury in age group triathletes. The findings will provide an evidence base for the development of injury prevention strategies for triathletes.
- Ms Louisa Lam is looking at the diagnosis and management of heart failure in the emergency setting.
- Mr Cameron Willis is undertaking an investigation of the practicality of using Indicators to assess quality of care in health systems.
- Ms Tsharni Zazryn is investigating the risk factors for injuries in professional and amateur boxing, with a specific focus on cumulative brain injury.

of patients at 6, 12, 18 and 24 months following major trauma. The VSTORM Group has also established strong links with other trauma registries in the United Kingdom, Hong Kong and New Zealand.

Professor Peter Cameron is a codirector of the National Trauma Research Institute (NTRI) and collaborates on many clinical research projects in trauma. The unit has major collaborations with the Alfred Hospital, the Victorian Cardiac Arrest Registry, the Metropolitan Ambulance Service, Rural Ambulance Victoria and The National Trauma Registry Consortium.

There are a number of pre-hospital studies led by Associate Professor Stephen Bernard including the RICH (The Rapid Infusion of Cold Hartmann's for Hypothermia following Cardiac Arrest) study; and the RSI (Rapid Sequence Intubation) Study.

In 2006 the Metropolitan Ambulance Translational Research unit was formed and this is led by Mr Ian Patrick.

In 2006 the Hyperbaric Oxygen in Lower Limb Trauma (HOLLT) study commenced. This is an international multi-centre randomised clinical trial aimed at assessing the impact of hyperbaric oxygen therapy (HBO) on acute complication rates and long term outcomes following severe musculoskeletal trauma.

Major research themes include injury prevention, pain management,

Below, staff and registry participants at a Haemostasis Seminar held at The Alfred Hospital





### Research Units at DEPM continued

### The Understandascope

Head of Unit Associate Professor Frank Fisher BE(Elec)(Hons), BA(Hons), MEnuSt(Hons). FEOANZ, FAIE, MIEA

The Monash Understandascope moved to this Department in 2006. It is a community engagement and demonstration unit which produces research and consulting services.

Activities are directed to a wide audience, including the general public, professional organisations and the academic community.

Frank Fisher is currently convenor of a Grad.Cert. in Sustainability, teaching two subjects (Principles of Sustainability & Energy for the Future) in Swinburne University of Technology's National Centre for Sustainability. He was also involved in development of the innovative Health, Knowledge & Society course for the new Monash five year medical curriculum.

www.understandascope.com
Frank Fisher (below)

A book based on his papers was published in 2006: Response Ability: Environment, Health & Everyday Transcendence, Vista, Elsternwick (Aust.).

Other staff are -

Dr David Low, Senior Research Fellow Ms Sue Edwards, Senior Research Fellow

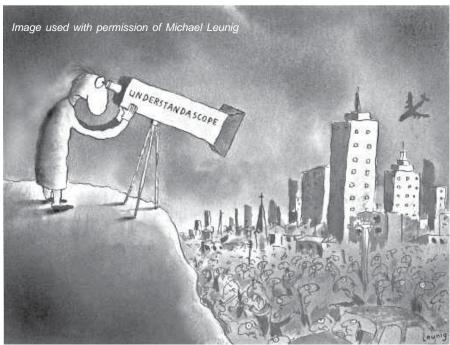
The Understandascope represents a way of seeing the world. It is represented by the following response to an e-mail from an environmental science graduate.

Question: Which kind of whipper snipper would you suggest that one should purchase and use for weeds in an urban residential garden, the petrol or an electric one?

### Response:

1. Neither. - ie. don't have a garden at all if in an urban residential situation try using or creating public/community gardens. Also: redefine "weed". OR:

- 2. Get used to things growing as "they" like
- 3. If insisting on a garden, grow things that are edible/satisfying in ways that don't need a "whipper snipper".
- 4. If insisting on cropping borrow & train (with e.g. fences) a herbivore (e.g. lamb).
- 5. If not disabled, do the job with a flat hook, hand shears etc.; you'll be fitter for it \*
- 6. If all that fails, here are things to think about and you make the decision:
- a) an electric device will be quiet (neighbours!?).
- b) from an energy efficiency point of view in mainland Aust. one is as bad as the other; -in Tasmania/NZ use the electric device.
- c) from a cutting perspective, probably the petrol device is more "powerful".
- d) the electric one will have a cable and there is a v. minor safety risk to the user in that s/he might cut the cable.
- e) from a user perspective the petrol one will be noisier, heavier & require petrol and more maintenance.



### **Seminars**

2006 was another successful year for Department seminars with staff, students and guest speakers presenting on a very wide range of topics. Thank you to all our staff, students and guest speakers who contributed to the seminar program.

## Our guest speakers in 2006 included -

Professor Harald Schmidt Head, Department of Pharmacology Vascular health: prevention and early diagnosis.

Professor Anthony Seaton Head, Division of Epidemiology National Stroke Research Institute Hazards and risks to health from nanoparticles.

Dr Mandy Thrift Head, Division of Epidemiology National Stroke Research Institute The inequity of stroke.

Dr Andreas Wielgosz
Director, WHO Collaborating Centre on
Surveillance of Cardiovascular
Diseases
Global cardiovascular disease - a time

for action.

Professor Boyd Swinburne School of Exercise & Nutrition Sciences Deakin University

Community based interventions for obesity prevention.

Associate Professor Dorota Gertig University of Melbourne The molecular revolution and epidemiology: potential and pitfalls. Our seminar calender is available at www.med.monash.edu.au/epidemiology/events/



Professor John McNeil and Dr Sally Cockburn after Dr Cockburn presented a seminar in 2006.

Dr David Taylor Director of Emergency Medicine Research

Royal Melbourne & Austin Hospitals Complementary and alternative medicines: their potential impact upon clinical practice.

Associate Professor Ian Greaves University of Minnesota Synthetic fibres focusing on SiC.

Associate Professor Mark Fitzgerald Director, Emergency & Trauma Centre Alfred Hospital Computerised trauma resuscitation

Professor Paul Myles Alfred Hospital Gender and recovery after general anaesthetic.

Dr Rob Medcalf, Australian Centre for Blood Diseases, Monash University The secret life of a clot buster. Associate Professor Frank Archer Centre for Ambulance and Paramedic Studies, Faculty of Medicine Department of Community Emergency Health and Paramedic Practice and its role in prehospital care.

Associate Professor Tony Harris
Monash Centre for Health Economics
The determinants of public
reimbursement for drugs. The
Australian Pharmaceutical Benefit
Scheme 1994-2004.

Dr Sally Cockburn Known in the media as Dr Feelgood, and one of Australia's leading health communicators.

Evidence based medicine in a commercial world - or the inside story on how I made herpes sexy.

### Staff in 2006





### Professor and Head of Department

John J McNeil MBBS MSc PhD FRACP FAFPHM

### Professor and Deputy Head of Department

Michael Abramson MBBS(Hons), BMedSc, PhD, FRACP, FAFPHM

#### **Professors**

Robert Atkins AM, MBBS, MSc(Colorado), DSc, FRACP R Bellomo MBBS (Hons), MD (USA), MD (Monash), FRACP, FACCP, FJFICM

Rachelle Buchbinder MBBS (Hons) MSc (Clin Epi) FRACP Robert Burton MBBS, BMedSci, PhD, MD, BA

Peter Cameron MBBS, MD, FACEM

Flavia Cicuttini MBBS (Hons) MSc PhD DHTM FRACP FAFPHM

Joseph Ibrahim MBBS, GradCertHigherEd, PhD, MRACMA, FAFPHM, FRACP

Henry Krum MBBS, PhD, FRACP

Brian Oldenburg BSc(Hons), MPsych, PhD

Brian Priestly BPharm, MPharm, PhD

Malcolm Sim BMedSc MBBS MSc GDipOccHyg PhD FAFOM FFOM FAFPHM

Just Stoelwinder MD, MBBS, FRACMA, FACHE, FAFPHM Andrew Tonkin MBBS, MD, MRACP, FRACP

Paul Zimmet, AO, MD, PhD, FRACP, FRCP, FACE, FAFPHM

### Associate Professors

Andrew Forbes BSc (Hons) MSc PhD Maximilian de Courten MD MPH

 $\label{eq:Frank Fisher BE(Elec)(Hons)} Frank \ Fisher \ BE(Elec)(Hons), \ BA(Hons), \ MEnuSt(Hons).$ 

