



The Queen Elizabeth Hospital
RESEARCH REPORT 2007

'07

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CONTENTS





04	2007 Foreword
06	Department Of Anaesthesia & Division of Critical Care
09	Cardiology Unit
14	Clinical Pharmacology Unit
17	Dermatology Unit
18	Endocrinology Unit
20	Gastroenterology and Hepatology Unit
22	Gynaecology, <i>TQEH Department of</i>
24	Haematology & Medical Oncology, Combined Departments of
30	Intensive Care Unit
34	Medicine, <i>University Of Adelaide Discipline of</i>
38	Neurology Unit
44	Nuclear Medicine Unit
45	Nursing Research
46	Otolaryngology Head And Neck Surgery, Department of
49	Psychiatry, <i>University of Adelaide Discipline of</i>
51	Renal Unit
57	Respiratory Medicine Unit
59	Rheumatology Unit
61	Surgery, <i>University of Adelaide Discipline of</i>
69	Publications
85	Invited Presentations
101	Research Support Structures
105	Awards
108	Acknowledgements
109	TQEH Research Foundation Inc



2007 FOREWORD

Within South Australia at present there is considerable pressure on available medical research space. Many of the existing facilities are unable to cope with new initiatives, with the ability to accommodate new research groups difficult to manage. The new Basil Hetzel Institute building is now firmly on the way, with the concrete structure currently completed at the time of writing this report. The opportunity to have state-of-the-art research facilities available to the medical research workforce, not only at The Queen Elizabeth Hospital but also from other institutions within South Australia, is an important initiative and will provide much needed opportunity for research groups unable to be properly accommodated.

The Basil Hetzel Institute will use this new facility as an opportunity in particular to forge closer research linkages with Women's & Children's Hospital, Hanson Centre and University of Adelaide. This will inevitably lead to the continuing success of medical research within South Australia. At present, however, there has been a steady decline in the State's share of

NHMRC research funding. This trend should be of great concern to Government as well as the public as it reflects a decline in the ability of research groups to deliver the quality of applications required for successful NHMRC support.

The Basil Hetzel Institute was fortunate this year in attracting three NHMRC grants, however of significance was a number of 'near misses' that were ranked highly but unable to gain funding. The Queen Elizabeth Hospital Research Foundation has been able to support these groups by providing twelve month funding in order for the projects to develop further and hopefully become competitive in the next round of NHMRC applications. If this strategy proves successful, and there is every reason to believe it will, then the number of successful NHMRC researchers within The Queen Elizabeth Hospital should increase substantially.

The year 2007 has also seen a considerable jolt to The Queen Elizabeth Hospital with the release of the South Australian Health Care Plan. This came out in

June and foreshadowed a decline in the role of The Queen Elizabeth Hospital in the future. The difficulty with such an initiative is that the lead time is almost a decade and the damage that can be done to providing not only service but attracting first-rate research staff is considerable if a period of ten years of doubt about role and function persists. Fortunately, however, it appears that the changes envisaged for The Queen Elizabeth Hospital would see it serving not only an increased role for elective surgery but also an important function in management of chronic disease and rehabilitation medicine.

If this plan does go forward then the research potential of the site is enormous as the patient load will escalate and the opportunity to conduct worthwhile research initiatives will continue to develop. Providing there is an increasing clinical load and a vibrant research base then recruitment and retention of medical and scientific staff will continue to be possible. It will be important over the next year to reassure the medical community in particular that The Queen Elizabeth Hospital has an important role into the future. This challenge will need to be taken up at all levels, not only within the Hospital and University but also within Government.

The support of the Minister of Health, the Hon. John Hill, for research at The Queen Elizabeth Hospital has been greatly appreciated and his belief that research forms an important cornerstone of the institution has been noted with relief.

December 19, 2008 will see the move into the new facilities and with it a rejuvenation of the energy and enthusiasm that has marked the Basil Hetzel Institute in the past.

Guy Maddern

Director of Research

The Basil Hetzel Institute for Medical Research
The Queen Elizabeth Hospital



"If this plan does go forward then the research potential of the site is enormous as the patient load will escalate and the opportunity to conduct worthwhile research initiatives will continue to develop."

Insert: Hon John Hill, Professor Basil Hetzel, Professor Guy Maddern and Mr David Norton celebrating the commencement of construction of the new research facility, 19 October 2007.



Dr Roelef van Wijk

ANAESTHESIA AND DIVISION OF CRITICAL CARE

Department of Anaesthesia

Overview

The Department of Anaesthesia provides anaesthetic services to the Departments of Surgery, Cardiology, Imaging, Psychiatry, and the Pregnancy Advisory Centre. Our Acute Pain Service provides advice and postoperative pain management services throughout the whole Hospital.

Anaesthetic staff are committed to a proactive and positive approach towards the new role envisaged for The Queen Elizabeth Hospital (TQEH) within the new State Health Care Plan.

The TQEH Anaesthesia Department is part of the SA/NT Anaesthetic Rotation Scheme for the training of registrars in Anaesthesia. The Department is engaged in teaching airway skills for resuscitation, ambulance staff and the Emergency Department. We are also involved in the assessment of rural General Practitioners for anaesthetic privileges. We supply lectures

and bed-side teaching sessions for 4th to 6th year medical students. The Department will participate in the redesign and implementation of the final year's undergraduate teachings in Anaesthesia and Pain Medicine for medical students, together with other Departments within the region.

The Acute Pain Service participates in the 'Acute Postoperative Pain Project (APOP)', which is a nation-wide multi-centre project initiated by the National Prescribing Service Ltd. The Department also initiated and collaborates with the University of Adelaide Department of Psychology in a systematic review on predictors of acute postoperative pain. Within the department there is a research focus on peri operative patient temperature control. The focus of future research will be aimed, among others, at regional anaesthesia and ultrasound location techniques.

Emergency Department

Overview

Dr James Smyth is continuing his ongoing retrospective survey "Nursing Home residents in the Emergency Department" aimed at the patient's assessment including the occurrence of an advance care plan, their diagnoses, management and disposition. He is also a clinical investigator in "Defibrillation or Cardiopulmonary Resuscitation first in patients with out-of-hospital cardiac arrests found to be in ventricular fibrillation by the first paramedics on scene? A randomised double blinded controlled trial". This multi-centre study includes the South Australian Ambulance Service (SAAS), Flinders Medical Centre, Lyell McEwin, Modbury, Royal Adelaide and The Queen Elizabeth hospitals.

The Emergency Department has participated in a number of multicentre studies including "IVANA" looking at the role of intravenous GTN and verapamil in acute myocardial infarction and Australasian Resuscitation In Sepsis Evaluation (ARISE) investigating the management of severe sepsis in Australian Emergency Departments and ICUs.

Emergency Department Educational and Training Activities

Emergency Department staff were strongly represented on the organising committee of the EMSA 2007 conference as well as presenting a number of sessions. This was the inaugural combined scientific meeting of the SA Faculties of the Australasian College for Emergency Medicine, the College of Emergency Nurses Australasia and the Australian College of Ambulance Professionals. The conference was attended by over 100 registrants. Participants included metropolitan and SA country members of the ambulance, nursing and medical professions.

Dr Alan Broomhead has been appointed to the Maintenance of Professional Standards (MOPS) Committee of the Australasian College of Emergency Medicine. This committee oversees a program of enhancement of professional competence for all Fellows in Australasia. During 2007 he was also a reviewer for the journal "Emergency Medicine Australasia".



Dr Ken Ooi

Staff

Anaesthesia

Head of Department

R van Wijk MD PhD FANZCA FFPMANZCA

Senior Consultants

A Craig FRCA FANZCA
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A Michael FANZCA
G Miller FFARCS(I) FANZCA
R Mitchell FANZCA
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K Osborn FANZCA
A Rainbird FANZCA
T Visvanathan FANZCA
P Woodhouse FANZCA

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P Lee FANZCA
P Chien Lim FANZCA
V Rao FANZCA
H Stevens FANZCA
G Tham FANZCA



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Visiting Medical Officers

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Emergency Department

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Staff Specialists

J Smyth MBBCh FACEM FFAEM FFSEM FRCSI BAO BA(Mod) DCH

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MRD Darmania (acting) RN, RM, BNursing, Grad Dip Emerg,
Grad Cert Adv Nurse Practice

Nurse Practitioner

C Ryan MNSc (UniSA) Dip Ns (SACAE) Grad Cert (Emergency
Nursing) Grad Cert (Coronary Care Nursing) Intensive Care Unit (ICU)

Intensive Care Unit

ICU has its research activity detailed under Intensive
Care Unit of this report.

CARDIOLOGY UNIT

Research Focus

- Early reperfusion therapies of acute myocardial infarction
- Coronary microvascular disorders – pathophysiology and therapeutics
- Impact of coronary heart disease on quality of life
- Depression in patients with coronary heart disease
- Tako-tsubo cardiomyopathy
- Aortic valvular disease – mechanisms and therapeutics
- Prevention of thrombosis in cardiovascular disease



Professor John Horowitz

Overview

The Queen Elizabeth Hospital (TQEH) Cardiology Unit has research interests in a variety of cardiac disorders including coronary heart disease, cardiac failure and valvular heart disease. Utilising basic, clinical and epidemiological approaches, the research team has made substantial contributions in the understanding and therapeutics in these disorders. The major areas of ongoing research are summarised below.

Early Reperfusion Therapies for Acute Myocardial Infarction (Dr J Beltrame)

The emergency treatment of acute myocardial infarction has undergone a rapid evolution in the past 25 years with coronary artery angioplasty and stenting being considered the optimal therapy to re-establish coronary patency. Clinical studies being undertaken at TQEH are examining pharmacologic therapies which may further enhance these mechanical treatments.

The IVANA trial (Intravenous Verapamil and Nitrates in Acute Myocardial Infarction) is an ongoing multi-centre study supported by the National Heart Foundation and co-coordinated by TQEH. This

study is examining the hypothesis that the coronary vasodilator/anti-aggregatory agents (Verapamil and Nitroglycerin) improve blood flow to the area of infarcting myocardium thereby improving outcomes in these patients.

Mechanisms and Therapeutics of Coronary Microvascular Disorders (Dr J Beltrame)

Angina pectoris usually results from obstruction of large coronary arteries. A minority of patients suffer from a condition characterised by spasm of the small coronary vasculature, referred to as the coronary slow flow phenomenon. This condition, first characterised at TQEH, frequently causes marked impairment of quality of life and responds poorly to standard anti-anginal therapy.

On-going studies on this disorder include clinical characterisation of similar microvascular conditions; pathophysiological and imaging studies evaluating responsible mechanisms; in-vitro studies determining the impact of calcium channel blockers and statins on microvascular vasomotor responses; and a National Heart Foundation grant-in-aid supported clinical study assessing the anti-anginal efficacy of bosentan. These

studies are being undertaken in close collaboration with University of Adelaide Department of Physiology, and a number of clinical units within TQEH including Neurology, Radiology, and Thoracic Medicine.

Impact of Coronary Heart Disease on Quality of Life (Dr J Belframe)

Coronary heart disease is not only associated with significant mortality but also substantial morbidity. Utilising established instruments, TQEH researchers are examining the clinical progress of patients with coronary artery disease and factors influencing their quality of life.

Depression in Patients with Coronary Heart Disease (Dr J Belframe)

In close collaboration with The University of Adelaide Psychiatry Department, TQEH, studies are being undertaken to examine the impact of depression on patients with coronary heart disease. Therapeutic strategies to manage these patients are also being assessed.

Pathogenesis of aortic stenosis (Prof J Horowitz, Dr J Kennedy, Dr O Akbar Ali & Dr Y Chirkov)

Aortic stenosis (AS) is the most common cause of disease in the Australian population. It affects individuals particularly as they age. We are trying to develop therapies to retard the progression of aortic stenosis and thus decrease the need for valve replacement. Components of the research in this regard include creation of a tissue culture model of aortic valve disease, development of aortic stenosis in rabbits treated with vitamin D supplements, and preparation of a human database for patients with early stages of aortic stenosis ("aortic sclerosis"). We have also identified the congenital condition of bicuspid aortic valve as a potential model of valve disease resulting from lack of nitric oxide effect. We are also evaluating the possible effects of a number of agents in improving outcomes in aortic stenosis. This includes a clinical study of the effects of perhexiline (the IMPASS investigation) and also an evaluation of the effects of ramipril in rabbits.

Metabolic anti-ischaemic agents (Dr J Kennedy, Prof J Horowitz)

Our recent research has shown that perhexiline, already known to be effective in relieving angina in patients who are unresponsive to other therapies,

also improves left ventricular function in patients with heart failure. The relationship of this improvement to our recent demonstration that perhexiline markedly improves the efficiency of oxygen utilisation of the myocardium, as well as suppressing inflammatory changes in white blood cells, valvular cells and endothelial cells, is under investigation. We are also interested in evaluating the effects of perhexiline as an adjunct to reperfusion therapy in acute myocardial infarction. We have therefore developed a regimen for acute treatment of patients with evolving myocardial infarction with perhexiline.

The Renin-Angiotensin System and platelet function (Dr Y Chirkov, Prof J Horowitz)

We have demonstrated that therapy with the ACE inhibitors perindopril and ramipril sensitises platelets to nitric oxide. This is likely to provide the mechanism for the known effects of these agents in reducing the risk of myocardial infarction and stroke. We have identified a sub-group of patients with known ischaemic heart disease who are likely to benefit in particular from the use of these agents.