FEOANZ, FAIE, MIEA

Bebe Loff BA, LLB, MA (Medical Law & Ethics), PhD

Chris Reid BA, DipEd, MSC, CERTHE, PhD

Peter Sprivulis MBBS PhD FACEM FACHI

Rory Wolfe BSc, PhD

### Research Manager

Elizabeth Douglas BA, GradDipHealthPsych, PhD

### Senior Lecturers & Senior Research Fellows

Michael Bailey BSc(Hons), MSc(Stats), PhD

Geza Benke BSc, MAppSci, GDipQuanMeth, FAIOH, PhD

Neville Betts BA, GDipOccHazMan, MBA, CFSIA

James Chan MBBS, GradDipOEH, FAFOM

James Cui BSc, MMed, PhD

Lisa Demos BPharm, GDipHospPharm, PhD

Sue Edwards MEnvSc

David Elder MBChB, DGM, MRCGP, GradDipOccHlth, MPH,

**FAFOM** 

Sue Evans BN, GDipClinEpi, PhD

David Fish MBBS, PAFOM, FAFPHM

Deborah Glass MA, MSc, PhD, DipOccHyg, COH

David Goddard BMedSc, MBBS, DOH, FAFOM, MFOM

 ${\tt Bruce\ Hocking\ MBBS, FAFOM, FFOM(UK), FAFPHM, FRACGP,}$ 

**FARPS** 

Shelley Jeffcott BSc(Hons), PhD (CompSci)

Daryl Jones BSc(Hons), MBBS, FRACP

Helen Kelsall MBBS, MPH, MHlthSci, FAFPHM

Elizabeth Kennedy BA, LL.B(Hons), LL.M(Melb),

GradDipHealthMedLaw

Mary Lawson BSc(Hons)

Karin Leder MBBS(Hons), FRACP, MPH

Danny Liew BMedSc, MBBS(Hons), FRACP, PhD

Bebe Loff BA LBB, MA(Med Law & Ethics), PhD

David Low BA(SocSci), MEdvSc, PhD)

Mark Lubeliner MBA, MBBA, BMedSc, RACMA

Dianna Magliano BAppSc(Hons), PhD

Kelly Makarounas-Kirchmann BEC, MEC

David Newman MBBS, DipAvMed, PhD

Alice Owen BSc(Hons), PhD

Ian Patrick BAParamedic

Anna Peeters BSc, PhD

Louise Prentice MBBS, FRACP

Deborah Roberts MBA, MPH, PhD

Kathlyn Ronaldson BSc, MSc, DPhil

Louise Shiel BSc, GradDipAppSci, GradDipEd(Sec)

Martha Sinclair BSc(Hons), PhD

Margaret Staples DipAppSci, BBSc(Hons), MSc, PhD

Bing Wang PhD, MSc, BSc

Owen Williamson MBBS, GDipClinEpi, FRACS

Anita Wluka MBBS, PhD, FRACP

Robyn Woods BSc(Hons), PhD

Deborah Zion BA(Hons), MA, PhD







#### Lecturers & Research Fellows

Nick Andrianopoulos MBBS

Emma Ashton BAppSc PhD

Tai-Juan Aw MBBS, FRACP

Melissa Barber BSc(Hons), PhD

Jill Blackman BA(Psych), GradDipBHlth, PhD

Angela Brennan RN

Andrew Briggs BSc(Physio), PhD

Jahar Choudhury MSc, PhD

Andrea Curtis BSc(Hons), PhD BSc(Hons)

Martine Dennekamp MSc, PhD

Sue Evans BN, GDipClinEpi

Belinda Gabbe MAPPSc, BPhysio, PhD

Linton Harriss MPH, GradDipClinEpi, DipAppSci(Nursing)

Lucinda Franklin BA

Giuliana Fuscaldo BSc, MBioethics, PhD

Koraly Giuliano BBS, BSc (Computing)

Andrew Harford BAppSci(Hons), PhD

Lisa Higgins BPhysio(Hon), MPH

Marisa Jenkins RN

Renea Johnston BSc(Hons), PhD

Daryl Jones MBBS

Peter Kent BAppSc(Chiro), BAppSc(Physio),

GradDipManipTher, PhD Andrew Kompa BSc, PhD

Louisa Lam RN, BHSc, GradDip(Coronary Care), MPH

Richard Lunz MBBS

Ewan MacFarlane BSc, MPH

Adam Meehan AppSci, CompSci

Dean McKenzie BA(Hons)

Alice Owen BSc(Hons), PhD

Helen Potts MTropHlth, LBBS, RN

Stephanie Poustie MPH, CertCritCare, BN

Samantha Rizak BA, BASc, MSc

Margaret Stebbing RN, DipAppSci, MPH

**Rwth Stuckey** 

Gillian Syres RN, BA, GDip(AdvNursing)

Robyn Tapp Dip(ChildStud), BA(Psych&PsychPhys),

GradDip(HealthStats), PhD

Donna Urquhart BPhysio(Hons), PhD

John Varigos BSc(Hons)

Elisa Wood MA AppSc, GDipEpi

Anita Wluka MBBS, PhD, FRACP

Tsharni Zazryn BAppSci

### Research Staff

Nadine Andrews MPH

Jane Ball

Allison Beauchamp BHlthSci, CCNCert,RN

Patricia Berry BBiomedSc(Hons)

Travis Bloom

Molly Bond BBiotech(Hons)

Naomi Cooke BApSci, BSci

Joanne Croucher BSc, BA

Bradley Crammond BA(Hons), LLB(Hons)

Christina Dimitriadis BAppSci

Anthony Del Monaco BSc(Hons), GDipComp, MPH

Basia Diug BBiomedSc(Hons)

Karen Duve DipGenNursing

Rosie Gehrig-Mills RN, GradCert(CritCare), ADA(AppPhot)

Judy Hankin BA(Psych), RN

Andrew Harford PhD

Alison Hayes RN

Kyung-Jin Kim MPH

Maris Jenkins RN

Tom Lanigan

Paul Lacaze BSc

Philippa Loane BBMedSci

Pam Lightbody BSc

Susan McLellan RN

Kevin Morris MEng, FIEAust, CPEng

Emily Mulholland BA, BSc

Vina Nguyen BBiomedSc(Hons)

Louise Phillips BSc(Hons), PhD

Rosa Schattner BEc MPH

Pam Simpson BSc(Hons)

Marina Skiba BEd(Sec)

Liz Stewart BAPsych(Hons)

Anne Sutherland RN, RM, AdCertMgmt, GDipOccEH&S

Yuanyuan Wang MMed, MBBA

Lainie Wengier BSc, MBioMedSci

Cameron Willis BPhysio

### Staff in 2006 continued

#### General staff

Carolyn Barrie - Marketing and short courses

Melissa Booth - HR

Waranon Buranasiri - Trauma Unit Rosalie Clementson - MONCoeh

Sabina Davey - Front Office Administrator

Colin Fee - IT Manager

Desmond Gul - Project Coordinator, International Public Health Unit

Kaylene Hanlon - Undergraduate & Doctoral Administrator

Andrew Hannaford - Data Manager, Trauma Unit

Natalie Holsinger - HR

Jo Harwood - Project Officer - Clinical Pharmacology

Christine Kirkham - HOD Office Manager

David Khuu - IT support

Peta McLaughlin - Project Officer CRE-PS

Elizabeth Moon - Finance Manager

Mimi Morgan - Trauma Unit

Vanessa Murray - Project Coordinator, MonCOEH Maida O'Keefe - Postgraduate teaching Administrator

David O'Reilly - Project Officer - Clinical Pharmacology

Catherine Pound - Postgraduate teaching Administration

Anna Sutjiadi - Finance Officer

Laura McCormick - Admin assistant

Kunnapoj Pruksawongsin - Trauma Unit

Rebecca Watson - Project Coordinator, International Public Health Unit

Gary White - Finance Officer

Jane Williams - Finance and HR Administrative Assistant

Vanessa Williams - Administrative Assistant

### Visiting academics

Dipak Kotecha (Wales)

Hoai Nguyen Thi Thu (Thailand)

Mahendra Arnold (Sri Lanka)

John Chen (US)

Cai Yong (China)

### Visiting students

Emily Kelly (RMIT student)
Carla Trone (Canada)

#### Doctoral students

Helen Ackland

Mohammad Ansari

Liz Barr

Charmian Bennett

Frank Buchanan

Rachelle Buchbinder

Adrian Cameron

Jessica Chellappah

Lei Chen

Georgiana Chin

Jennifer Coghlan

Miranda Davies

Glenn Doolan

Adam Dowrick

Gregory Duncan

Maros Elsik

Soula Filipas

Andrea Fradkin

Michael Glisson

Cameron Gosling

Rebecca Guy

Steven Haas

Guy Haller

Linton Harriss

Andrew Haydon

Peter Higgs

Jillian Blackman

Imo Inyang

Ken Karipidis

Will Kemp

Louisa Lam

Karin Leder

Danny Liew

Megan Lim

Ewan Macfarlane

Dean McKenzie

Shyamala Nataraj

Jo O'Toole

Tina Racunica

Samantha Rizak

Shelly Rodrigo

Margaret Stebbing

Rwth Stuckey

Ogilvie Thom

Nicholas Thomson

Helen Walls

Nicholas Walsh

Carolina Weller

Cameron Willis

01 1 1/

Changchuan Xue

Julie Yallop Tsharni Zazryn

## Honorary staff in 2006

### Honorary Professors

John Catford MA, MSc, MB BChir, DM, DCH, FFPH, FRCP, FAFPHM, FIPAA, FAICD

Nicholas Crofts MBBS, MPH, FAFPHM

Mark Elwood BSc(Hons), MBBCh, SM,MD, DSc, MBA, FRCP, FAFP

Kit Fairley MBBS, FRACP, FAFPHM, Ph D, FAChSHM Caroline Finch BSc(Hons I), MSc, PhD, FASMF, ASTAT