Optimising the effects of nitrates and nitric oxide in arteries and platelets (Prof J Horowitz, Dr Y Chirkov, Dr J Kennedy)

This research is based on related observations. First of all, nitric oxide, which is released from the endothelial lining of blood vessels and prevents spasm and thrombosis of these vessels, becomes less effective in patients who are prone to the development of coronary events. This phenomenon, of nitric oxide resistance, has been shown by our group to be a major prognostic marker. The second related observation is that drugs used in the treatment of heart disease such as nitroglycerin, (a nitric oxide donor) become less effective with the passage of time, a phenomenon known as nitrate tolerance.

We are interested in developing strategies to circumvent both of these problems. We have demonstrated that a number of forms of therapy calculated at reducing redox stress improve tissue responsiveness to nitric oxide. Such therapeutics include ACE inhibitors, perhexiline,

possibly cholesterol lowering, and certainly improved diabetic control in diabetics. We are evaluating the effects of hydralazine as a potential treatment for nitric oxide resistance.

Patients at risk of nitrate tolerance lose their ability to release nitric oxide from organic nitrates. We have investigated the possibility that aldehyde dehydrogenase (ALDH) is the critical enzyme involved in this process; however, it appears that ALDH, while a valid marker for nitrate tolerance, is not the main mediator of this problem.

We will also investigate the potential role of the nitroxyl anion as a means of optimising vasodilator function.

Finally, it has recently been demonstrated that hydralazine may augment responses to organic nitrates. We are trying to determine whether this interaction may be useful in the management of ischaemia.

Platelet and endothelial dysfunction in the Polycystic Ovary Syndrome (PCOS) (Prof J Horowitz)

The polycystic ovary syndrome is a common cause of menstrual disturbances and impaired fertility. Many people with polycystic ovary syndrome are obese and there is an increased risk of diabetes. It has been suggested for some time that polycystic ovary syndrome may be a risk factor for the development of heart disease in women, but it has been felt that this occurs via the associated obesity, insulin resistance and diabetes. We have shown that young women with polycystic ovary syndrome exhibit abnormalities of platelet and blood vessel function irrespective of body weight. These ongoing studies will seek to investigate the implications of therapy and the ageing process on cardiac risk profile in this group of individuals. In particular, we will evaluate associations between polycystic ovary syndrome, vascular and platelet function and endothelial progenitor cell counts in various subsets of patients.

Non-pharmacological interventions in heart failure (Prof S Stewart, Prof J Horowitz)

We have previously shown that outcomes in patients with chronic heart failure can be improved by screening them for short term deterioration during the early period of time after discharge from hospital. The success of such

interventions has led to the widespread clinical utilisation of nurse led outreach programs for patients with chronic heart disease. The nature of these programs varies somewhat and it is important to delineate the optimal program for patient outcomes. We have demonstrated that the protocol developed at TQEH is associated with reduced admissions as well as improved survival over a 10-year period. An ongoing research program will compare this protocol with related forms of clinic-based intervention in patients with chronic heart failure.

Pathogenesis of Tako-Tsubo Cardiomyopathy – “Broken Heart Syndrome”

(Prof J Horowitz, Dr J Beltrame, Dr S Unger, Dr J Kennedy & Dr Y Chirkov)

Tako-tsubo cardiomyopathy is an uncommon but interesting condition that mimics acute myocardial infarction although there is no evidence of coronary artery disease. The condition often occurs in women and is typically precipitated by severe emotional stress. While the condition may be life threatening in its acute presentation, the long term prognosis is generally good. Utilising basic laboratory studies and clinical cardiac magnetic resonance imaging techniques, important advances have been made at TQEH in understanding the mechanisms responsible for this disorder.

The methodology utilised for all of these research protocols involves a continuum of “bench to bedside” techniques. Apart from the evaluation of platelet and blood vessel pharmacology, and cardiac performance, we have also utilised a number of key investigations which are now of central importance in a variety of our studies.

These include:

1. Assay of asymmetric dimethylarginine (ADMA). This assay, developed by Ms Tamila Heresztyn, provides a marker of the function of the vascular endothelium. We recently reviewed the importance of this assay for all cardiac studies examining both physiology and prognostic markers.
2. Magnetic Resonance Imaging (MRI) of the Heart. We have increasingly utilised MRI imaging to characterise cardiac anatomy and function. This is increasingly important for identification of microinfarction and perfusion abnormalities.

3. Echocardiographic Backscatter. This technique, initially utilised for the quantitation of early aortic stenosis in a study from TQEH, is a vital tool in enabling us to follow the progression of aortic valve disease in both animal models and in the general population.
4. Endothelial Progenitor Cells Function. In collaboration with the Renal Unit of TQEH, we are developing methods for quantitating the release from the bone marrow of endothelial progenitor cells, which play a major role in the ongoing repair of the vasculature. Disorders of endothelial progenitor cell function postulated in association with most forms of cardiac disease and an additional therapeutic objective should be optimisation of EPC release.

Collaborators

- (1) Department of Physiology, University of Adelaide
- (2) Department of Medicine, St Vincent's Hospital, Melbourne
- (3) Department of Epidemiology and Preventative Medicine, Monash University, Melbourne
- (4) Cardiology Department, Birmingham University, UK
- (5) Department of Obstetrics and Gynaecology, University of Adelaide
- (6) Baker Research Institute, Melbourne

Staff

Professor of Cardiology

Director, Cardiology Unit

JD Horowitz MBBS BMedSc(Hons) PhD FRACP

Senior Lecturers

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Research Assistant

T Heresztyn BSc

Technical Officer

G Murphy BSc

Trial Coordinators

S Leslie RN Cor Care Cert

L Owen RN BEd Dip T (Nurs) Crit Care Cert

M Black RN

J Rose RN

Administration

A Sowter

Postgraduate Students

PhD Candidates

C Ball BSc(Hons) "Calcium T-Channel Distribution in the Human Vascular Tree and its Relation to Function"

N Cutri BSc(Hons) "The Characteristics of Microspastic Angina"

N Ghaffari BSc(Hons) "The Modulation of Vasomotor Responses by Statin Therapy"

D Ngo BPh(Hons) "Aortic stenosis: pathogenesis studies and therapeutic interventions"

A Philpott MBBS FRACP "Mechanisms and prevention of nitrate tolerance"

S Rajendran MBBS(Hons) "Platelet Aggregation and the renin angiotensin system"

B Jesuthasan MBBS, FRACP "Coronary and myocardial perfusion studies of the coronary slow flow phenomenon"

A Chan MBBS "The polycystic ovary syndrome and coronary risk"

A Sverdlov MBBS "Pathogenesis of aortic sclerosis"

V Kopetz BSc(Hons) "Clinical and biological determinants of the coronary slow flow phenomenon"

R Tavella BSc(Hons) "Prognostic determinants on patients with chest pain and normal coronary angiography"

G Mahadevan MBBS "The pathophysiology and potential therapeutics of diastolic heart failure"

Masters Candidate

K Mishra MBBS "Pathogenesis of aortic valve calcification"

Honours candidate

M De Sciscio BHSc(Hons)

Awarded

E Lieberts (nee Kelly) "Determinants of vascular nitric oxide responsiveness: metabolic aspects" Awarded PhD, Faculty of Health Science, University of Adelaide.

X Hua BMed "Biochemical studies of the normal and stenotic aortic valve". Awarded M.Med.Sci, Faculty of Health Science, University of Adelaide.

Grants

National Heart Foundation of Australia Clinical Research Fellowship "Mechanisms and new therapies of acute coronary syndromes" (\$30,580 2007) 2006-2009, Beltrame J.

National Heart Foundation of Australia "Modulation of myocardial metabolism in heart failure: implications regarding inflammation, vascular platelet and myocardial function" (\$126,000 2007) 2007-2008, Horowitz JD, Kennedy J, Chirkov Y, Edwards J.

National Heart Foundation of Australia "Endothelin in the Pathophysiology of the Coronary Slow Flow Phenomenon" (\$61,500 2007) 2006-2007. Beltrame JF, Horowitz JD.

National Heart Foundation of Australia "The early use of Intravenous Verapamil and Nitrates in Acute myocardial

infarction. The IVANA Trial" (\$60,000 2007). Beltrame JF, Horowitz JD, Mahar L, Chew D.

National Heart Foundation of Australia "Endothelial dysfunction, redox stress and the pathogenesis of aortic valve calcification" (\$71,836 2007) 2007-2008. Horowitz JD, Kennedy JA.

NHMRC Postgraduate Medical Scholarship "Coronary and myocardial perfusion studies of the coronary slow flow phenomenon" (\$31,250 2007) Jesuthasan B.

TQEH Research Foundation/University of Adelaide Faculty of Health Science Divisional Postgraduate Research Scholarships (\$78,464 2007) Ball C, Cutri N, Ghaffari N, Tavella R.

University of Adelaide Faculty of Health Science/ Department of Health Postgraduate Scholarship (\$19,616 2007) Chan A.

University of Adelaide Postgraduate Scholarship (\$19,616 2007) Kopetz V.

University of Adelaide Postgraduate Scholarship (\$19,616 2007) Mahadevan G.

Acknowledgements

The Cardiology Unit wishes to thank the Ann-Marie Trimboli Trust, the NHF and NHMRC for their ongoing project and research staff support and the National Heart Foundation, The Queen Elizabeth Hospital Research Foundation and the University of Adelaide for their valuable support to its students.

CLINICAL PHARMACOLOGY UNIT

Associate Professor Ray Morris
Photograph courtesy of Ben Searcy Photography



Research Focus:

- Higher quality therapeutic drug testing requiring complex analytical tools
- Perhexiline genetics and metabolism
- Immunosuppressant drugs used in organ transplantation
- Use of local anaesthesia in post-operative pain management and fast-track surgery

Overview

By definition, clinical pharmacology is about the science of drugs and drug actions in the clinical situation. While the department delivers patient therapeutic drug assays that are at the more technically complex or expensive end of the drug-assay scale, this does position us well to also contribute to knowledge by undertaking research in these drugs and related fields. So we strive to have medical research initiatives in the same drugs that we also measure as a routine diagnostic test for patients. By doing so, we aim to impact on clinical outcomes delivered at TQEH and other institutions that refer such specialised testing to us from all over Australia. Some specific highlights over this past year are summarised below.

Angina treatment

The department maintains an active research interest in the treatment of angina, particularly in patients receiving perhexiline, an older and very effective drug which can, however, cause serious liver and nerve toxicity. Our current research aims to better understand

the mechanisms of action and fate of perhexiline in the body in order to enhance its safe clinical use and to develop new therapies for the treatment of angina. The project is currently supported by:

- A PhD student whose work is investigating the development of new drugs for the treatment of angina, based on our growing knowledge of how perhexiline works.
- An Honours student who has investigated possible genetic reasons for the large variability in perhexiline dosage requirements between different individuals.

Transplantation therapy

We have been involved with research projects that use drugs to avert rejection in organ transplantation:

- As a member of the SA and NT group progressing pancreatic islet cell transplantation for the treatment of type-1 diabetes, our department will be providing the national drug monitoring service in the national consortium, and have already contributed such testing for the first successful transplant under this consortium. We acknowledge the hard work of the Juvenile Diabetes Research Foundation (JDRF) in making this research funding available.
- A PhD study into the cellular mechanisms by which the liver handles mycophenolate and other drugs given to transplant recipients is progressing well. Following the identification of the MRP2 liver transporter protein involved in the elimination of mycophenolate and its metabolites from the body, we are now investigating genetic factors that may influence the activity of MRP2 and hence individual patient's dosage requirements and potential for interactions with other drugs.
- With funding from the University of Adelaide we are undertaking a wide-ranging project investigating overall genetic factors that may influence the efficacy of immunosuppressant drugs and, hence, the incidence of rejection or organ toxicity. Preliminary data suggests that genetic variability in another transporter protein, P-glycoprotein, may play a role in determining clinical outcomes in renal transplant recipients.

Local anaesthesia and 'fast-track' surgery

In collaboration with Departments of Surgery and Anaesthesia, we have welcomed Sumithra Krishnan to a PhD project that is an extension to our earlier pilot study investigating the use of local anaesthesia for pain management after abdominal surgery as a potential alternative to traditional narcotic pain-killer drugs. The local anaesthetic is trickled in near to the surgical site in the abdomen for 4 days using a commercial device (called PainBuster®) designed for such purposes. The aim of this study is to minimise post-operative pain using drugs with a local effect at the surgical site, rather than the more powerful drugs that affect the whole body, including some unwanted side-effects that may be a particular problem in this elderly population (e.g. respiratory depression) and inhibit recovery following bowel surgery (e.g. inhibition of gut motility causing constipation). Our pilot study showed that this procedure was sufficiently safe to allow higher local anaesthetic concentrations to be infused, hence enhancing the likelihood of therapeutic benefit. We hope to improve pain management and reduce hospital stay by using this commercial device to infuse local anaesthetic so that patients can be mobilised earlier leave hospital sooner, without the need to be connected to machines that deliver narcotic drugs on demand.



Staff

Chief Medical Scientist

RG Morris PhD

Principal Medical Scientist

BC Sallustio PhD

Senior Medical Scientist

IS Westley BMedSc

Technical Officers

FA Wicks BSc

A Kalaitidis BSc

C Lang-Jones Cert Med Lab Sc

Clerical Officer

L Carmody

Postgraduate Students

PhD Candidates

B Davies BSc(Hons) "Metabolism and enantiomer selectivity of the antianginal agent perhexiline"

IS Westley BMedLabSc "Drug interactions involving mycophenolic acid and cyclosporin"

OH Corso BSc(Hons) "Optimising liver function following resection for colorectal liver metastases"

J Licari BHSc(Hons) "Investigation of the pharmacological effect of (-)- and (+)-perhexiline"

S Krishnan BHSc(Hons) "The clinical evaluation of fast-track surgery including extended local anaesthetic infusion for post-operative pain"

MSc Candidate

M Cervelli BPharm "Sirolimus interaction with diltiazem in renal transplantation"

Honours Student

NT Truong BHSc "Influence of CYP2B6 genotype on the pharmacokinetics of perhexiline in CYP2D6 poor metabolisers"

Grants

Juvenile Diabetes Research Foundation Program Grant "South Australian and Northern Territory Pancreatic Islet Isolation Program" (\$731,567 2006-2007) 2006-2009, Russ G, Coates PTH, Morris R et al.

TQEH Research Foundation Honours Research Scholarship (\$4,000 2007) Truong NT.

TQEH Research Foundation/University of Adelaide Faculty of Health Sciences Divisional Postgraduate Scholarships (\$27,778 2007) Licari J, Krishnan S.

Surgical Synergies Product support for patient local anaesthesia studies (Approx \$70,000 2007) Morris RG, Hewett P, Karatassas A, Tonkin J.

Novartis, Wyeth, Roche Pharmaceuticals to TQEH Research Foundation Sponsorship for "Tour de Heart" (\$5,000 2007) Morris RG.

University of Adelaide, Faculty of Health Sciences Research Development Award "ABCB1 Pharmacogenomics and Drug Action" (\$11,000 2007) AA Somogyi, JK Coller, BC Sallustio, Morris RG, Foster DRG, Ashby M.

DERMATOLOGY UNIT

Research Focus

- * Clinical trials of new treatments for basal cell carcinomas of the skin

Overview

The Dermatology Unit assesses and treats clinical skin disorders at The Queen Elizabeth Hospital (TQEH) in both outpatients and inpatients and teaches medical students, dermatology registrars, general practitioners and other doctors employed at TQEH. The unit is also involved in clinical research with an emphasis on different methods of treatment and prevention of sun damage and skin cancer. Dr Warren Weightman is a board member of the Australian Society of Dermatological Research.

We have been involved in three studies during 2007.

The first study is in association with the Renal Unit of TQEH. This is a randomised, open-label study to compare the rate of new non-melanoma skin cancer in maintenance renal allograft recipients converted to a Sirolimus-based regimen versus continuation of a Calcineurin Inhibitor-based regimen (Protocol No: 0468HI-407-AUS).

The second study is also in association with the Renal Unit of the QEH. This is a 12 month open-label, randomised, multi-centre, sequential cohort, dose finding study to evaluate the efficacy, safety and tolerability of oral AEB071 versus Neoral in combination with Certican, Simulect and corticosteroids in de novo adult renal transplant recipients. The dermatology unit is doing safety skin assessments.



Dr Warren Weightman

The third study is in association with the neurology unit with the dermatology unit doing safety skin assessments. The trial is a 24 month, double-blind, randomised, multi-centre, placebo-controlled, parallel-group study comparing efficacy and safety of FTY720 1.25mg and 0.5mg administered orally once daily versus placebo in patients with relapsing-remitting multiple sclerosis.

The unit is looking at doing further clinical trials in the future.

Staff

Head of Department

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Visiting Dermatologists

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YC Lee MBBS FACD

Dermatology Registrar

C Ooi MBBS

ENDOCRINOLOGY UNIT



Research Focus

- Health care delivery
- Development of efficient strategies to diagnose and monitor diabetes and osteoporosis

Dr Pat Phillips

Overview

Our major research emphasis focuses on health care delivery and the development of efficient strategies to diagnose and monitor diabetes and osteoporosis. Support for our research has come from a wide range of government and private organisations.

On the clinical front we are reviewing our data on the status of people with diabetes who attend the unit's Diabetes Assessment Clinic. This clinic provides a "one stop shop" which includes checking for predisposition to diabetes, risk factors for complications, the complications themselves and current therapy. We hope to identify the important targets that are being missed and the tools which could reduce this risk and the incidence of complications in future.

At the same time we are evaluating strategies to prompt/improve diabetes management by the general practitioners who refer patients for assessment. If successful, we will broaden the audience for these prompts on diabetes care and the areas they cover.

In 2007 we continued the North West Adelaide Health Study in collaboration with The Queen Elizabeth Hospital's Respiratory Medicine and Epidemiology units, the Department of Health and the University of South Australia. We are studying a representative sample of residents in North West Adelaide, checking for risk factors and early indicators of health problems, especially diabetes and cardiovascular and respiratory disease. The original cohort was first assessed in 2000 and has been reassessed to give longitudinal information on health status, changes in health status and associations with these changes. Alongside the quantitative data the University of South Australia team are assessing qualitative information including quality of life and the individual responses to changes in health status. These studies will give us data on the factors associated with improved, stable or worsening health status and ideas on how medical, self care and quality of life can be improved.

Osteoporosis and associated fractures are a major cause of preventable disability and dependence for South Australians and a major cost to the community. Our good links with the community organisation Osteoporosis Australia, the Royal Australian College of General Practitioners and the Divisions of General Practice enable us to review the management of osteoporosis in the community. There are now osteoporosis education and awareness programmes in the western and northern metropolitan areas targeting those with osteoporosis, their health professionals and the general community.

We now have a dual xray absorptiometer (DXA) scanner at the Lyell McEwin Hospital to meet the needs of the northern metropolitan area. We are working with Osteoporosis Australia to make osteoporosis a State health priority and to develop a strategic plan to reduce its impact in South Australia. We were also part of a demonstration project to prevent refracture after a critical fracture. This was successful and we are now working to a standard of practice in South Australia.

Our Clinical Trials Centre is now involved in new insulin therapy, cardiovascular benefits of weight loss, prevention of diabetic retinopathy, new oral hypoglycaemic agents and new agents for osteoporosis. 2007 was a good year for publications and presentations with several of the group presenting at national and international conferences. Our group is well represented on committees relating to diabetes and osteoporosis in South Australia and nationally.

Staff

Director

PJ Phillips MBBS MA MRACMA FRACP Grad Dip Hlth Econ

Medical Specialists

M Bidhu MBBS MD (India)

CG Beng MBBS MRC PATH MAACB Associate Physician (Clin Chemistry Dept)

Scientists

G Phillipov BSc(Hons) MSc PhD

C Seaborn BSc

E Bowen BSc

Ophthalmology

N Gehling BSc BMBS FRACO

M Goggin MB BCh BAO DO FRCSI(Ophth) FRCOPhth PhD

J Runciman MB BHB FRACS FRACO

A Drew CRA (US)

Clinical Trials Coordinators

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(Diab Education & Management)

R Cox CN BN MN

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N Smith

C Strongylos BSc (Hons) MND

Diabetes Centre Nurses

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D Barrow RN Grad Cert (Diab Ed)

M Ross RN BNG Grad Cert (Renal) Grad Cert (Diab Ed) CDE Cert for Workplace Ed & Training

E Kopsaftis Grad Cert Health (Diab Man and Ed)

M Hodgson RN RM BMid Grad Cert (Diab Ed)

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D Brown DipAppSc Nursing BappSc Podiatry

D Filipak BappSc Podiatry

Dietitians

M Carapetis BHSc MND

C Stanton BSc DipEd MND

Diabetes Outreach

J Giles Grad Cert (Diab Ed) MN (Advanced Prac) CDE

C Gilbert BA (Hons)

B Cummins

Administration

L Roberts

J Grimsey

L McDonald

V Watson

A Gazzard

J Cocks



GASTROENTEROLOGY AND HEPATOLOGY UNIT

Research Focus

- Growth and immunity in the small bowel
- Prevention of small bowel inflammation that occurs after chemotherapy for cancer
- Genetic susceptibility to gastrointestinal disorders

Professor Ian Roberts-Thomson

Overview

The highlight of the year was a successful NHMRC grant by Dr Adrian Cummins, commencing in 2008. The grant will provide funds to study three pathways that appear to be important for the growth and differentiation of cells in the small bowel. An understanding of these pathways may lead to new forms of therapy for children with immature bowel and for adults who have a short small bowel because of previous surgery.

Current projects are continuing to explore the development of the small bowel and various factors that affect the immune function of the bowel. In relation to small bowel development, there is a particular focus on the role of the Wnt/beta catenin pathway in epithelial cells. In the area of mucosal immunity, PhD student Nicola Leung has been studying subsets of T-cells in the bowel that appear to be important for immunoregulation. Other projects linked to the function of the small bowel involve the role of tight junctions between epithelial cells and impairment of small bowel function after chemotherapy for cancer.

In the clinical area, we are continuing our work on histological and other criteria for the diagnosis of

coeliac disease and the effect of coeliac disease on bone density and susceptibility to fractures. At diagnosis, the majority of patients with coeliac disease have thin bones (osteopaenia or osteoporosis). Furthermore, this can be corrected, at least in part, by strict adherence to a gluten-free diet. Thin bones in coeliac disease appear to be caused by impaired absorption of calcium rather than low levels of vitamin D.

Coeliac disease is also being studied using images of the small bowel obtained by capsule endoscopy. This technique can be used to estimate the extent of small bowel inflammation and the improvement that occurs on a gluten-free diet. In patients with coeliac disease, the upper small bowel is more inflamed than the lower small bowel as the former is exposed to higher concentrations of wheat protein (gluten). Other studies with capsule endoscopy are continuing to explore techniques that might increase the rate of passage of the capsule through the small bowel as well as techniques that might permit tracking of the capsule through small bowel loops.

The final project involves the study of bowel inflammation that occurs in ulcerative colitis and Crohn's

disease. We have been interested in particular proteins called cytokines that can either promote or inhibit the inflammatory response. Levels of at least some of these cytokines can be influenced by genetic variants (polymorphisms) and we have a particular interest in interleukin-5. This cytokine is linked to the function of eosinophils and may have a role in the development of bowel inflammation, particularly in ulcerative colitis.

Dr Adrian Cummins and Ms Wendy Uylaki have also been involved with the planning and detailed design of the new research building. Dr Cummins is Deputy Chair of the Management Committee of the Basil Hetzel Institute for Medical Research.

Awards

N Leung. Prize for best presentation in the Higher Degree: Basic Research (senior students) category at TQEH Research Day 2007 (\$500). Prize sponsored by TQEH Research Foundation.

Grants

Australian Crohn's and Colitis Association. "Investigation of regulatory cells in inflammatory bowel disease" (\$10,000 2007) Leung N.

Channel 7 Children's Research Foundation "Investigation of Wnt/Beta-catenin signalling as a determinant of crypt fission during postnatal growth of the small intestine" (\$35,000 2007) Cummins A.

TQEH Research Foundation/University of Adelaide Faculty of Health Sciences Divisional Postgraduate Scholarship (\$19,616 2007) Leung N.

Staff

Director

IC Roberts-Thomson MD FRACP

Senior Consultant

AG Cummins BSc(Med) MD PhD FRACP

I Lidums PhD FRACP

Hospital Scientist

WJ Uylaki BSc(Hons)

Technical Officer

GJ Goland Cert App Sc(ML)

Research Assistant

A Trotta BSc(Mol Biol)(Hons)

Postgraduate Scholars

PhD Candidates

R Grose "Deficiency of NK-T Cells in Coeliac Disease and Inflammatory Bowel Disease"

N Leung "Deficiency of Immunoregulatory Cells in Inflammatory Bowel Disease"

J Fauser "The Effect of Probiotics on the Small Intestine"

Honours student

E Whitford "Effect of probiotics on mucositis after 5-FU treatment"

Acknowledgements

Studies on growth of the small intestine are undertaken in collaboration with the Women's and Children's Hospital, Adelaide (Professor G Davidson, Dr D Moore, Dr R Couper, Dr P Hammond), the Royal Children's Hospital, Melbourne (Prof A Catto-Smith and A/Prof D Cameron), Sydney Children's Hospital (Dr A Day), Child Health Research Institute (Dr I Penttila, Dr G Sander) and in the Discipline of Agriculture, Roseworthy University of Adelaide Campus (Associate Prof G Howarth). Research studies have been supported by the Channel 7 Research Foundation of SA, The Queen Elizabeth Hospital Research Foundation, The Australian Crohn's and Colitis Association and Given Imaging.



Dr David Munday

GYNAECOLOGY, TQEH Department of

Research Focus

- Pelvic organ prolapse
- Novel anti-oxident therapy for male infertility
- Clinical Trials

Overview

The Gynaecology department provides a comprehensive range of general gynaecological and subspecialist investigations and procedures with an emphasis on minimally invasive surgery. Particular areas of expertise include pelvic organ prolapse and urinary incontinence (urogynaecology), gynaecological oncology and management of severe endometriosis including close collaboration with our colorectal colleagues for severe pelvic disease. All consultants in our department have an active role in clinical research activities and are supportive of our trainees undertaking suitable projects while working in our unit. In our 2006 Research Report we alluded to the change in focus of research within the department following the relocation of the IVF Unit from TQEH to Fullarton (Repromed). Thus the main research interests changed from IVF to pelvic organ prolapse and related minimally invasive surgical treatments, including mesh vaginal repair; Essure sterilisation and gynaecological oncology. For the former we are to a large extent indebted to the enthusiasm and dedication of Dr Chris Barry, our senior staff specialist with a special interest in Urogynaecology. Dr Barry was appointed to the department in January 2006 and was previously a senior lecturer in Obstetrics and Gynaecology at James Cook University, Queensland. He is currently completing a PhD thesis in the role of 3D ultrasound in assessing pelvic organ prolapse.