Graham Giles CertEd, BS, MS, PhD

Lindsay Grayson MBBS, FRACP, FAFPHM, MD, MSc

Steve Hrudey FRSC, MSc, PhD, DSc(Eng), PEng

David Hill AM, PhD

Joseph Ibrahim (Adjunct) MBBS, GradCertHigherEd, PhD, MRACMA, FAFPHM, FRACP

John Mills SB, MD, FACP, FRACP, AFRCPA

Rob Moodie MBBS, MPH, F(FPHM)RACP, FRACGP, FAIM

Paul Myles MBBS, MPH, MD, FCARCSI, FANZCA

John Reeder

Frank Rosenfeldt MBBS, MD (Adel), FRCSE, FRACS.

Richard McK. F Southby PhD, MPA, FCHSE, FCLM (Hon),

FFPH, FRSM, FRIPH

Simon Stewart BA, RN, BN, Grad Dip Ed, PhD

Andrew Tonkin MBBS, MD, MRACP, FRACP

Mark Wahlqvist

The Hon Michael Wooldridge MBA, MBBS, BSc, RACP,

John Zalcberg MBBS, PhD, FRACP, MRACMA, GAICD

#### Honorary Associate Professors,

Michael Ackland MBBS (Melb), MPH(Monash), FAFPHM

Terri Allen BSc, PhD

Stephen Bernard MBBS, FACEM, FJFICM

Steve Bolsin, BSc, MBBS, FRCAL, RACMA, ANZCA

Alex Currell BE, MEngSc, BA

Elton Edwards

Simon Finfer MBBS, FRCP, FRCA, FJFICM

Suzanne Garland MBBS, FRCPA, MASM

Robyn Guymer MBBS, PhD, FRANZCO

Chris Gray PhD

Graeme Hart MBBS, FANZCA, FJFICM

William Hart MBBS, MAPsS, FAFPHM

Margaret Hellard MBBS FRACP PhD FAFPHM

Kim Hill MBBS, MHP, FRACMA

 $Peter\ Hodsman\ MBChB,\ MD,\ MRCP(UK),\ FRCP,\ FRACP,$ 

MAICD

Damien Jolley MSc, Mc, DipEd, CStat

Bruce Levy BEc, LLB

Harry Mond MBBS MD FRACP FACC FCSANZ FHRS

John Myburgh MBBCh, PhD, DA(SA), FANZCA, FJFICM

Professor Julie Pasco BSc(Hons), PhD

Colin Russell MB ChB(Glasgow), FRACS MS

(Monash), Grad Dip Bus (RMIT)

Robert Salamonsen MBChB, MD, FJFICM, Cert Hyp Med,

FFICANZCA, FANZCA, FFARACS

Jonathan Shaw MD, MRCP(UK), FRACP

Denis Spelman MBBS, FRACP, FRCPA, MPH

Philip Stokoe MBBS, DPH, MSc, MPH

Merlin Thomas MBChB, PhD, FRACP

Michael Toole B Med Sci, MB BS, DTM&H (London).

Theo Vos MD, MSc, PhD

Michael Walsh MBBS(Hons), BHA, MPA, FRACMA

### Honorary Associates

Robyn Berry

Shelley Cox BA, BAppSci(Hons), PhD

Anne Bruce

Masha Fridman BSc(Hons), GradDip, MSc, PhD

Guy Haller, PhD

Jan Hoving MSc, PhD

Roderick McRae BMedSc(Hons), MBBS(Hons), FANZCA,

FJFICM, MBioeth, JD, GDLP, PGDipEcho

Susan Montgomery

Alex Proudfoot

Louise Turnour RN ,RM ,Grad Dip Health Ed.

### Honorary Clinical Teacher

Andrew Pranckunas

#### Honorary Senior Lecturers

Campbell Aitken PhD, BSc(Hons)

Peter Allen

John Amarena FRACP

M Zahid Ansari MBBS, MPH (Yale), MS (Washington)

Kathryn Antioch BA(Hons), MSc, AFCHSE, CHE, PhD

Emilio Badoer BSc(Hons), PhD

David Barton MBBS, MSc, FACOM, MFOM

James Black MBBS(Hons), PhD, MCommH, PhD DTM&H

**FAFPHM** 

Ronald Borland BSc(Hons), MSc, PhDDr

Pauline Branley MBBS, PhD, FRACP

Malcolm Brown MBBS DOH FAFOM

Robin Burns BA(Hons), MSc, MPH, DipEd, PhD

John Clements MBBS, MSc, DCH, DObst, LRCP, MRCS,

FAFPH, MFPH, MCCM

Ben Coghlan MBBS, MPH&TM, MAppEpid

## Honorary staff in 2006 continued

Barbora De Courten MD, PhD Mick Creati MBBS, FRACP

Peter Deutschmann MBBS, FRACS, MPrimCare

Sherene Devaneson MBBS, Dip (Obs) RACOG, FRACMA,

FCHSE, FAIM, FHKCCM

Tim Driscoll BSc(Med) MBBS MOHS PhD FAFOM FAFPHM

David Eccleson

Andrew Haydon MBBS, PhD, FRACP

Bruce Hocking MBBS, FRACGP, FAFOM

Wendy Holmes MBBS, MSc

Karen Jandeleit-Dahm MD, PhD

Don Kay SBHA, MHA, MSc

Helen Kemp BA, MBA

Peter Kruger MBBS, BSc (hons), FANZCA, FJFICM

Trish Livingston BA(H), PhD

Kevin MacDonald BMedSc, MBBS, FAFOM

Anne-Marie Pellizzer MBBS, FRACP, PhD

Caroline Marshall MBBS, PhD, FRACP

Jeremy Millar GradCertHlthEc GradCertBiostat BMedSci MB

ChB FRANZCR FAChPM

Richard Osborne DipApplBiol, BSc, PhD

Josef Reum, BA. MA, PhD

Anne Reutens

Deborah Roberts MBA, MPH, PhD

Karen Smith BSC(Hons), Grad Dip Epi and Biostats,

GradCertExec BA, PhD

Beverley Snell MappSc

Anthony Stewart MBBS, MAE

Peter Stow MBBS FRCA FJFICM

Paul Talman BSc, MBBS, FRACP, Phd

Amanda Thrift BSc(Hons), PhD

Sara Watson MBChB, BSc, MHA, FRACMA

Heather Wellington MBBS, BMedSc, BHA, FRACMA

Joanne Williams BSc(Hons), MAppEpi, PhD

Alan Wolff MB BS DipRACOG FRACGP MBAAFCHSE

MRACMA, MD

Michael Wright

### Honorary Senior Research Fellows & Research Fellows

Carol George BSc, MBus(IT), GradDipEpiBiostat
Deepak Haikerwal BSc, MBBS, FRACP, PhD
Stephen Duffy MBBS(Hons), PhD, FRACP, MRCP, FCSANZ
David Pilcher MBBS, MRCP(UK), FRACP, FJFICM
Stephanie Poustie MPH,BN,CritCareCert.

Julie Yallop NZRN

### Honorary Assistant Lecturers

Ms Juliet Gale BA(Hons IIi), MLib

### Honorary Lecturers

Tai-Juan Aw MBBS, FRACP

Emma Ashton BAppSc, PhD

Stephen Begg BA(Hons), MPH

Shin Choo BPharm, GradDipHosPharm, CertHlthEco

Noel Cranswick MBBS, B Med Sc, FRACP

Margaret Curran MBChB, MPH, FRCPath, FFPM

Fabian Dalais BSc(Hons), PhD

David Dunstan PhD

Simon Fisher MBBS, MBA

Robyn Horsley MBBS FAMAS FAFOM (RACP) MPH GRAD

DIP MSM

Peter Kamen MBBS

Martyn Kirk BAppSc, MAppEpi

David Kong GCHE, BPharm, MPharm, PhD

David Kotzman BMedSc(Hons), MBBS, MPH, FAFOM,

FAFPHM

Robert Lew MBBS PhD FCSANZ FRACP

Clement Malau MBBS, DTM&H and MPH

Jacqueline Martin BAppSci (Med Lab Sci) Hons, PhD

Chris Morgan MBBS (Sydney) DTCH (Liverpool) FRACP

Damien Morgan RN, BEd, PhD

Lisa Natoli MPH, Dip App Sci Nursing

Peter New MBBS, MClinEpi, FAFRM (RACP)

Raj Perera MBBS, MSc, MD

Priscilla Robinson RN, BNurs, MPH, PhD

Gayle Savige

Richard Skiba BEd(Sec), MDistEd, MEd

Helen Sutcliffe MBBS, FAFOM

Loretta Vaughan BAppSc, MPH

Elmer Villanueva MD, ScM

Nicole Watson BSc(Hons), GDipManSci

David Weissman MBBS, MPM, FRANZCP

Mary Wyatt MBBS (Hons) MPH, Grad Cert MSM, FAFOM

# Research funding in 2006

Thankyou to all the organizations listed on the following pages who have generously funded our research.

A prospective cohort study of recentonset low back pain in primary care. NHMRC Fellowship Kent P 2006-2009, \$188,300

A randomised trial of core cooling versus surface cooling in comatose survivors of prehospital cardiac arrest (RICH).

NHMRC Project Grant S Bernard , I Patrick, D Taylor, A Kelly, W Silvester 2003-2007, \$295,000

A randomised, double-blinded intervention study to assess health effects of drinking water from rainwater tanks.

CRC for Water Quality and Treatment Scholarship Rodrigo S \$23,076.00, 2006-2009

A randomised, double-blinded intervention study to assess health effects of drinking water from rainwater tanks.

NHMRC Project Grant Leder K, Sinclair M, Forbes A 2006-2008, \$844,313

A study of health and work in employees of Alcoa of Australia Ltd. (Healthwise). Alcoa Australia Ltd John McNeil, Malcolm Sim, Lin Fritschi, William Musk 1994-2006, \$6629,684.00

A trial of prehospital rapid sequence intubation in patients with severe head injury.

NHMRC Project Grant

Bernard S 2004-2008, \$305,375 Advanced statistical analyses and associated computing programs for epidemiological longitudinal studies. Monash University Strategic Grants Scheme J Cui, A Forbes, M Sim \$40,000

Air Standards Health Advice.

Commonwealth Department of Health and Ageing

B Priestly, J McNeil, M Abramson

2006, \$79,200

An automated telephone system to improve diabetes self-care behaviours. DART Research Grant B Oldenburg, M Courtney, R Friedman 2006-2007, \$45,000

An implementation trial of a telephonebased care management program for patients following myocardial infarction.

NHMRC Project B Oldenburg 2007-2009, \$569,875

Antiviral treatment in injecting drug users. NHMRC Scholarship N Walsh 2005-2006, \$60,028

Aspirin in reducing events in the elderly (ASPREE) trial
Bayer Health-Care
J McNeil, M Nelson, C Reid, A Tonkin
2006-2012, \$333,067

AusJEM: An Australian Job Exposure Matrix Monash Research Grant G Benke 2006-2007, \$20,000

### Research funding in 2006 continued

ACHHRA-Australian Centre for Human Health Risk Assessment. Commonwealth Department of Health and Ageing, Capacity Building Grant J McNeil, M Sim, B Priestly 2001-2006, \$600,000

Australian Centre for Health Care Innovation.

Dept of Science, Technology and Innovation Capacity Building Grant J McNeil 2005-2007, \$4,500,000. Administered through Alfred Hospital.

Australian Centre for Radiofrequency Bioeffects Research (ACRBR); Mobile phone users surveillance study. (MORPHEUS) NHMRC CRE I Cosic, M Abramson, R Croft, J Finnie, R McKenzie, A Wood 2005-2008, \$2,499,200 Administered through Swinburne University

Australian Rheumatology Association Database (ARAD). NHMRC Capacity Building Grant R Buchbinder, L March, C Reid, M Lassere 2006-2010, \$1,250,000

Bosentan Patient Registry. Actelion Pharmaceuticals Australia C Reid 2004-2006, \$342,268

Building brief screening and diagnostic tests of mental health. NHMRC Scholarship D McKenzie 2007-2008, \$43,732

Cancer incidence, the effect of diet and physical activity on breast cancer prognosis, disability and quality of life in ageing Australians investigated through the Melbourne Collaborative Cohort Study.

NHMRC Fellowship

NHMRC Fellowship H Kelsall, 2006-2009, \$299,000 Cardiorespiratory effects of ultrafine particles.

NHMRC Project Grant M Abramson, H Krum, R Wolfe, J Gras, B Priestly 2005-2007, \$461,438

Causes of Acute Lymphoblastic Leukemia in children (ALL). Cancer Council of WA M Sim 2004-2007. \$77,270

Centre of Research Excellence in

Patient Safety (CREPS).
Commonwealth Department of Health and Aged Care Capacity Building Grant J McNeil, P Cameron, J Stoelwinder, D Campbell, P Myles, S Duckett 2005-2010, \$2,640,000

CRC-Health Stream Newsletter. CRC for Water Quality and Treatment 1995-2008, \$367,410

Current best OH&S practices for the Australian nanotechnology industry. Nanotechnology Victoria Ltd Research B Priestly, A Harford 2006, \$14,260

Dietary risks and alcohol as determinants of cardiovascular disease in the Melbourne Collaborative Cohort Study. NHMRC Scholarship L Harriss 2004-2006, \$71,559

Disability and quality of life in ageing Australians within the Melbourne Collaborative Cohort Study and development of a veteran twin registry. Monash University Fellowship H Kelsall, M Sim 2006-2009, \$25,000 Does bone metabolism affect risk of osteoarthritis in healthy women? L.E.W. Carty Charitable Fund A Wluka, J Pascoe 2006-2007, \$36,250

Does hyperbaric oxygen therapy reduce complications and improve outcomes after open tibial fractures with severe soft tissue injury? Victorian Trauma Foundation Research Grant P Cameron, I Millar, O Williamson 2006-2009, \$273,000

Effect of lifestyle factors on knee cartilage volume and rate of cartilage loss in a normal population NHMRC Project Grant F Cicuttini, A Forbes 2005-2007, \$233,726

Effects of lateral wedged insoles on symptoms and disease progression in knee osteoarthritis NHMRC Program Grant K Bennell, F Cicuttini, C Payne, A Harris 2005-2008, \$469,120

Efficacy and safety of vertebroplasty for treatment of painful osteoporotic spinal fractures: a randomised trial.

NHMRC Project Grant
R Buchbinder, D Connell, R Osborne, J Wark, P Ebeling, S Graves
2004-2007, \$578,000

Efficacy and cost-effectiveness of physiotherapy for chronic rotator cuff pathology. NHMRC Project Grant K Bennell, R Buchbinder, S Green, A Harris, A Forbes, 2004-2006, \$259,460 Epidemiological research into nutrition and cardiovascular disease. NHMRC Fellowship E Ashton 2003-2008, \$254,000

Epidemiology of diabetes related complications. NHMRC Sidney Sax Fellowship R Tapp, J Shaw, A Tonkin 2005-2008, \$340,772

Evaluating a novel, automated telephone system for improving the long term management of diabetes. HCF Grant
B Oldenburg, R Wootton, R Friedman, M Courtney, K Mengersen, J Prins 2006-2008, \$308,586

Evaluation of Aspirin and Tranexamic Acid in Coronary Artery Surgery: The ATACAS Trial. NHMRC Project Grant P Myles, J Smith, J McNeil, J Knight, J Cooper, B Silbert 2005-2009, \$1,170,000

Evaluation of orthopaedic treatment effectiveness across Victorian hospitals.

HCF Health and Medical Research Foundation Research Grant D Urquhart, P Cameron, 2006-2007, \$124,000

Exposure assessment for urban dual reticulation systems.

CRC for Water Quality and Treatment Grant

K Leder, J O'Toole, M Sinclair 2005-2007, \$112,070

Factors affecting knee cartilage volume and bone size and change over time in otherwise healthy women. NHMRC Scholarship Grant F Hanna, 2005-2006, \$44,537 Haemostasis Registry Project.

Novo Nordisk Pharmaceuticals Pty Ltd
Peter Cameron, John McNeil,
Christopher Reid
2005-2006, \$256,717

Health inequalities, governance and participation.
VicHealth Fellowship Grant
B Loff
2006-2010, \$650,000

Health literacy in the general population.

ANZ Executors & Trustee Company Ltd R Buchbinder, R Osborne

2006, \$20,000

Health risk assessment: Recycled water.
Smart Water Fund (Victorian Water Trust) Research Grant
K Leder, J O'Toole, C Diaper 2006-2007, \$151,490

Health Watch Case Control Study.

Australian Institute of Petroleum Ltd

Research Grant

M Sim, D Glass

1999-2007, \$405,087

Home Automatic external defibrillator Trial (HAT). Seattle Institute of Cardiac Research Grant A Tonkin 2003-2007, \$175,000

Identification of blood (serum) and urinary biomarkers that are associated with osteoarthritis disease progression in a well established cohort of subjects with knee osteoarthritis.