Future possible research interests include further assessment of vaginal mesh repairs; new approaches to imaging pelvic organ prolapse, novel treatments (eg: botox) for chronic pelvic pain and interstitial cystitis, and management of women with severe endometriosis and infertility and menopause trials.

Our former director, Dr Kelton Tremellen, in conjunction with Repromed and the Research Centre for Reproductive Health, has developed a novel anti-oxidant therapy for male infertility. This medication was tested in a randomised placebo controlled trial and found to double pregnancy rates in the IVF program. All the laboratory work for the trial was conducted at TQEH. This new therapy (Menevit) is to be launched by Bayer Australia in February 2008 and will hopefully be exported worldwide.

Dr John Miller, senior visiting gynaecological oncologist, has continued recruiting patients for the Australian National Ovarian and Endometrial Cancer Study. This study involves collection of tissue from cancer patients together with demographic data. It is hoped that the correlation of cancer biology with demographics will help delineate the cause of these cancers and lead to the development of novel therapies for gynaecological malignancy.

Dr Amita Singla has been involved in a prospective study to develop new biochemical markers of genetically abnormal pregnancies. She has been collecting blood samples prior to amniocentesis and will use these samples to correlate genetic abnormality in the foetus with biochemical changes in the blood. It is hoped that this will lead to more sensitive and specific non-invasive tests for foetal genetic abnormality.

Dr Singla is participating in two antenatal trials at the Women's and Children's Hospital including a study on Twins: Timing of Birth at Term along with the PROGRESS study (Progesterone after previous pre-term birth for the prevention of Neonatal Respiratory Distress Syndrome). Dr Singla has also been involved as co-investigator with clinical trials on H4Z-MC-GJAD; Eli-Lilly, Phase 3, trialling medication Arzoxifene to compare effects of Arzoxifene on vertebral fracture incidents and on invasive breast cancer incidents in post menopausal women with osteoporosis or low bone density.

Drs Barry and Munday are coordinating the hospital's arm of a multi-centre prospective randomised trial of vaginal mesh repair for the correction of cystocele (MAP study). Dr Paul Duggan at the Royal Adelaide Hospital is the principal investigator.

Dr Munday, in association with Dr Martin Ritossa, has continued his involvement with the long term follow-up of the STOP 2000 (Essure Sterilisation) phase 3 trial participants on behalf of the late Professor John Kerin. This project has been extended to 10 years follow-up and should be completed in 2011. The first STOP trial procedures were conducted at TQEH in the late 1990's.

Dr Juneja, senior registrar in Gynaecology and new Fellow of RANZCOG has been undertaking a pilot study investigating the role of hysterectomy in prolapse repair with a seeding grant from the Australian Gynaecological Endoscopy Society Research Committee. Her term supervisors are Drs Barry and Munday.

Staff

Director

K Tremellen MB BS (Hons) PhD FRANZCOG CREI Grad Cert Mgmt (Director until June 2007)

Gynaecologist and sub-specialist in Reproductive Endocrinology and Infertility

D Munday MB BS FRANZCOG (Director from June 2007)

Senior visiting gynaecologist with special interests in minimal access surgery/ endometriosis/pelvic floor repair/Essure sterilisation. Deputy Chair of the Australian Gynaecological Endoscopy Society Research Committee.

Senior Consultants

C Barry MB BS MRCOG FRANZCOG

Staff specialist and senior gynaecologist with a special interest in Urogynaecology

J Cook MB BS FRANZCOG

Visiting gynaecologist with special interest in endometriosis and minimal access pelvic floor repair

J Miller MB BS FRANZCOG CGO

Senior visiting gynaecologist and certified sub-specialist in Gynaecology Oncology

R Norman MB BS MD FRANZCOG CREI

Professor of Reproductive Medicine with special interest in menopause/reproductive endocrinology

A Singla MB BS FRANZCOG

Senior Staff Specialist, Senior Obstetrician and Gynaecologist with special interest in Pelvic Floor repair, menopause, Colposcopy and vulval disorders

K Tremellen MB BS (Hons) PhD FRANZCOG CREI Grad Cert Mgmt

D Roberts MBBS, FRANZCOG

Visiting medical specialist, obstetrician and gynaecologist

Clinical Nurse Coordinator

S O'Toole RN RM

Postgraduate Students

PhD Candidates

D Lekamge MBBS "Role of the Transforming Growth Factor beta family in ovarian function"

O Tunc BSc (Hons) "Oxidative stress and male infertility"



Associate Professor Peter Bardy

HAEMATOLOGY AND MEDICAL ONCOLOGY, Combined Departments of

Research Focus

- Further understanding of the mechanisms underlying solid cancers and haematological disease, particularly myeloproliferative disorders and leukaemia.
- Development of new cancer diagnostic assays
- Identification, development and clinical trial of new therapeutic agents for the treatment of these diseases

Overview

Clinical research

The clinical trial program involves Phase I, II and III trials of new therapeutics. A significant expansion in the number of studies (currently over 30 active trials open) has seen the appointment of a seventh study coordinator, an administrative assistant and a clinical research fellow to the group. Ongoing studies are investigating chemotherapeutic agents, new supportive therapies (cytokines, erythropoietic agents), novel molecular targeted agents (EGFR, VEGF and mTOR inhibitors) and antithrombotic agents. The expansion of Phase I studies has seen access to novel molecular agents and these studies have become an important component of the unit's activity with dedicated medical staff and study coordinators.

The increased activity and experience has seen the standing of the unit grow with involvement in international trial steering committees (Phase III study of EGFR inhibitor in advance colorectal cancer) and involvement at an executive level within national trial cooperative groups such as the ALLG, AGITG and the ANZBCTG.

Laboratory-based studies

Project 1: Molecular genetic approaches to identify lesions in myeloproliferative disease

(A/Prof R D'Andrea)

We have focused on the myeloproliferative disorder (MPD) Polycythemia vera (PV), a hematological disease in which the bone marrow produces increased numbers of several haemopoietic cell types (red blood cells, white blood cells and platelets). This disease is of particular interest to us as the multilineage effects are associated with a dys-regulation of haemopoietic stem cell growth and normal blood cell growth factor responses. An acquired mutation has been identified recently in a high percentage of PV patients. This mutation affects the activity of the intracellular signaling molecule JAK2 which plays a critical role in normal growth factor responses. We have confirmed that this mutation is present in 54 out of 56 PV patients in our cohort and we are now further investigating the properties of the mutant protein. Recently, we identified a novel JAK2 lesion in the patients that do not have this common mutation. Our current studies are focused on identification of lesions that cooperate with the JAK2 mutation in disease development.

A vertical photograph of medical equipment. At the top, a clear plastic IV bag hangs from a metal stand. A clear tube leads from the bag to a drip chamber, which is a small plastic device with a blue cap and a clear body. Below the drip chamber, a blue cloth is draped over the stand. A small orange tag is attached to the blue cloth. The background is blurred, showing a clinical setting.

A vertical photograph of medical equipment. At the top, a clear plastic IV bag hangs from a metal stand. A clear tube leads from the bag to a drip chamber, which is a small plastic device with a blue cap and a clear body. Below the drip chamber, a blue cloth is draped over the stand. A small orange tag is attached to the blue cloth. The background is blurred, showing a clinical setting.

A vertical photograph of medical equipment. At the top, a clear plastic IV bag hangs from a metal stand. A clear tube leads from the bag to a drip chamber, which is a small plastic device with a blue cap and a clear body. Below the drip chamber, a blue cloth is draped over the stand. A small orange tag is attached to the blue cloth. The background is blurred, showing a clinical setting.

A vertical photograph of medical equipment. At the top, a clear plastic IV bag hangs from a metal stand. A tube leads from the bag to a drip chamber, which is a clear plastic device with a blue cap and a small window showing the internal filter. Below the drip chamber, a tube leads to a blue cloth that is draped over the side of the stand. The background is blurred, showing what appears to be a hospital room with a window and some furniture.

Project 4: Discovery of protein biomarkers for diagnostic and therapeutic applications in colorectal cancer (Dr J Hardingham, Dr T Chataway, Mr P Hewett, Ms G Arentz)

Patients diagnosed with early-stage bowel cancer may be considered cured by surgery alone, yet up to 30 per cent of this group will develop recurrent and metastatic disease after their surgery. This is thought to result from undetected dissemination of tumour cells.

The Molecular Oncology Laboratory is focused on identifying suitable colorectal cancer (CRC) biomarkers for use as diagnostic or prognostic markers for the detection of disseminated tumour cells in CRC patients using the immunobead RT-PCR assay. We have been using a proteomics approach (2D DIGE) to determine differential protein expression between matched tumour and normal tissue that has been laser micro-dissected to ensure homogeneous cell populations are analysed. Further, we have used a fluorescent surface-labelling technique and 2D electrophoresis to specifically identify surface expressed biomarkers in colonic tumour cells. Such biomarkers will be useful as specific targets to select a panel of antibodies to label the immunobeads, thus improving the efficacy of the first step of the assay. In addition, these antibodies will also be useful in diagnostic immuno-histochemistry, flow cytometry and ELISA assays, and as part of an antibody micro-array to screen plasma samples for circulating tumour antigens. Several candidate biomarkers are being validated for use as tumour biomarkers using RT-PCR, Western blotting and flow cytometry.

Currently there are no tests to identify early stage CRC patients at high risk of relapse. The outcome of this work will be the development of a sensitive and specific immunobead RT-PCR assay to determine those early stage patients with micro-metastatic disease. Subsequently the prognostic significance of positive results will be determined by long term follow-up and survival analyses. This new improved immunobead RT-PCR assay will have great potential to select those early stage patients who would benefit from early post-operative adjuvant therapy, patients who would not otherwise be considered for further treatment. Candidate surface membrane biomarkers could be used in future studies to target therapeutic nanoparticles to tumour cells.

Project 5: Identification of plasma proteins as biomarkers for the early detection of colorectal cancer (Dr J Hardingham, Dr T Chataway, Ms A McCormack)

Pre-symptomatic detection of colorectal cancer (CRC) requires sensitive detection of appropriate protein biomarkers that have been secreted into the bloodstream by the tumour and are thus detectable in blood plasma. Carcinoembryonic antigen (CEA) is an example of such a protein that has traditionally been used as a serum marker of disease activity in CRC. However this marker lacks specificity and is only useful in a proportion of CRC patients, in particular those with more advanced disease. Additional biomarkers, detectable in blood, are needed for the early detection of CRC in a high-throughput screening setting. Due to the large dynamic range in abundance of plasma proteins, it is necessary to deplete plasma of the most abundant proteins so that proteins of lower abundance can be detected. During this year pre- and post-operative plasma samples from patients undergoing resection for CRC have been collected, after obtaining informed consent, and processed according to the Human Proteome Organization (HUPO) guidelines. A depletion strategy has been developed to remove the most abundant proteins. A protocol for the detection of differentially expressed proteins will be developed for use on the linear ion trap mass spectrometer at Flinders Proteomics. Potential biomarker proteins will be investigated for use in an early diagnostic screening blood test for colorectal cancer.

Project 6: Detection of occult disseminated tumour cells and tumour DNA (Dr S Stephenson, Dr M Raynor, A/Prof A Dobrovic)

This project focuses on the detection of occult disseminated disease in patients with early stage breast cancer. We are studying the significance of circulating tumour cells in patients with early stage operable breast cancer and monitoring the presence of occult disease (circulating tumour cells and tumour DNA in the plasma) at regular intervals after surgery. To isolate circulating tumour cells we make extensive use of the Immunobead RT-PCR method, which was previously established in this department. In addition, plasma is separated from the blood samples for the detection of tumour DNA using methylation markers. Currently, approximately 270 patient blood samples have been collected for

immunobead harvesting of tumour cells and preparation of plasma DNA. Many of these patient samples now have 3, 6, and 12 month follow up samples. The immunobead RT-PCR method has now been adapted for a high-throughput platform to allow quantitation, faster processing of samples and clear distinction between specific and background amplification. Ten experimental gene markers and three housekeeping gene markers have now been fully optimised and validated for tumour cell detection. The utility of methylation as a tumour marker has been demonstrated by several studies and we have established methods for detecting DNA originating from tumour cells and for analysing several genes previously shown to be commonly methylated in breast cancer cells. Different methods for extracting DNA from plasma have been compared and the best method selected. Methylation probes for the MethyLight assay have been designed for multiple genes of interest and internal controls. We will initially use quantitative methylation-specific PCR (Q-MSP) to measure the extent of gene methylation in patient plasma DNA. We will now also use new technology High Resolution Melting (HRM) which has been shown to detect DNA methylation and is a more sensitive and cost effective methodology.