Astra Zeneca UK Ltd
F Cicuttini, J Hankin, A Wluka

2004-2006, \$380,800

Improving risk assessment for recycled water: Domestic laundries and recreational parks. NHMRC Project Grant K Leder, M Sinclair 2006, \$81,250

Improving the utility of outcome measurement in trauma patients.

Monash University Research Grant P Cameron, O Williamson, B Gabbe 2006, \$50,000

Integrating human rights and bioethics into public health research and policy. VicHealth B Loff 2005-2006, \$25,000

Intelliheart Research Project.
IM Medical Limited
D Kotecha, D Eccleston
2006-2008, \$447,000

Is the rate of rise in early morning blood pressure a potential risk factor? NHMRC Project Grant C Reid 2005-2007, \$392,700

Korean War veterans' national health study. Commonwealth Department of Veterans Affairs M Sim 2003-2015, \$58,600

Long-term implications of the increasing prevalence and duration of obesity for health in Australia: An aid to more effective and targeted prevention. VicHealth Fellowship A Peeters 2003-2007, \$500,000

Low back pain (LBP) and urinary incontinence (UI): What are the risk factors and are these conditions associated?

Monash University Project Grant D Urquhart, S Davis, F Cicuttini, R Bell 2006, \$35,000

### Research funding in 2006 continued

Mobile Radiofrequency Phone Exposed Users' Study (MoRPhEUS). NHMRC Project Grant M Abramson, G Benke, M sim, R Croft 2005-2007, \$204,750

Monitoring and Evaluation of the Victorian State Trauma System. (VSTORM) Department of Human Services P Cameron, J McNeil, B Gabbe 2005-2008, \$1,235,221

National Centre for Intensive Care Research (NCICR). NHMRC Capacity Building Grant J Cooper, R Bellomo, J Myburgh, S Finfer 2005-2010, \$1,290,000

NHMRC Practitioner Fellowship R Buchbinder 2005-2009, \$388,500

Novel therapeutic strategies to reduce the burden of chronic heart failure. NHMRC Program Grant H Krum, R Gilbert, S Itescu, M Tonkin, C Reid, K Darren 2005-2009, \$4,634,965

Occupational exposure to lead compounds and human cancer. NHMRC Project Grant M Sim, G Benke, L Fritschi 2006-2007, \$220,850

Outcomes of major trauma and sports injuries.

NHMRC Fellowship C Finch, B Gabbe 2002-2007, \$254,000

Pooled analysis of petroleum case control studies. CONCAWE Contract Research D Glass, M Sim 2006-2008, \$291,990 Predictors influencing the change in health status of elderly in community care.

Baptist Community Care Research C Reid, D Roberts 2006-2007, \$100,000

Proposal for funding for the Alfred/ Monash Centre for Therapeutics & Clinical Research. NHMRC CRE F Cicuttini 2003-2007, \$2,000,000

Randomised double-blind placebocontrolled trial of asprin in primary prevention of CVD events or dementia in the aged (ASPREE). NHMRC Project Grant J McNeil, A Tonkin 2005-2009, \$3,503,500

REACH Registry.

Baker Medical Research Institute

C Reid

2003-2006, \$176,175

Risk and determinants of fatal and non-fatal coronary heart disease in the Melbourne Collaborative Cohort Study. Australian Health Management Group Project Grant J McNeil, S Harrap, D Liew, D Magliano, A Tonkin 2005-2009, \$422,500

Role of musculoskeletal biomechanical factors in cartilage loss in those who undergo partial medical menisectomy. NHMRC Project Grant F Cicuttini, K Bennell, A Forbes, D Lloyd, G Stachowiak 2005-2008 \$644,330 Services and programs for an ageing society: Perceived needs, types of services and models of care.

Monash Research for an Ageing Society
C Browning, D Roberts, L Gerber, C Morse, F Sharifian, N White 2006-2007, \$19,917

Sulodexide in diabetic nephropathy. Keryx Biopharmaceuticals Inc R Atkins 2005-2008, \$662,754

Temporal relationships between war exposures and stressors and subsequent psychological disorders and their relationship to physical indicators of ill health.

Commonwealth Department of Veterans Affairs Research

M Sim

2005-2006, \$60,000

The Alberta Back Pain Initiative Study: A population based social marketing intervention for the prevention of disability associated with back pain. Alberta Heritage Foundation for Medical Research D Gross, A Russell, R Ferrari, D Schopflocher, M Battié, L Condratow, R Buchbidner, R Hu, G Waddell. 2004-2006, \$100,000

The Alfred/Monash Centre for Therapeutics and Clinical Research Excellence (CCRE) NHMRC CCRE Grant.

H Krum, J McNeil, A Tonkin, P Myles, F Cicuttini, A Forbes 2003-2007, \$2,000,000

The characterisation of orthopaedic trauma and the evaluation of outcome.

NHMRC Fellowship

D Urquhart

2004-2007, \$259,000

The effect of weight loss on knee cartilage volume.
Shepherd Foundation
A Wluka, J Dixon, F Cicuttini
2004-2006, \$65,000

The effect of weight loss on the risk of knee osteoarthritis and potential modification by biomechanical factors. NHMRC Project Grant F Cicuttini, J Dixon, A Wluka, K Bennell, G Jones, B Strauss 2006-2008, \$464,000

The effectiveness of short-term treatments for plantar fasciitis.

New South Wales Podiatrists

Registration Board

J Radford, K Landorf, R Buchbinder, C Cook

2006, \$3,125

The epidemiology of chronic disease, health interventions and DNA studies. NHMRC Project Grant A Tonkin, D Hill, M Wakefield, J Hopper, J Jass, J McCallum 2002-2006, \$625,000

The establishment of a Level 1 Trauma Centre Orthopaedic Registry (VOTOR). Victorian Trauma Foundation E Edwards, S Graves, O Williamson, M Richardson, T Kossmann, P Cameron, F Cicuttini, J McNeil, D Urquhart 2002-2007, \$879,700

The practicality of using indicators to assess quality within health systems. NHMRC Scholarship C Willis 2006-2008, \$80,451

The relationship between airborne particles exposure, incident respiratory symptoms and decline in lung function. NHMRC Project Grant M Abramson, R Wolfe, G Ayers, E Walters 2002-2006, \$301,060.00

The role of spirometry in managing chronic respiratory diseases in general practice.

NHMRC Project Grant M Abramson, F Thien, N Sulaiman, E Side 2005-2007, \$487,427

The use of patient-completed outcome assessment instruments following upper extremity orthopaedic trauma.

Monash University Scholarship
A Dowrick,
2005-2007, \$56,511

ViCS study.

Alfred Hospital Project Grant
J McNeil, H Schirmer, D Magliano
2002-2007, \$39,660

Use of adult mesenchymal precursor cells in the treatment of heart failure - novel experimental strategies, immunomodulatory porperties and cost-efficacy.

National Heart Foundation Scholarship H Zimmet 2006-2008, \$92,082

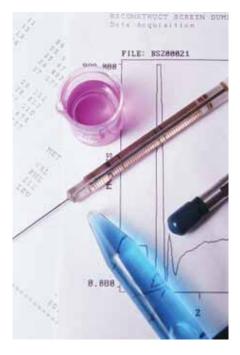
Vytorin treating uncontrolled lipids.

Merck, Sharp & Dohme (Australia) Pty
Ltd

C Reid,
2006-2008, \$1,411,610

War stressors, mental health and wellbeing outcomes in Australian veterans and service personnel. NHMRC Scholarship J Ikin 2005-2007, \$48,525





# Research funding beginning in 2007

A case-control study investigating factors contributing to the risk of bleeding in patients receiving warfarin therapy. J McNeil, P Cameron, R Wolfe, M Dooley. NHMRC Project Grant. 2007-2009, \$553,550.

A comprehensive regulatory strategy for obesity prevention in Australia.

NHMRC Preventive Healthcare and Strengthening Australia's Social and Economic Fabric Research Grant

B Loff, A Peeters, B Swinburn, M Lawrence, M Ackland.

B Loff, A Peeters, M Ackland

2007-2011 \$761,184

A phase II randomised controlled trial of atorvastatin therpy in intensive care patients with severe sepsis.

NHMRC Project Grant.

P Kruger, B Venkatesh, R Bellomo, K Kostner, J Cooper, M Roberts.

2007-2008, \$603,825.

Better targeting of preventive services using epidemiological modelling NHMRC Development Grant J McNeil, A Peeters, B Oldenburg, B Hollingsworth, M Nelson, M De Courten 2007-2011, \$1,823,750

Caring for Asylum Seekers in Australia: Bioethics and Human Rights ARC Project Grant D Zion 2007-2009, \$95,723

Determining the awareness of health professionals and carers of the health risks to the elderly from extreme weather conditions. Department of Human Services (Vic). J Ibrahim, D Roberts, 2007, \$99,938

Epidemiological assessment of Aboriginal and non-Aboriginal Australians at high risk of developing heart failure. National Heart Foundation Scholarship M McGrady, 2007-2009

Epidemiological modelling of cardiovascular disease and diabetes in Australia. ARC Project Linkage Grant D Liew, C Reid, A Owen, J Shaw, D Magliano, 2007-2009, \$400,513

Epidemiological modelling of cardiovascular disease and diabetes in Australia. NHF Fellowship D Liew, C Reid, 2007-2008, \$122,686

Factors that affect knee structure in healthy women Geelong MRI NHMRC Project Grant A Wluka, J Pascoe, M Kotowicz, M Henry 2007-2009, \$165,400

Fitness versus fatness and burden of disease NHMRC Project Grant A Forbes, A Peeters 2007-2008, \$246,574

Improving outcomes measurement in trauma
Monash University SGRS
P Cameron
2007, \$20,000

Improving the measurement and monitoring of long term outcomes following trauma NHMRC Career Development Grant B Gabbe, 2007-2011, \$452,500

Is Rhokinase an important mediator of the pathophysiological effects in cardiac hypertrophy and failure? National Heart Foundation Research Grant H Krum, A Kompa, B Wang, C Drummond 2007-2008, \$126,974

Nitrous oxide anaesthesia and cardiac morbidity in major surgery NHMRC Project Grant K Leslie, P Myles, P Peyton, B Silbert 2007-2011, \$556,500 Novel statistical methods to analyse recurrent event data to investigate the biological process of a disease in epidemiological follow-up studies Monash University Research Grant J Cui, A Forbes, A Tonkin 2007, \$47,997

Occupational respiratory and new technology epidemiology NHMRC Career Development Grant G Benke 2007-2011, \$445,000

Outcomes following major trauma in

Victoria: inclusion of a 12 month followup and quality of life measure (VSTORM) Victorian Trauma Foundation Research Grant B Gabbe, P Cameron, A Sutherland, A Hannaford 2007, \$42,691

Role of blood collagen turnover markers in reverse remodelling following cardiac resynchronisation therapy in advanced heart failure Pfizer Inc M Elsik, Maros, 2007, \$55,000

Treatment of Cardiorenal Syndrome NHMRC Project Grant H Krum, J Friend, S Hunyor 2007, \$195,000

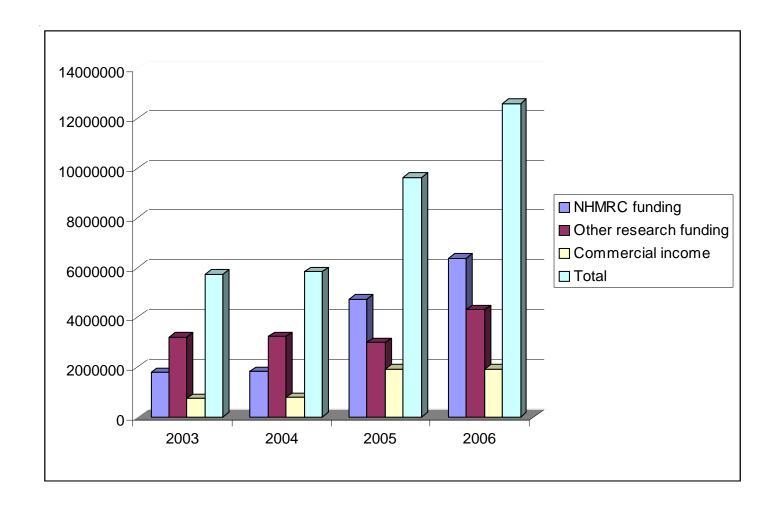
Using conversational computer technology to improve diabetes management: A randomised controlled trial
NHMRC Project Grant
B Oldenburg
2007-2010, \$604,464

Treatment and prevention of bacterial vaginosis.

NHMRC Public Health (Australia)
Fellowship
C Bradshaw, Catriona
2007-2010, \$83,500

# Funding sources

	2003	2004	2005	2006
NUMBO 16 II				
NHMRC research funding	\$1,788,443	\$1,828,511	\$4,731,346	\$6,377,861
Other research funding	\$3,206,862	\$3,233,107	\$2,992,391	\$4,310,483
Commercial income	\$730,964	\$768,257	\$1,915,709	\$1,922,662
TOTAL	\$5,726,269	\$5,829,875	\$9,639,446	\$12,611,006



### International links

We value our links with health researchers in other countries and each year welcome several visiting academics and students to the Department, as well as postgraduate and doctoral students.





In May, Dr Dipak Kotecha arrived from Wales. Dipak is doing a PhD in cardiac risk factors through Imperial College in London. He was born in Caerphilly, Wales and studied medicine at Bristol University in England. His research interests focus on how we can better use existing data on risk factors for coronary heart disease as well as develop a few new criteria that can help us target therapies such as coronary angiography. Dipak will spend two years in DEPM.



Dr Hoai Nguyen Thi Thu came from Vietnam in December to spend six months training in this department on a Fellowship from the Vietnam government. Hoai is a doctor from the Vietnam National Heart Institute in Hanoi and said 'this was an excellent opportunity for her to gain relevant experience and skills to perform as a cardiovascular clinical research specialist in her home country of Vietnam.



Dr Mahendra Arnold came from Sri Lanka to spend 12 months at DEPM. He completed his Masters in Public Health in 2002 and a Doctorate in Community Medicine from the University of Colombo in 2005. He has worked as a specialist in public health in the Ministry of Health, Sri Lanka. His areas of interests include occupational health, environmental health and food safety.



Dr John Chen came from Oregon, US, where he works a large managed health care system. He was interested in how we design systems and implement processes to optimize the care of populations.



Dr Cai Yong (left) came from the Medical School of the Shanghai Jiao Tong University, one of the oldest universities in China. His major interest is a peer education program on HIV/ AIDS among youth, and the epidemiology of HIV/AIDS in China.



Mr Andrew Little (left), a medical student from Aberdeen completed an elective here on the SABRE study of respiratory health. Andrew was here for six weeks.



In October we welcomed three visiting academics from the School of Medicine, Monash Malaysia - Dr Christine Kennedy (Health Economics/Public Health Researcher), A/Professor Robert Chen (family physician) and Dr Wong Chee Piau (Paediatric Neurologist). They attended a meeting organised by Professor Brian Oldenburg, Head of the International Public Health Unit at DEPM, to improve public health research capacity building between Monash Australia and Monash Malaysia and look at opportunities for collaboration in research and other areas. Above from front left, Robert Chen, Bebe Loff, Brian Oldenburg: from left at back, Robyn Bell, Christine Kennedy, Deborah Zion, Max de Courten, Wong Chee Piau, Tangerine Holt.

In June we had a visit from senior staff of the Beijing Centers for Disease Prevention and Control. The purpose of the visit was to discuss matters related to the management of public health risks for Beijing 2008 with Monash and Burnet staff experienced in this area, and also emergency health services and emergency medicine in general. The visitors were Ms Xinghuo Pang, Director of Scientific Research Administration Office, Ms Lianzhi Yu, Director of Treasurer's Office, Dr Zejun Liu, Director, Ms Shan Zou, Director of Central Laboratory, Mr Bing Shao, Associate Research Fellow. Other guests were Dr Rosemary Lester, Head of the Communicable Diseases Unit, DHS, Victoria, David Hogan, Environmental Health Unit DHS, Professor Steve Wesselingh, Burnet Institute, A/Prof Miek Toole, Head, Centre for International Health, Burnet Institute, Mr Greg Sassella, CEO Metropolitan Ambulance Service.



Department staff
who met to talk
with the guests
included Professor
John McNeil,
Professor Peter
Cameron, A/
Professor Michael
Abramson, A/Prof
Chris Reid, A/
Professor
Maximilian de
Courten, Dr Martha
Sinclair, Dr James
Cui.

## Teaching - Undergraduate

Staff of DEPM contribute to the undergraduate program - both Bachelor of Medicine and Bachelor of Biomedical Science courses.

### **MBBS**

We share overall responsibility for Theme II: Population, society, health and illness, which comprises 15% of the undergraduate medical curriculum with staff from the Monash Institute of Health Services Research, Department of General Practice and Centre for Health Economics. Theme II provides the structure to develop students' abilities to deal with broader society and population issues. We teach population health in first year, health promotion in second year, evidence-based clinical practice, occupational and environmental health in third year and health services management in fourth year.

Because the students are spread all over Victoria in Year 4, most of the teaching is conducted on the internet (Monash Univeristy Studies Online/ WebCT). Fifth year is seen primarily as a preparation for internship.

Members of the Department have also been involved in planning Theme II content for the new graduate medical school in Gippsland and training teachers at the Monash Medical School in Malaysia.