Staff

Chair of the combined Departments of Haematology and Medical Oncology

Head of Clinical Haematology

Co-Director Division of Medicine TQEH

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Head of Clinical Oncology

KB Pittman MBBS MD FRACP

Head of Clinical Research

TJ Price MBBS FRACP

Staff Specialists/Clinical Trials

RM Green MBBS FRACP FRCPA

U Hahn MD FRCPA

S McRae MBBS FRACP FRCPA

JE Norman MBBS FRACP

WK Patterson MBBS FRACP

K Robinson MBBS FRCPA FRACP



Chief Medical Scientist and Laboratory Head

A/Prof RJ D'Andrea PhD

Principal Medical Scientist and Group Leader

JE Hardingham PhD

Senior Research Fellow and Group Leader

SA Stephenson PhD (until 31 July 2007)

Postdoctoral Research Fellows

MP Raynor PhD

A Varelias PhD

Research Assistant

J Wrin BSc

Clinical Trial Manager

S Yeend EN

Clinical Trial Study Coordinators

P Cooper BSc

G Dymmott

J Jefferies B Biotech(Hons) B App Sc(Human Movement)

A Kain (based at Lyell McEwin Hospital)

L Pirc B Biotech(Hons)

J Williams BSc Gen(Hons)

Clinical Research Fellow

A Townsend MBBS

Administration

A Barr

B Dickinson

S Dowsett

Postgraduate Students**PhD Candidates**

G Arentz BSc(Hons)

E Douglas B Hlth Sc(Hons)

A Gysbers BSc (Hons)

C Kok BSc(Hons)

A Laidlaw BSc(Hons)

Y-C Lee B Biomed Sc, BHLth Sc(Hons)

J Perren B Biomed Sc(Hons)

Honours Students

Z Deng BSc

2007 – 2008 Vacation Students

N Lokman

ML Soo

ZMD Dom

Collaborators

- (1) A/Prof S Barry, Department of Paediatrics, University of Adelaide, Adelaide
- (2) Dr T Chataway, Flinders Proteomic Facility, Flinders University, Adelaide
- (3) A/Prof A Dobrovic, Molecular Pathology Research, Department of Pathology, Peter MacCallum Cancer Centre, Melbourne
- (4) Prof T Gonda, Centre for Immunology and Cancer Research, University of Queensland, Brisbane
- (5) Mr P Hewett, Colorectal Surgical Unit, Department of Surgery, The Royal Adelaide and Queen Elizabeth Hospitals, Adelaide
- (6) Dr I Lewis, Department of Haematology, Institute of Medical and Veterinary Science, Adelaide
- (7) Dr C Mullighan, St. Jude Children's Research Hospital, Memphis, Tennessee, USA
- (8) Prof G Nolan, Stanford University, USA
- (9) Mr N Rieger, Colorectal Surgical Unit, Department of Surgery, The Royal Adelaide and Queen Elizabeth Hospitals, Adelaide
- (10) Dr H Scott, Walter and Eliza Hall Institute, Victoria
- (11) Prof LB To, Department of Haematology, Institute of Medical and Veterinary Science, Adelaide
- (12) Ms M Wallwork and Mr J Terlett, Adelaide Microscopy
- (13) Mr D Walsh, Breast/Endocrine Unit, Department of Surgery, The Queen Elizabeth Hospital, Adelaide

Grants

Adelaide Integrated Bioscience Laboratories (AIB Labs), Research Infrastructure Fund Grant (Adelaide Microarray Facility) (\$88,363 2006-2007) Goodall G, Richards R, Rudzki Z, Koblar, S, Keefe D, Kuss B, D'Andrea R.

Australian Red Cross Blood Service Research Grant "The role of immunoregulatory and host defence gene polymorphisms in determining outcome following allogeneic haemopoietic stem cell transplantation" (\$76,000 2006-2007) Heatley S, Bardy PG, Mullighan C, Doherty K.

Australian Red Cross Blood Service Research Grant "The relationship of cytokine gene polymorphisms to circulating levels of cytokine and outcome following sibling allogeneic haemopoietic stem cell transplantation (HSCT)" (\$30,000 2006-2007) Bardy PG, Mullighan C, Heatley S, Doherty K.

Australian Red Cross Blood Service Research Grant "The role of natural killer cells and killer cell immunoglobulin-like receptors in determining outcome following allogeneic haemopoietic stem cell transplantation" (\$22,600 2006-2007) Heatley S, Mullighan C, Doherty K, Bardy PG.

Australian Red Cross Blood Service Research Grant "A comparison of blood product usage between myeloablative and non-myeloablative sibling allogeneic haemopoietic stem cell transplant (Allo-HSCT)" (\$30,000 2006-2007) Bardy PG, Robinson K.

Cooper's Brewery Foundation Equipment Grant (via TQEH Research Foundation), Fluorescent Microplate Reader (\$49,000 2007) Stephenson SA.

NHMRC "Detection of occult disseminated tumour cells and tumour DNA in early stage operable breast cancer patients" (\$73,400 2007) 2005-2007, Dobrovic A, Henderson M, Waring P, Stephenson SA.

NHMRC Project Grant #351463 "Identification of oncogenes in myeloid leukaemia by retroviral expression cloning" (\$190,000 2007) 2005-2007, Gonda T, D'Andrea RJ.

NHMRC "Dissecting FLT3 signalling in acute myeloid leukaemia" (\$193,333 2007) 2007-2009, D'Andrea RJ, Gonda TJ.

The Queen Elizabeth Hospital Research Foundation. Special Initiative funding (\$25,000 2007) 2005-2007, Bardy P.

The Queen Elizabeth Hospital Research Foundation funding for mass spectrometry costs (\$6,000, 2007) Hardingham JE.

TQEH Research Foundation Postgraduate Research Scholarship/Haematology Department (\$19,616 2007) Kok C.

TQEH Research Foundation/University of Adelaide Faculty of Health Sciences Divisional Postgraduate Scholarship (\$2,434 2007) Perren J.

University of Adelaide Postgraduate Scholarships (\$68,656 2007) Gysbers A, Arentz G, Laidlaw A, Lee Y-C.

The Cancer Council SA. Travel grant, Lorne Proteomics Conference (\$839 2007) Hardingham JE.

The Australasian Microarray & Associated Technologies Association/Microarray and Gene Expression Data Meeting, Brisbane, Australia. Student travel grant (\$500 2007) Kok CH.

Acknowledgements

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INTENSIVE CARE UNIT

Research Focus

- Sepsis studies
- Observational surveys
- Monitoring studies
- Nutrition studies
- Outcome studies
- Statistical method reviews

Dr Sandra Peake

Overview

Sepsis Studies

Outcome of sepsis presenting to the Emergency Department in Australia and New Zealand

The characteristics and outcomes of 7649 patients admitted to intensive care following presentation to the Emergency Department of Australian and New Zealand hospitals with sepsis or septic shock has been undertaken using data from the Australian and New Zealand Intensive Care Society (ANZICS) Adult Patient Database (APD). The data from this study and a prospective epidemiological study (ARISE) (see below) have been used to provide information regarding feasibility and recruitment rate for a prospective, multi-centre trial of Early Goal Directed Therapy. The multi-centre trial (under the auspices of the ANZICS Clinical Trials Group (CTG) and the Australasian College of Emergency Medicine) will be undertaken in collaboration with a group of investigators in the United States. Dr Peake is the chief investigator in Australia and New Zealand. The APD study was published in *Critical Care and Resuscitation* in March 2007.

A 3-month prospective, multi-centre observational study (Australasian Resuscitation in Sepsis Evaluation; ARISE) examining the resuscitation practices and outcomes of patients presenting to the Emergency Department with severe sepsis was undertaken. This ANZICS CTG and ANZIC Research Centre multi-centre study involved 31 Australian and New Zealand hospitals. Dr Peake was the chief investigator. At TQEH, the study was performed in collaboration of Dr Ken Ooi and the Department of Emergency Medicine.

A controlled comparison of eritoran tetrasodium and placebo in patients with severe sepsis

A multi-centre, international, industry-sponsored randomised, double-blind, placebo-controlled study. The purpose of this research study is to assess the safety and efficacy of an experimental drug called eritoran tetrasodium (eritoran) in patients with severe sepsis. Eritoran tetrasodium belongs to a group of drugs called Lipid A antagonists. Previous studies have indicated that eritoran works by blocking the effect of toxic products and by reducing the production of inflammatory chemicals that can contribute during an infection to the symptoms of sepsis. The study will also measure how health care costs are affected by its use. The study commenced in May 2007.

STATinS: Study of Atorvastatin Therapy in Sepsis

A phase II randomised controlled trial of atorvastatin therapy in intensive care patients with severe sepsis. The study is NHMRC-funded and is being performed under the auspices of the ANZICS CTG.

The purpose of this study is to assess the effects of atorvastatin on the biological and clinical outcomes of adult intensive care patients with severe sepsis. The study will establish whether a definitive phase III trial in Australia and New Zealand is feasible and justifiable, and will provide essential information on the cost and likely sample size for such a trial. Recruitment commenced November 2007.

Sepsis and DIC

A multi-centre, industry-sponsored randomised, double-blind, placebo-controlled, Phase-2B study is underway to assess the safety and efficacy of a drug called ART-123 on subjects with sepsis and disseminated intravascular coagulation. ART-123 is thought to act by stopping thrombin-mediated clotting and enhancing Protein C activation at the site of clotting rather than systemically; thereby reducing the risk of bleeding. The study commenced November 2007.

Community acquired pneumonia

A multi-centre, international, industry-sponsored randomised placebo-controlled clinical trial examining the role of tissue-factor pathway inhibitor in community acquired pneumonia commenced in January 2005 and recruitment continues.

Hospital acquired pneumonia

A multi-centre, international, industry-sponsored randomised placebo-controlled clinical trial comparing a new anti-microbial agent with standard therapy in gram-positive hospital-acquired pneumonia. This study commenced in April 2005 and recruitment completed April 2007.

Observational Surveys

SAFE Translation of Research into Practice Study (SAFE TRIPS)

Participation in this ANZICS CTG-endorsed one-day point prevalence survey was undertaken in April 2007. The aim of the study was to conduct a prospective assessment of resuscitation fluid practices in ICU patients in multiple

countries worldwide in order to document current practice. Specific aims included:

- 1) Determining if there are identifiable patient characteristics that influence choice of fluid;
- 2) Determining whether there are identifiable national or regional variations in choice of resuscitation fluid that are not explained by patient characteristics, and
- 3) Determining the degree to which evidence from related contemporaneous literature has been translated into practice.

The extended study of prevalence of infection in Intensive Care (EPIC II)

Participation in the prospective 'one-day' assessment of infection and antibiotic usage in adult and paediatric ICUs throughout the world was conducted on 8th May 2007. This is a follow-up study to the EPIC Study conducted in over 1400 ICUs in Western Europe in 1992 (JAMA 1995; 274:639-644).

A point prevalence survey of Venous Thromboembolism (VTE) prophylaxis management in the critically ill and an epidemiological observational audit of Venous Thromboembolism prophylaxis management in critically ill patients with severe sepsis

Participation in this survey commenced on 1st May 2007. The aims of this survey were to document current VTE prophylaxis practice in Australia and New Zealand and to examine the use of heparin for VTE prophylaxis in patients with severe sepsis during their ICU admission. This longitudinal audit on patients with severe sepsis occurred over 4 weeks.

Nutrition Studies

Early total parenteral nutrition

A multi-centre, level 1 randomised, controlled trial comparing early total parenteral nutrition to standard nutritional support in the critically ill patient was commenced in December 2006. The study is NHMRC-funded and is being performed under the auspices of the ANZICS CTG. Dr Peake is an associate investigator and member of the study Management Committee.

Monitoring in the Intensive Care

Temperature measurement in the critically ill

A study comparing different temperature measurement modes (axillary, tympanic, urinary and pulmonary artery) has been published in *Critical Care Medicine*. This was the largest study, in terms of patients and observations, ever published on this topic in the journal and showed that the most optimal measurement mode was urinary. The study used advanced statistical modelling with a random effects linear model.

Outcome Studies

Tight glycaemic control

An ANZICS CTG multi-centre NHMRC-funded Australian and Canadian trial comparing 2 target ranges for blood glucose control in critically ill patients predicted to stay in ICU for longer than 48 hours commenced in April 2005. Planned enrolment is 4000 patients in Australia and New Zealand and 2000 patients in Canada. To date 4700 patients have been recruited.

Metformin associated lactic acidosis

A case-series study of 17 patients admitted to the intensive care unit in the last 5 years with life-threatening lactic acidosis associated with metformin use has been completed. The results were recently presented at the 32nd Australian and New Zealand Annual Scientific Meeting on Intensive Care, Rotorua, New Zealand.

Radiocontrast-induced nephropathy in ICU patients

A retrospective study examining the incidence of, and risk factors for, radiocontrast-induced nephropathy in ICU patients has been completed. The results were recently presented at the 32nd Australian and New Zealand Annual Scientific Meeting on Intensive Care, Rotorua, New Zealand.

Outcome from Idiopathic Pulmonary Fibrosis

A retrospective study examining the outcome of patients with idiopathic pulmonary fibrosis admitted to ICU for respiratory failure has been completed.

Gentamicin and creatinine clearance

In conjunction with Dr Terry Jones (Pharmacy) a prospective observational study comparing various modes of creatinine clearance in ICU patients, including the clearance of gentamicin is continuing.

The haemodynamic effects of intravenous paracetamol

Anecdotal observations by staff within the intensive care unit of hypotension following intravenous paracetamol administration has led to a prospective, observational study of the haemodynamic effects of intravenous paracetamol in 40 high-dependency patients (Dr Stewart Moodie). The study has been completed and planning is underway to repeat the study in intensive care.

Australia wide outcomes from ICU

A paper modelling the mortality and length of stay of patients over the period 1993-2003 (from the ANZICS Adult Patient Database) has been accepted for publication in *Critical Care Medicine*.

Toxicology Reviews

A number of papers reviewing aspects of toxicology, in particular oxime poisoning, have been published in cooperation with Dr JV Peter, Christian Medical College & Hospital, Department of Medical Intensive Care, Vellore, India.

The epidemiology of radiocontrast exposure in critically ill Australian adults: a prospective, multi-centre, observational study

A study to determine the incidence of intravascular radiocontrast (contrast) nephropathy following exposure to contrast among adults admitted to Intensive Care Unit's in Australia is nearly completed. This study is in collaboration with the Royal Prince Alfred Hospital Intensive Care Unit.

Prolonged QT interval in the ICU-incidence, risk factors and outcome, a prospective multi-centre observational study

This study is being undertaken to determine the incidence of prolonged QTc interval and QTc dispersion in critically ill patients admitted to the ICU.

The study aims to identify associated risk factors, compare cardiac and non-cardiac complications, mortality, length of ICU and hospital stay in patients with prolonged QTc interval and QTc dispersion.

Statistical methods

A comprehensive review of statistical methods in the biomedical sphere has been recently accepted for publication in *Critical Care and Resuscitation* (authors Dr JL Moran and Professor PJ Solomon, School of Mathematical Sciences, University of Adelaide).

Reviews of generalised linear models in cost modelling in ICU and survival analysis techniques as applied to ICU patients have both been accepted in the *Journal of Evaluation in Clinical Practice* (authors Dr JL Moran and Professor PJ Solomon, School of Mathematical Sciences, University of Adelaide).

A meta-analysis of the effects of loop diuretics in acute renal failure using advanced Bayesian statistical methods has been published in *Critical Care Medicine*.

Presentation of papers illustrating the use of advanced statistical and econometric techniques to characterize process of care indices were made by Dr JL Moran and Professor PJ Solomon, School of Mathematical Sciences, University of Adelaide to the 1st International Conference on Safety, Quality, Audit and Outcomes Research in Intensive Care, Queenstown, New Zealand August 2007 and the Cambridge University MRC Statistical unit in November 2007.

Staff

Senior Director

AR Peisach MB BS FRCA FANZCA FFICANZCA

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SL Peake BM BS BSc(Hons) FANZCA FFICANZCA PhD

(Acting Director)

M Finnis MB BS FANZCA FFICANZCA

S Moodie MB CHB FJFICM

Studies on the critically ill represent co-operative undertakings between all the Nursing and Medical staff in both the Intensive Care Unit and the High Dependency Unit. Many thanks to our research coordinator, Mrs Tricia Williams.

Research team members

Research Coordinator

P Williams RN IntCCert, BN

Pharmacy

T Jones B Pharm DipEd PhD

Senior Registrars/Registrars/Resident Medical Officers

R Chalwin MB CHB

TM Vinodh MBBS DA DNB FISCCM

H Tewari MBBS MD

R Goud MBBS

K Arpudaswamy MBBS MD

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J Phillip-Hughes RN IntCCert Grad Dip Ns

S Flynn RN IntCCert

L Esca RN IntCCert

T Payne RN IntCCert Grad Dip Ns

W Ashforth RN RM IntCCert Grad Dip Ns

Grants

Intensive Care Foundation grant. "The Australasian Resuscitation in Sepsis Evaluation Survey 2007" (\$30,000 2007) Peake SL.

Acknowledgements

The staff of ICU would especially like to acknowledge the support and dedication of Mary Salagaras in our research endeavours (1957 – 2007).



MEDICINE, University of Adelaide, Discipline of

Research Focus

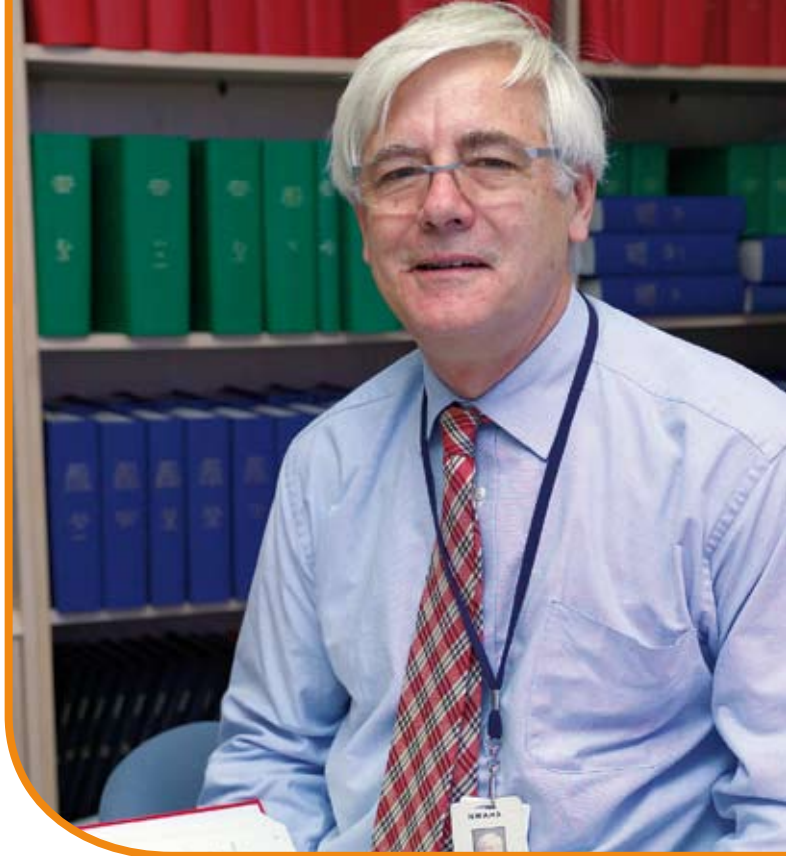
- Basic research studies of the physiology of zinc in the respiratory system
- Population research on chronic disease
- Patient safety and quality improvement
- Nutritional problems affecting older people
- Health Services and systems research
- Undergraduate and postgraduate assessment

Overview

The University of Adelaide Discipline of Medicine has its major activities in undergraduate and postgraduate teaching, undergraduate curriculum development, basic and applied research, and clinical service and management. Members of the department are involved in basic science research, clinical research, and epidemiological research across the disciplines of Neurology, (see Neurology report), Ageing, Cardiology (see Cardiology report), chronic diseases and population health.

Dr Renuka Visvanathan is the Director of the Aged and Extended Care Service at The Queen Elizabeth Hospital (TQEH). In 2007, her promotion to Associate Professor was approved. Her research interest is ageing, nutrition, dementia, depression and chronic disease. In 2007, she has completed recruitment into the Cytokine, Adiposity, Sarcopenia and Ageing - A Pilot Study. This study is supported by a research grant from the Vincent Fairfax Family Foundation (awarded 2005), The Queen Elizabeth Hospital Research Foundation and also an establishment grant from the University of Adelaide. Professor William Banks from the Department of Geriatric Medicine from St Louis University, USA is an international collaborator in this study. Other co-investigators include A/Professor David Wilson, A/Professor Robert Adams, Dr Pat Phillips and A/Professor Ian Chapman (RAH - Discipline of Medicine). Dr Solomon Yu has recently commenced a PhD in ageing and nutrition and is working on the CASA study. Working together with A/Professor Ian Chapman, A/Professor Visvanathan is now analysing the results of a randomized controlled study looking at the effects of nutritional and testosterone supplementation in community dwelling older people.

A/Prof Visvanathan is also collaborating with the nutrition group at Flinders University looking at the ability of various well known screening tools to predict poor health outcomes in older people using data from the Australasian Longitudinal Study of Ageing. In addition to this, the LUFLI Study (NHMRC funded project) which attempts to improve the management of asthma in the elderly has commenced at the TQEH. In September 2007, A/Prof Visvanathan was the co-convenor of the well attended International



Professor Richard Ruffin

Academy of Nutrition and Ageing conference which was held together with two other national meetings (Medicine, Ageing, Nutrition 2007). A/Professor Visvanathan has also authored a position statement entitled "Nutrition In The Elderly" for the Australian and New Zealand Society for Geriatric Medicine in 2007.

Professor Richard Ruffin is involved in studies on asthma and COPD epidemiology, and continuing a population health study examining chronic diseases (diabetes, obesity, asthma, COPD, cardiac risk factors, renal disease) within the North Western Adelaide population. This work is defining incidence, severity, undiagnosed disease prevalence, and the burden of disease in the population. A linked data set is facilitating this work. Research of educational assessment at the undergraduate and postgraduate level has commenced and will provide an evidence base for future junior doctor training.

A/Prof Adams is continuing work on population health and chronic disease, particularly within the North West Adelaide Health Study cohort population. He is continuing work funded by the NHMRC on a diagnostic trial of therapy to diagnose asthma in older people. Other funded projects include examining the effectiveness of spirometry in managing asthma in general practice. Within the ARC-funded Nutrition, Obesity, Lifestyle and Environment Study (NOBLE) he is examining the effects of obesity on respiratory health, the understanding of obesity in the community, and in collaboration with the School of Economics, the

economic implications of obesity. A/Prof Adams is the project leader of the Team STEPPE Project, funded by the Australian Commission on Safety & Quality in Health Care, which will be initiating and evaluating a training project in clinical handover and communication. He is a founding leading member of the newly formed Adelaide Centre for Health Services Research and Technology Assessment at the University of Adelaide.

Dr Peter Zalewski and Dr Carol Lang continued their studies on the physiology of zinc in the respiratory system and in asthma funded by an NHMRC project grant with Professor Richard Ruffin and Dr Darryl Knight, and in collaboration with Dr Chiara Murgia (a visiting research fellow from the Institute for Food and Nutrition in Rome). The NHMRC grant finished in March 2007. There was a slight shift in direction of the research by Dr Zalewski, focussing on the role of Zn ions in regulation of apoptosis in the airways. Preliminary data was obtained through an Honours project by Mr Joshua Hallett and a review on apoptosis in the airways has been accepted for publication. In September, NHMRC funding for 2008-2010 was obtained for this project with Prof Ruffin and Dr Murgia, to commence in 2008. PhD student Dr Lata Jayaram is in the final stages of writing up and is completing a paper on the zinc-related aspects of this study. Another PhD student Dr Dion Grosser is also in the final stages of completing his PhD. With research assistance from Mr Eugene Roscioli, Dr Grosser established a method for measuring labile Zn ions in airway epithelial cells using flow cytometry. Mr Roscioli has now commenced a PhD candidature in the Department with Drs Zalewski and Lang. Dr Zalewski presented the zinc and asthma studies at a meeting in Bangladesh in Feb 2007. This meeting has initiated a collaboration between Medicine, CSIRO, WCH and Waite Institute looking at human zinc biomarkers. Dr Zalewski is a co-supervisor of a PhD student Razinah Sharif who will work on this project. This year, Dr Zalewski also supervised four 3rd year Physiology students on a research project involving zinc fluorescence imaging in airway epithelial cells.

Dr Carol Lang is a NHMRC Peter Doherty Research Fellow who conducts research into the role of zinc in

airway inflammation and infection. Dr Lang collaborates with Prof Gary Anderson and Dr Rosa Gualano at the Departments of Pharmacology & Medicine at the University of Melbourne and the Cooperative Research Centre for Chronic Inflammatory Diseases. Implications for airway zinc, and the proteins that transport zinc in airway cells, are now being investigated in response to respiratory viruses, cigarette smoke and inflammatory cytokines. She was recently awarded a Clive and Vera Ramaciotti Foundation Establishment Gift to continue this work. Drs Lang and Zalewski are also working with Dr Toby Coates (Transplantation) and Dr Chiara Murgia (INRAN, Italy) to investigate zinc transporters in pancreatic islets.

Associate Professor David Wilson is an epidemiologist employed in the Department of Medicine to contribute to several large scale population studies including the Northwest Adelaide Health Cohort Study which is now in its sixth year of operation. This comprises a large representative population sample on whom biographical, biomedical and economic data have been collected overtime. He has also been appointed as the manager of the Nutrition Obesity Lifestyle and Environment (NOBLE) study (www.noblestudy.com.au). This is based on an Australian Research Council linkage grant and currently has nine PhD students working in an inter-disciplinary group investigating several aspects of the obesity problem. These students have contributed a number of papers to national and international journals and conferences since their studies commenced. In addition, a major statewide conference on obesity entitled the "Shape of Things to Come" was planned by the NOBLE Chief Investigators and held at the Adelaide Town Hall, November 5, 2007.

A/Prof Wilson also contributes substantially to several other population studies and is acknowledged as an international expert in population surveillance. He was a member of the Scientific Committee for the 5th International Conference on Behavioural Risk Factor Surveillance, Rome 24-26 October 2007 and a conference reviewer for the 19th International Health Promotion Conference on Health Promotion and Health Education, Vancouver, Canada June 11-15, 2007. He has established important collabo-

rations on population surveillance with a number of international centres including the Center for Disease Control, Atlanta.

Dr Simon Koblar has his research interests detailed in the Neurology section of this report.

Prof John Horowitz and Drs Arstall, Beltrame and Zeitz have their research interests detailed in the Cardiology section of this report.

Staff

Professor of Medicine

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CJ Lang BSc (Hons) PhD

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E Roscioli BSc(Hons)

Postdoctoral Fellow

C Murgia PhD (Visiting)

Grants

ARC Linkage Project Grant "Obesity, Health, Social Disadvantage and Environment in Australia: Relationships and Policy Implications" ARC \$910,395; Industry Partners \$450,000 (\$155,502 2007) 2005-2007, Hugo GJ, Ruffin R, Wittert GA, Taylor AW, Adams RJ.