### **BBiomedSc**

We also teach some units in the Bachelor of Biomedical Sciences course -

BMS1042 : Biomedical sciences and society

BMS3032: Health policy and management

Biomedical science students will choose a variety of careers on graduation, so we aim to stimulate their interest in population health. They learn how health is maintained and illness controlled at local, regional and national levels.

# Occupational and environmental medicine

Third year medical students are invited to sit the examination for The John Desmond Prize in Occupational Medicine which is donated by Drs Robyn Horsley and Peter Desmond.

The examination for the Prize was conducted simultaneously at Mildura, Bendigo, Traralgon, Warragul, Sale, and at five Melbourne sites.

Kristy Siostrom, a third year student based at Maroondah, was first prize-winner of in 2006. Four students came equal second - Colleen D'Arcy (Alfred), Amie Gillett (MMC), Nicole Gale (Box Hill), and Mariam Tokhi (Warragul).

## Teaching - Honours program

The BMedSc(Hons) program is interesting and varied. Students with sufficient grades from the BMedSc course participate in classes in epidemiology and biostatistics, the cornerstones of medical research. They also complete research supervised by researchers within the department and become proficient in presenting their results at departmental seminars.



Honours projects available to students in 2007 included areas such as -

- Biostatistical methods in epidemiological research
- Cardiovascular disease epidemiology
- · Clinical pharmacology
- · Diabetes epidemiology
- · Environmental health
- Infectious disease epidemiology
- Musculoskeletal
- Occupational health
- Pharmacoepidemiology
- Preventive medicine
- Rheumatology
- · Risk assessment

Our Honours students in 2006 were Patricia Berry Basia Diug Danielle Horyniak Katrina Parkins Juliet Mutheu Dilinie Herbert

Patricia and Basia enrolled as doctoral students in 2007



We welcome enquiries from students considering honours. Enquiries to Dr Anna Peeters on 03 9903 0177 or email anna.peeters@med.monash.edu.au

# Teaching - Postgraduate

- Biostatistics
- Clinical Epidemiology / Clinical Research
- Health Services Management
- International Health / International Research Bioethics
- Occupational & Environmental Health
- Public Health

Our Postgraduate Courses attract students from a wide range of backgrounds - including medical, nursing, physiotherapy, pharmacy and health management.

We are dedicated to preparing our students to serve the community in an increasingly competitive job market, and our graduates are highly sought after by employers worldwide.

Many of our courses are off- campus, on line, with the Monash University Student Online System (MUSO). This involves web based assignments and discussion groups, enabling students to fit study in with their work and social life

Lectures are held in the AMREP
Education Precinct or in the
Department's seminar room, both at
the Alfred Hospital. This gives students
access to modern classrooms and
seminar rooms and the Ian Potter
Library. It is also close to public
transport and a short tram ride from the
city.

We would like to acknowledge staff of the Centre for International Health, Burnet Institute, for their substantial contribution to our teaching programmes. We offer students -

- over 75 units taught by leaders in their field
- articulated programs from Graduate Certificate to Masters degree.
- units taught by flexible delivery mode for busy professionals
- · self-paced study
- single unit options
- a variety of course options for maximum career benefit
- enthusiastic teaching staff who inspire students
- a research rich environment at the Alfred in collaboration with the Burnet Institute, the Baker Heart Research Institute, Clinical Trials Victoria, the National Trauma Centre and others sharing the AMREP facilities.

In 2006 we had 285 postgraduate students enrolled, 131 of these were studying the Master of Public Health. 103 students graduated in 2006.

#### New courses 2006

Two new courses were approved to begin in 2006, the Graduate Certificate in International Research Bioethics and the Master of International Health.

For information about our postgraduate courses go to www.med.monash.edu.au/epidemiology or phone 03 9903 0563



# Master of Public Health (MPH)

The MPH provides students with the full range of quantitative, analytical and communication skills necessary to work in public health.

We are a partner in the Victorian Consortium for Public Health, a collaboration between Deakin, La Trobe, Melbourne and Monash Universities.

Through the Victorian Consortium for Public Health, we offer specialization streams for students enrolled through Monash in this course in clinical epidemiology, environmental health, health economics, health services management, international health, occupational health and environmental health.

The MPH is studied in two parts. In Part 1, students from the four member universities study together, and in 2006, the core units were -

- Epidemiology and demography
- Introductory statistics
- Principles and practice of public health

In Part 2 of the MPH, students study with their university of enrolment and choose a specialist stream.

### **Biostatistics**

The Graduate Certificate and Graduate Diploma in Biostatistics give a broad range of biostatistical theory and techniques especially designed for health professionals.

The Master of Biostatistics develops the technical skills needed to commence a professional career as a biostatistician.

Off campus, part time
Course coordinator - Associate
Professor Andrew Forbes

# Clinical Epidemiology Clinical Research Methods

The Graduate Certificate in Clinical Trials is a part time, on-campus course which provides the core skills in epidemiology, biostatistics and clinical trial issues.

The Graduate Certificate in Clinical Research Methods is an off-campus course with some block requirements. This degree guides you through the many stages required for undertaking research.

The Graduate Diploma in Clinical Epidemiology assists clinicians or public health professionals to become familiar with clinical research methodology and can lead to the Master of Clinical Epidemiology or Master of Public Health.

Master of Clinical Epidemiology is an on campus, part-time or full-time course. Assists health professionals to make rational evidence-based decisions in clinical practice and undertake small clinical research projects.

Course coordinator - Professor Michael Abramson

### Health Services Management

The Graduate Certificate, Graduate
Diploma and Masters in Health
Services Management are offcampus, part-time or full-time
courses. The Masters degree caters
for medical or general hospital
administrators, clinicians, quality
assurance managers, team leaders,
senior nursing administrators, unit
managers and case managers within
the health care system.

Course coordinator - Professor Just Stoelwinder.

### International Health

The Graduate Diploma in International Health and Master of International Health are offered in collaboration with the Centre for International Health at the Burnet Institute for Medical Research and Public Health, and provide the skills to design, implement and evaluate the relevant programs that address the major public health priorities of communities in developing countries.

The Graduate Certificate and Masters in International Research Bioethics deal in ethical issues that arise in healthcare settings, in vulnerable populations and in international settings. Particular emphasis is given to ethical issues associated with research in developing countries in the Asia-Pacific region.

Course coordinator - Associate Professor Bebe Loff

# Occupational & Environmental Health

The Graduate Certificate in Occupational Health, Graduate Diploma and Masters in Occupational and Environmental Health are off-campus, part or full-time courses offered by the Monash Centre for Occupational & Environmental Health (MonCOEH) at DEPM.

Course coordinator - Professor Malcolm Sim

### Single units

Many of our postgraduate units are available for single unit study.



## **Doctoral program**

Our doctoral program has trained many health professionals for a senior career in public health.

The program has continued to grow and attracts students from around Australia and globally.

In 2006 we had over 50 doctoral students enrolled, from many backgrounds, including microbiology, pharmacy, physiotherapy, medicine, radiography, science, psychology, nursing.

The progress of students in the Department is facilitated by a very strong research environment, with an extensive program of NHMRC funded research, access to extensive infrastructure support including assistance in biostatistics, data management, computing and support from experienced staff and a large student body.

We also have a Good Research Governance Coordinator who works with each doctoral student on the development of protocols and the following of strict research guidelines. Of 34 doctoral students who have completed training here since 1992, four have been appointed to Chairs and five to Associate chairs. Fifteen have been awarded prestigous post-doctoral fellowships.

Our graduates head public health research units at The Baker Institute, the National Stroke Research Institute, the Victorian Infectious Diseases Service, and the Metropolitan Ambulance Service.

In 2004, our doctoral program was highly commended in the Victorian Department of Human Services Public Health Awards.

In 2006 we welcomed the following new doctoral students -

Elizabeth Barr Adrian Cameron Lei Chen Georgiana Chin Miranda Davies Maros Elsik Soula Fillipas Cameron Gosling Rebecca Guy Louisa Lam Karin Leder Shyamala Nataraj Shelley Rodrigo Helen Walls Carolina Weller Cameron Willis Changchuan Xue Julie Yallop



Will Kemp



Jessicah Chellapah



Soula Fillipas

If you would like to enquire about our doctoral program, please contact our program coordinators - Associate Professor Rory Wolfe, and Associate Professor Bebe Loff -

rory.wolfe@med.monash.edu.au bebe.loff@med.monash.edu.au

Kaylene Hanlon is the doctoral program administrator.



In September we farewelled Narges Khanjani, a doctoral student from Iran. Narges returned home after carrying out an ecological study of organochlorine pesticides and breast cancer in rural Victoria. Narges presented the Department with a framed Persian rug which has pride of place in our staff room. Above, Narges presenting the gift to Professor Malcolm Sim, her PhD supervisor.



Guy Haller was awarded a PhD in 2006. His thesis was 'Unplanned admission to the Intensive Care Unit as a measure of patient safety'. Guy trained as an anaesthesist in Switzerland and chose to do his PhD in this Department.