NHMRC General Practice Research Grant # 349573 "Spirometry in asthma management in children and adults in general practice" (\$141,255 2007) 2005-2007, Crockett A, Beilby J, Mudge RP, Staugas R, Adams R, Stocks N.

University of Adelaide, Faculty of Health Science, Early Career Small Grant "The role of zinc in cigarette-smoke induced airway inflammation and in chronic obstructive pulmonary disease" (\$15,000 2006-2007) Lang CJ, Gualano R.

NHMRC, Australian Biomedical (Peter Doherty) Research Fellowship "The role of zinc in the respiratory system and in chronic obstructive pulmonary disease" (\$67,500 2007) 2006-2010, Lang CJ.

NHMRC Project Grant # 399124 "Establishing the safety and effectiveness of a diagnostic therapeutic trial for asthma in community elderly" (\$56,250 2007) 2006-2007, Adams R, Wilson D, Beltrame J, Visvanathan R.



Research Focus

- Epilepsy Research (clinical trials of new anti-epileptic medication)
- Dementia Research (clinical trials of new Alzheimer's Disease medications)
- Multiple Sclerosis (clinical trials of new RRMS treatments)
- Investigating environmental and genetic risks for stroke
- Investigation of the therapeutic application of adult stem cells to repair the brain following stroke
- Statistical parametric mapping analysis of regional cerebral blood flow (Nuclear Medicine collaboration)

NEUROLOGY UNIT

Overview

The Neurology Department has two main research arms:

Stroke related research which involves both genetic investigations into risk for stroke and stem cell therapy to repair the brain following stroke,

Clinical trials sponsored to investigate the benefit to our patient populations of new therapeutics in dementia, epilepsy and multiple sclerosis.

Stroke Research Programme (SRP)

The SRP forms a collaborative research concentration between the School of Medicine, School of Molecular Biomedical Science, Australian Research Council Special Centre for the Molecular Genetics of Development, University of Adelaide and TQEH Dept of Neurology, Basil Hetzel Institute for Medical Research and TQEH Research Foundation.

The new study of endothelial function in cerebral small vessel disease, with PhD student Ada Lam, is progressing well, with the first 50 subjects enrolled in the pilot study. Collaborators on this project include EW Khoo and S Patel (MRI and Cerebral SVD) and S McLennan and J Mathias (Cognition and Cerebral SVD). The study includes development of our earlier neurogenetics findings, and may lead to further commercialisation of

intellectual property (IP). With respect to the IP from our earlier research, Atherogen has been in discussion with several major pharmaceutical companies regarding their interest in this IP.

In collaboration with Dr Jane Mathias and Skye McLennan from the Department of Psychology at the University of Adelaide, another arm has been added to our research. Previous research has demonstrated that the clinical symptoms associated with cerebral small vessel disease vary substantially from person to person, ranging from a complete absence of observable symptoms to severe disability and/or dementia. The available published research indicates that in non-demented populations, clinical symptoms associated with small vessel disease include cognitive impairment, gait disturbance, urinary incontinence and mood disorder. If endothelial dysfunction is a major cause of small vessel disease, then endothelial dysfunction may be related to these symptoms. We are therefore assessing each of these four areas.

Dr Roopali Verma, a first year PhD student, is investigating stem cell therapy for stroke. The discovery of stem cells in the human brain has provided a promising future for repair of the human brain following stroke. In this research project, Dr Roopali is attempting to tap the potential of the neural stem cells resident in the mature brain. In stroke, these stem cells may be directed to regenerate brain tissue which died due to stroke.

Dr Elaine Leung, an academic GP registrar, is investigating Transient Ischaemic Attack (TIA) knowledge in General Practice. Research has shown that about 20% of strokes are preceded by a TIA or 'mini stroke', where symptoms resolve in 24 hours. TIAs are difficult to diagnose and should be considered an urgent medical condition, as approximately 50% of these patients can be at risk of having a stroke within the next 48 hours. High risk patients should be admitted to hospital for observation, and patients at lower risk can be assessed and managed non-urgently. GPs need to know how to diagnose TIA and how to best manage these patients. Research suggests that significant gaps exist in GP's knowledge of stroke and TIA. We propose to determine what this knowledge

is in Adelaide by inviting GPs in the Western and North East areas to complete a questionnaire. The questionnaire includes questions on how GPs prefer to be educated, if knowledge can be improved and about barriers in the delivery of the best care for their patients with TIAs, so that we can then determine the best way to deliver this education, enabling GPs to deliver up-to-date care to the community.

The SRP was again represented at the Stroke Society of Australasia Annual Scientific Meeting held in Perth in September. Dr Jim Jannes presented on three PDE4D SNPS in stroke. This work was also presented on Research Day at TQEH by medical student Verna Aykanat. Dr Anne Hamilton-Bruce presented 'Epilepsy Artwork in Medical Education' at a workshop for the Association of Neurophysiological Technologists of Australia at Flinders Medical Centre. Team members also presented at a number of community meetings, which has helped to raise much needed funding to support our research. Australian Neurology Research (ANR), a trust to raise further funding for research in Neurology, is developing well. ANR's committee is addressing marketing and fundraising to raise awareness of the important research being undertaken and provide further support for research in the department.

Dr Simon Koblar in collaboration with Dr Stan Gronthos from IMVS, Adelaide, presented the work of his PhD student, Dr Agnes Arthur, at the Society for Neuroscience conference in San Diego, CA, USA. In this work they presented the concept that stem cells were able to induce neuroplastic change to a host nervous system. This work was enthusiastically received and is under consideration in a high impact factor science journal. The meeting had 32,000 neuroscientists attending with less than 1% invited to speak on their work.

MBA Marketing student, Lubna Shaikh, has been instrumental in undertaking market research to assist with planning for fundraising during her work placement in April-July. She also undertook departmental scholarship work with us to develop further strategies and an evaluation plan. Victor Krawczyk, a Social Science student at the University of South

Australia and TQEH Vacation Scholarship student, undertook a risk management study for the Stroke Research Programme, including facilitating a team strategic planning meeting to identify and address risks, using the PESTEL framework. The results of this study should assist the SRP in developing plans that are strategically aligned with those of TQEH and the University of Adelaide.

From a clinical research perspective, the Acute Stroke Unit (a geographically located unit providing high level monitoring facilities to enhance the acute care of stroke victims) was launched by Dr Jim Jannes and clinical stroke nurse Lizzie Dodd in October. With input from other team members, the Emergency Department and Allied Health, a clinical pathway for acute stroke has been developed. New developments such as thrombolytic therapy and clotting factors in the treatment of intra-cerebral haemorrhage have mandated that a dedicated unit is necessary for state-of-the-art stroke management. The Stroke Unit will also provide education and research opportunities to achieve clinical excellence in stroke management. Drs Aaron Tan and Jim Jannes have also taken part in a Stroke Audit and will use the data gathered pre- and during the Acute Stroke Unit trial for evaluation and recommendation purposes.

Further development, from the assessment undertaken as part of the Own-Pet Dog Visiting Service, includes exploration of extending this service to include other pets.

Clinical Trials

Epilepsy

Three trials of new anti-epileptic drugs were undertaken throughout the last year, one of which is still actively recruiting. These trials will allow us access to new anti-epileptic drugs that may not become available to the general public until Pharmaceutical Benefits Scheme (PBS) listing and allows developing valuable clinical experience in the utilisation of these drugs.

Dementia

Dr Karyn Boundy is the Chairperson of the Australasian Consortium of Centres for Clinical Cognitive Research

(AC4R) to continue facilitation of clinical trials in memory conditions in Australia. She has also been selected as the South Australian and AC4R representative for Neurosciences Trials Australia – a clinical trials platform with “nodes” in each neurological subspecialty area to facilitate both investigator driven and to also to attract pharmaceutical company early stage phase I – III research to Australia. Dr Boundy has spoken at local General Practitioner (GP) division, national and international meetings about aspects of dementia management and diagnosis of less common dementias eg, frontal lobe and tauopathies. She has participated in an analysis of antipsychotics on behavioural and psychological symptoms associated with dementia, which subsequently aided the PBS reimbursement of Risperidone for BPSD.

The study with the Rheumatology Unit on neuropsychological, cognitive, behavioural and imaging with MRI and SPECT in Sjogren's Syndrome is submitted for review for publication.

RN Jill Forrest continues to supervise the Prospective Research in Memory Clinics (PRIME) database, studying new presentations with all types of dementia every 6 months. This database allows comparison with centres interstate and to provide epidemiological data on our patient group.

In Alzheimer's disease, eight trials have been completed or are in extension phase. Xaliproden neurotrophic mimic study was cancelled due to lack of efficacy. The voyager study was also held due to mid trail analysis showing minimal benefit. Three new add-on trials to conventional ACHEI treatment are under-way including PBT2 (A Metal Protein Attenuating Compound, a relatively weak chelator that binds zinc and copper), MEM-MD-71 (Memantine targets glutamate to prevent too much calcium entering the brain cells preventing cell death) and AVA102670 (Rosiglitazone is thought to enhance glucose uptake into the brain and have anti-inflammatory effects, as well as promoting mitochondrial biogenesis and aid amyloid processing).

The Clinical Trials department is also conducting two 'head to head' comparative studies with Donepezil, Aricept SR 23mg for moderate to severe Alzheimer's

disease is being assessed in a 2:3 ratio with Aricept 10mg, Huperazine A Implant, (Debio Pharma) an alkaloid derived from a traditional Chinese herbal remedy for fever. The compound exhibits anticholinesterase activity and is being assessed in a 1:1 ratio with Aricept 10mg. In addition a further study in the use of Aricept for BPSD in Severe AD will commence in the new-year. On the basis of our last SAD trial the TGA have now listed Aricept for severe AD.

A Restless Legs (RLS) with Ropinirole study continues in the open-label phase and is on the TGA.

Multiple Sclerosis

Clinical trials in the area of Relapsing Remitting Multiple Sclerosis (RRMS) expanded with protocols such as CFTY720D2301 an oral compound (FTY720) that reversibly traps a proportion of lymphocytes in the lymph nodes thereby reducing neuro-inflammation in RRMS. Another diverse treatment is Finategrast1 (SB-683699) (also oral) an antagonist of $\alpha 4\beta 1/\alpha 4\beta 7$ integrin mediated cell adhesion. These integrins have been shown to play an important role in the initiation and perpetuation of localised inflammation. Finategrast has a similar selectivity and pharmacodynamic activity to natalizumab, a monoclonal antibody shown to be effective for treatment of multiple sclerosis.

Previous study STARS showed Tysabri to be very effective in RRMS. It is now Therapeutic Goods Association (TGA) listed but not on the Pharmaceutical Benefits Scheme (PBS). Our department has one person on the Special Access Scheme (SAS) for this drug.

The CAMMS323 Protocol studies Alemtuzumab which is approved for the treatment of B-cell chronic lymphocytic leukaemia in many countries under the names CAMPATH or MabCAMPATH. Early studies conducted in patients with SPMS found that Alemtuzumab significantly decreased annual relapse rates and the formation of lesions in the CNS.⁷ In a subsequent study conducted in patients with RRMS Alemtuzumab produced a reduction in sustained accumulation of disability as well as reductions in relapse rates and lesion formation.

In the REFLEX Protocol 27025 Rebif New Formulation is used (FBS- and HSA-free) and assess Rebif NF for Clinically Isolated Syndrome (CIS) - subjects at high risk of converting to MS in a 2:3 ratio of Rebif (Rebif NF 3x Week versus Weekly versus Placebo). Rebif new formulation will soon be PBS listed.

Staff

Director of Neurology

MK Robinson MBBS FRACP

Senior Visiting Neurologist

AB Black OAM MBBS B Med Sc FRACP

GH Purdie MBBS FRACP

KL Boundy MBBS FRACP

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Clinical Academic Neurologist/Director of Stroke Research Programme

SA Koblar BMBS FRACP PhD

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J Jannes BMBS FRACP PhD

Research Fellow/Consultant

C Short MBBS BSc FRACP

Senior Registrar

A Tan BMBS

Principal Medical Scientist/Co-Director Stroke Research Programme

MA Hamilton-Bruce BSc MSc MBA PhD AFCHSE MIBiol CBiol FIBMS CSci

Medical Scientist

MB Donk BHSc

Research Officer – casual (Neurogenetics)

M Nezić BSc (Hons)

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Clinical Research Trials

JA Deimel RN BN

EL Lam RN

JS Forrest RN ICU Cert

PCK Cheung RN

P Steventon RN

Academic General Practitioner Registrar (GPET)

E Leung BSc (Med) MBBS DCH

Undergraduate Research Students

Medical (4th Year MBBS) Students

V Aykanat

Postgraduate Students

PhD candidates

R King BA BSW "Hospital hOme Pathways (HOP) – improving pre-hospital admission and discharge planning to community services for Home and Community Care (HACC) eligible clients in the western suburbs of Adelaide". University of Adelaide, Department of Public Health: 2003-. Supervisors: Moss JR (Public Health), Hamilton-Bruce MA, Mahmood A (Public Health).

A Lam B Pharm(Hons). "Endothelial Function in Cerebral Small Vessel Disease" University of Adelaide. 2006-. Supervisors: Jannes J, Hamilton-Bruce MA, Koblar SA.

R Verma MBBS. "Investigation of Stem Cell Therapy for Stroke" University of Adelaide. 2007-. Supervisors: Koblar SA, Hamilton-Bruce MA, Nottle M.