Charmian Bennett was awarded a CSIRO Postgraduate Preventative Health Flagship Scholarship in 2006. Charmian is looking at the impacts of environmental exposures to particulate air pollution on respiratory health and the role of public health intervention. Charmian's first paper was published in Science of the Total Environment 2006;366 and in 2006 she was one of the top abstract presenters at the Symposium 'Challenges in Environmental Toxicology in Australasia'.



Dr Helen Kelsall (left) was awarded the Vice-Chancellor's Commendation for Doctoral Thesis Excellence in September2005. Helen undertook her PhD in this Department's Centre for Occupational and Environmental Health (MonCOEH). Her doctoral thesis was 'Respiratory and neurological health, symptoms, medical conditions and chronic fatigue syndrome in Australian Gulf War veterans', and was part of The Australian Gulf War Veterans' Health Study.

This major study was funded by the Australian Government Department of Veterans' Affairs and was awarded the 2005 Victorian Public Health Award for Research Excellence. It was the first comprehensive health study of an entire group of Australian war veterans involved in a single theatre of war. Helen's supervisors were Professor Malcolm Sim, Professor Michael Abramson and Associate Professor Andrew Forbes. Helen was awarded a NHMRC Postdoctoral Fellowship and is now with the Cancer Council of Victoria.

### Doctoral students enrolled in 2006

#### **Helen Ackland**

Assessment of the correlation of clinical and radiographic findings in acute cervical discoligamentous injury with long term outcomes in road trauma patients.

#### Zahid Ansari

Proposal to develop a system to monitor aspects of the quality and performance of the Victorian healthcare sytem using routine data sources.

#### Elizabeth Barr

The contribution of impaired glucose metabolism to cardiovacular disease and to mortality in Australians.

#### **Charmian Bennett**

The impact of environmental exposures to particulate air pollution on respiratory health and the role of public health interventions.

#### Jill Blackman

War exposure and its health outcomes in service personnel.

#### Frank Buchanan

The influence of gender on recovery from general anaesthesia.

#### Rachelle Buchbinder

Short and long-term effects of a public health media campaign designed to reduce disability associated with back pain.

#### **Adrian Cameron**

The Metabolic Syndrome in Australia

#### Jessica Chellappah

Surveillance and modification of cardiovascular risk factors in children and young adults.

#### Lei Chen

Development and validation of appropriate methods for the prediction of risk of future cardiovascular events in the contemporary Australian population.

#### Georgiana Chin

Transitions of care - obstetric clinical handover.

#### Jennifer Coghlan

The efficacy and safety of different perioperative modalities of pain control in subacromial decompression and/or rotator cuff repair surgery for rotator cuff disease.

#### **Miranda Davies**

The effect of obesity and weight loss on osteoarthritis of the knee.

#### Glenn Doolan

Occupational exposure using self reports and a job exposure matrix in relation to prostate cancer from an Australian case-control study.

#### **Adam Dowrick**

Development of an orthopaedic trauma registry to evaluate and monitor treatment effectiveness.

#### **Gregory Duncan**

Incidence and prevalence study of people experiencing chronic wounds in the community in Victoria.

#### **Maros Elsik**

Fibrosis and remodelling in chronic heart failure - mechanisms and treatment.

#### Soula Fillipas

Exercise and HIV/AIDS

#### Andrea Fradkin

Sports injury epidemiology.

#### Michael Glisson

Quantifying the influence of osteoarthritis by measuring changes in cartilage in the hip and knee.

#### **Cameron Gosling**

Incidence, risk factors and outcomes of injuries in triathletes.

#### Rebecca Guy

Linked voluntary sentinel surveillance for HIV in Victoria.

#### Steven Haas

The epidemiology of chronic heart failure.

#### **Guy Haller**

Safety and quality of the peri- operative process; a new tool of assessment.

#### **Fahad Hanna**

Magnetic resonance imaging of osteoarthritis.

#### **Linton Harriss**

Dietary risks and alcohol as determinants of cardiovascular disease in the Melbourne Collaborative Cohort Study.

#### **Andrew Haydon**

Long term risk factors and outcomes for cancer in Victoria.

#### **Peter Higgs**

Ethnic Vietnamese drug users and blood borne viruses: A study of social contexts, culture and risk.

#### **Imo Inyang**

Assessment of exposure to radiofrequency energy in an epidemiological cohort

#### Ken Karipidis

Electromagnetic fields and the possibility of adverse health effects.

#### Will Kemp

The impact of norfloxacin on portal pressures and endotoxaemia in clinically siginificant portal hypertension and the role of urotension II.

#### Narges Khanjani

Organochlorines and breast cancer.

#### Louisa Lam

The diagnosis and treatment of patients with acute decompensated heart failure.

#### Karin Leder

Infections in travellers.

#### **Danny Liew**

Epidemiological modelling of ischaemic heart disease in Australia.

#### Megan Lim

Novel ways of assessing and reducing the sexual risk behaviour of young men and women.

#### **Ewan MacFarlane**

Occupational exposures and cancer risk in Australian workers.

#### **Dean McKenzie**

The development, comparison and application of brief psychological diagnostic and screening tests by statistical and machine learning methods.

#### Shyamala Nataraj

Bioethics and HIV interventions.

#### Joanne O'Toole

Water re-use and alternative water sources: attitudes, practices, risk assessment and human health outcomes.

#### Tina Racunica

Effect of weight loss on knee joint cartilage, bone size & density, changing body composition & muscle strength in a population of obese subjects free of osteoarthritis.

#### Samantha Rizak

Achieving safe drinking water: The role of water quality monitoring and risk management.

#### **Shelley Rodrigo**

Health effects of increased usage of recycled water and alternative water sources.

#### **Margaret Stebbing**

Current issues in risk perception and the transmission of ideas of risk.

#### **Rwth Stuckey**

Evaluation of occupational health & safety models for corporate fleet safety.

#### **Ogilvie Thom**

Preventive aspects of non invasive haemodynamic monitoring in severely ill patients in the Emergency Department.

#### **Nicholas Thomson**

Public health implications of amphetamine use epidemic in Northern Thailand.

#### **Helen Walls**

Effectiveness, cost-effectiveness and equity of obesity prevention strategies.

#### Nicholas Walsh

Psychosocial, environmental and pharmacotherapy determinants of antiviral treatment in injecting drug users.

#### **Carolina Weller**

Chronic wounds: outcomes for people attending specialist wound clinics.

#### **Cameron Willis**

The practicality of using indicators to assess quality within health systems.

#### Chuangchuan Xue

Effect of weight loss on knee cartilage and bone.

#### Julie Yallop

Multi-centre national and multi-national clinical trials in chronic disease - methodological considerations.

#### Tsharni Zazryn

A prospective study of cumulative brain injury in boxers.

#### **Hendrik Zimmet**

Experimental strategies combining mesenchymal stem cells with angioblasts and analyses of such strategies in the treatment of congestive heart failure.

# **Short Courses**

# Our successful Short Course program continued in 2006 and included -

- The Australian
   Certificate of Civil
   Aviation Medicine
- Introduction to Stata
- Health Risk
   Assessment
- Introduction to Clinical Research

We are planning an expanded Short Course Program in 2007 including a Spring / Summer school. epi.springschool@med.monash.edu.au

More information on current programs can be found at

www.med.monash.edu.au/ epidemiology/shortcrs/index.html

or email shorters@med.monash.edu.au



#### Principles of Health Risk Assessment

This course covered the principles of health risk assessment, hazard identification, dose-response assessment, exposure assessment and risk management.

#### Australian Certificate of Civil Australian Medicine

This two week course is run in conjunction with the Civil Aviaion Safety Authority and qualifies physicians to register as Designated Aviation Medicine Examiners. It can also be credited as an elective unit towards many of our postgaduate courses.

#### Introduction to Stata

This course covers the basics of interacting with Stata including working with data files, log files and do files. Students learn how to extract results and graphs from Stata for presentation in reports. A range of simple data manipulation techniques is introduced to teach students to manage data efficiently in Stata. Students gain basic summary statistics such as medians, means and standard deviations, and tabulations with percentages.

#### Introduction to Clinical Research

This course is ideal for health professionals who are new to medical research and covers, getting started from an idea to a protocol, study design, research data types, data collection methods, research ethics why we need it and how to comply with International guidelines, preparing a Human Research Ethics Committee application. This course provides an understanding of the key issues in designing, implementing and interpreting clinical research information. The course is taught by senior academic staff with many years experience

Below, Dr David Newman - Coordinator of the Aviation Medicine course



# Publications 2006

#### Peer reviewed articles

Abramson MJ, Crockett AJ, Frith PA, McDonald CF. COPDX: an update of guidelines for the management of chronic obstructive pulmonary disease with a review of recent evidence.

Medical Journal of Australia
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Department of Epidemiology & Preventive Medicine