E Leung. "Transient Ischaemic Attack (TIA) Knowledge in General Practice" Supervisor: SA Koblar.

Departmental Scholarship Student

L Shaikh

Vacation Scholarship Student 2007 - 2008

Krawczyk V. "Managing risk for the SRP: Identification, assessment and planning" Supervisors: Hamilton-Bruce MA, Koblar SA.

Grants

Australian Government Commercialising Emerging Technology (COMET) Grant: \$64,000 from AusIndustry and \$16,000 from The Queen Elizabeth Hospital Research Foundation. Awarded to Atherogen Biotechnology Pty Ltd 2006-2007. IP Inventors: Jannes J, Koblar SA, Hamilton-Bruce MA.

Business Development Initiative Grant: \$8,000 from BioInnovation South Australia (BISA), with additional operating costs for the company from the shareholders. BISA Grant Awarded to Atherogen Biotechnology Pty Ltd 2006-2007. IP Inventors: Jannes J, Koblar SA, Hamilton-Bruce MA.

Australian Research Council Special Research Centre Grant. "Centre for the Molecular Genetics of Development" (\$111,111 2007) 2000-2009, Koblar SA, Saint R et al.

Prime Database Survey funding from Janssen Cilag (\$80,000 2007) Boundy KL.

The Queen Elizabeth Hospital Research Foundation Vacation Scholarship 2007-2008 (\$1,600 2007-08) Krawczyk V.

The Queen Elizabeth Hospital Departmental Scholarship 2007 Shaikh L.

University of Adelaide/TQEHF Postgraduate Research Scholarship (\$15,000 2007) Verma R.

Patents

Mutation associated with strokes (TPA): US patent application 10/563,360, filed 04/01/2006.

- Registered in the name of The Queen Elizabeth Hospital Research Foundation and Adelaide Research and Innovation Pty Ltd (ARI). Licensed to Atherogen Biotechnology Pty Ltd.
- Inventors: Jannes J, Koblar SA, Hamilton-Bruce MA.
- Received first office actions from the European Office and responded to the questions raised. National Offices are undertaking a review of patent applications.

Mutation associated with lacunar strokes (PON1): US patent application 10/589,725, filed 17/08/2006.

- Registered in the name of The Queen Elizabeth Hospital Research Foundation and Adelaide Research and Innovation Pty Ltd (ARI). Licensed to Atherogen Biotechnology Pty Ltd.
- Inventors: Jannes J, Koblar SA, Hamilton-Bruce MA.
- In national phase.

Other on-going research projects

Black AB. East Timor Epilepsy Project – Consultant/Volunteer 2007.

Boundy KL, Barnden L, Unger S. Early detection of Alzheimer's Disease in individuals using quantitative brain SPECT: Implementation and Optimization.

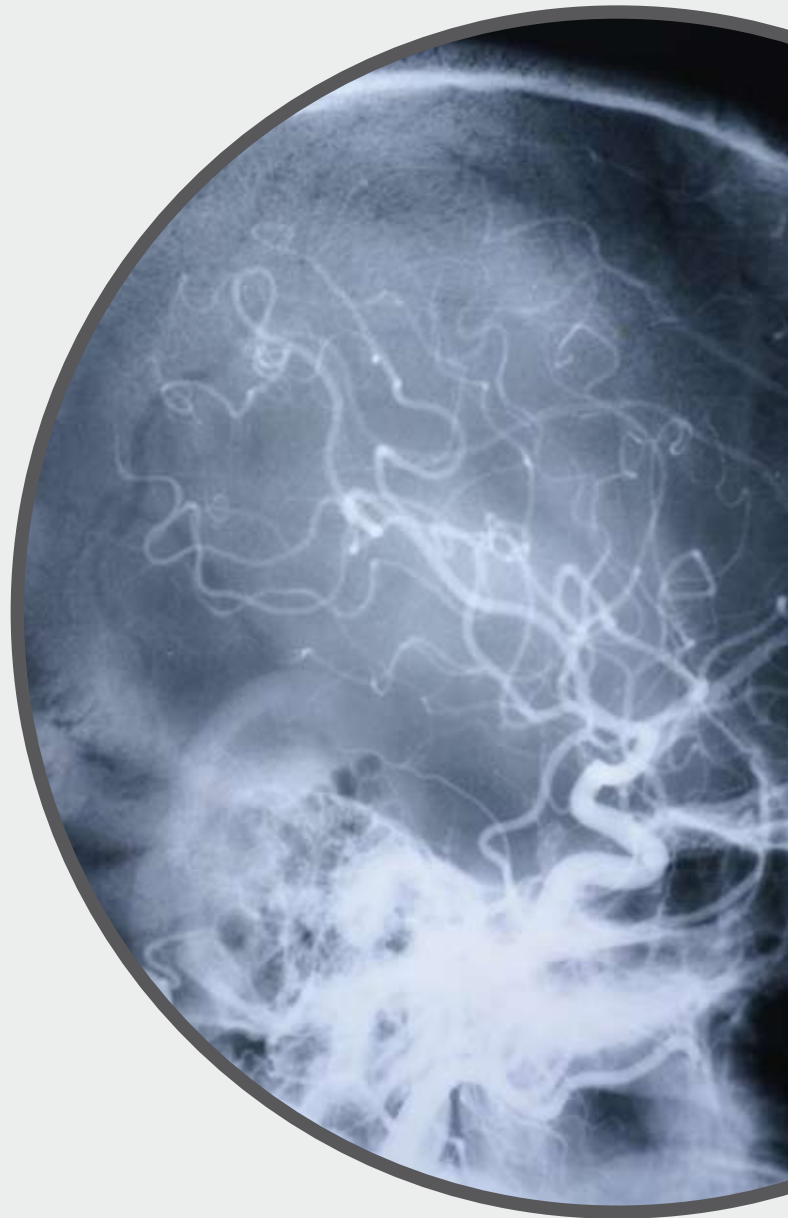
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Horn S. Psychosocial Outcomes of Epilepsy Surgery.

Milton AG, Hamilton-Bruce MA, Koblar SA, Jannes J. Chloride Channel Gene Polymorphism and Stroke.

Milton AG, Aykanat VM, Hamilton-Bruce MA, Koblar SA, Jannes J. PDE4D Gene Association with Ischaemic Stroke in an Australian Cohort.

Short CL, Behin-Ain S, Barnden L and Boundy KL. Clinical Correlation Between Cognitive and Regional Cerebral Blood Flow Changes in Patients with Mild to Moderate Alzheimer's Disease During Donepezil Therapy.



NUCLEAR MEDICINE UNIT

Research Focus

- Statistical parametric mapping of regional cerebral blood flow and MRI
- Comparison of nuclear and magnetic resonance cardiac imaging

Overview

Our department's research continues to focus on the major areas of cardiac and neurological nuclear medicine. Quantitative analysis of myocardial perfusion imaging is being utilised in the measurement of myocardial salvage following primary angioplasty for acute myocardial infarction. Collaborative projects with the oncology unit include serial imaging of gall bladder function in patients with advanced solid tumours undergoing therapy with a novel chemotherapeutic agent AMG 706.

Research and development in cerebral blood flow imaging included collaboration with Dr Anna Caroli at LENITEM, the Italian National Alzheimer's Disease Research Institution in Brescia on technical aspects of brain SPECT analysis that resulted in a joint publication. Dr Barnden visited this group and gave a presentation in October. Basic medical physics research was continued in collaboration with Prof Brian Hutton of University College London and results were presented at a workshop in Paris. Further optimization of the statistical parametric brain mapping (SPM) package in SPECT and MRI applications was performed. A new Chronic Fatigue Syndrome research project with Dr Richard Burnet of RAH as principle investigator was commenced. Subjects will undergo both SPECT and MRI brain imaging, with quantitative analysis to be performed at TQEH. A new nuclear medicine procedure to assess global cerebral fusion was developed with the requisite software written by Dr Barnden.

One peer reviewed paper was published in 2007, three presentations given at international conferences (European Association of Nuclear Medicine, Copenhagen and IEEE NSS-MIC, Hawaii), one at an international workshop (Paris) and 6 at a national conference (ANZ Society of Nuclear Medicine, Adelaide).

Staff

Director

S Unger MBBS FRACP PhD

Visiting Medical Specialists

M Kitchener MBBS FRACP

R Casse MBBS FRACP

A Warner MBBS FRACP PhD

G Cehic MBBS FRACP

M Nottage MBBS FRACP

Medical Scientists

L Barnden PhD

D Badger PhD BSc(Hons)

Higher Degree Student

TH Nguyen, MD "Ischaemic heart disease project"

Registrar

E Lam MBBS

Technologists

P Ong

G Pandos

T Smith

P Sotiropoulos

N Farnham

T Piscitelli

L Waran

R Edwards

D Maglica

Dr Steve Unger



NURSING RESEARCH

Overview

The Queen Elizabeth Hospital (TQEH) has been involved with the National Institute of Clinical Studies (NICS) VTE Prevention program. VTE prophylaxis programs have now been initiated in specialty units across the hospital.

In November 2006 TQEH participated in the Pressure Ulcer Point Prevalence (PUPPIES) survey which was a state-wide initiative of the SA Department of Health using standardised processes, methods and tools for pressure ulcer surveillance. The service improvement outcomes from PUPPIES survey are that TQEH nursing now uses the Braden scale for assessment of pressure ulcers and education across all clinical areas. Organisational policy and procedures have been developed and the frequency of re-assessment of pressure risk is well defined.

In 2007 TQEH Clinical Education Centre implemented a Basic Life Support Link Nurse Program for registered nurses with a minimum of 12 months experience and an interest in CPR to become a resource person for their clinical area. Currently there are 17 accredited CPR link nurses in the organisation who have conducted sessions in BLS and SAED in their clinical area and accredited nursing staff.

Susan Henwood, Staff Development Consultant, Clinical Education Centre, participated in the Clinical Leadership Program, 2006-2007, graduating from the program in April 2007.

Jacquelin Wood
Director of Nursing, TQEH





OTOLARYNGOLOGY HEAD AND NECK SURGERY, Department of

Professor PJ Wormald

Overview

2007 has again been a very productive year for the Department of Otolaryngology Head and Neck Surgery. During 2007 we have lodged a patent and set up a significant collaboration with the Department of Chemistry at the Otago University in Dunedin. This collaboration has resulted in the development of a wound dressing comprised mostly of chitosan derived from squid pens. Our research into the benefits of this dressing in the laboratory, animal model and human patient trial has produced excellent results and we are now in negotiations with a number of large multinational companies on the commercialization of this research. In collaboration with Prof Maddern and the division of surgery we are also looking into the potential post-operative reduction in abdominal adhesions for this product. This research was recognised by the Adelaide University in the recent Adelaide Research and Innovation Impact Awards (ARIIA) by awarding the Most Exciting New Disclosure Award to Professor Wormald and Dr Theo Athanasiadis. Dr Athanasiadis is currently on the surgeon scientist program and will be completing his PhD this year in the department.

This year also saw a significant increase in our contract research with a large contract signed with Medtronic ENT to evaluate their new product's efficacy in removal of biofilms from sheep with chronic sinusitis. This project has resulted from our research into and consequent development of the sheep as an appropriate animal model for eosinophilic chronic rhinosinusitis and for the protocols we have developed into assessing effectivity of interventions into the treatment of this disease.

As such our department is now internationally recognised as one of the top 5 rhinology research institutions in the world with numerous invitations to deliver keynote addresses at major international meetings in India, Hong Kong, Japan, Israel, Vietnam, United Kingdom, and the USA during 2007. Our reputation as a centre of excellence has also led to the department hosting overseas visitors from Switzerland, Brazil, Taiwan, Greece, Spain, Netherlands and Malaysia for periods of up to 3 months. The department runs research and clinical fellowships and we receive over 60 applicants every year for these positions with our current fellow from San Antonio, Texas, USA.

The department has also been successful in obtaining further grants from the Garnett Passe and Rodney Williams Memorial Foundation. This has helped support our annual research budget of over \$150,000 per annum. 14 peer-reviewed articles have been published in the highest impact factor journals in Otolaryngology and the department has also won numerous awards and prizes.

Our department recognises the importance of understanding the molecular mechanisms that underlie the pathology of sinus diseases. Laboratory based research under the leadership of chief scientist Dr Lor Wai Tan addresses important aspects such as understanding signals that can reduce chronic mucosal inflammation. Dr Tan and research scientist Leonie Baker are into the second year of a 3 year project grant funded by the Garnett Passe and Rodney Williams Memorial Foundation to investigate the use of short DNA fragments known as Cytosine-p-Guanosine sequences (CpG's) to attenuate the chronic inflammatory response. By stimulating Toll-like Receptor 9 found in the epithelial cells of the sinus mucosa with CpG's we have identified a cohort of patients who demonstrate a shift from the pro-inflammatory Th2 to an anti inflammatory Th1 pathway. Using state of the art multiplexing real time RTPCR we detected a lowering of the pro-inflammatory cytokine Interleukin-5 and an increase in the anti inflammatory IL12 p35 subunit. The benefit to the patient is that our findings can be developed as adjuvant therapies to complement surgical and medical treatments in the management of chronic rhinosinusitis.

The other keystone of the department's research program has been the surgeon scientist program and research registrar program. In 2007 the department has two PhD surgeon scientists, Alkis Psaltis and Theo Athanasiadis completing their theses and one Master of Surgery student, Tong Le. These aspirant surgeons have all received awards this year recognising their significant contributions to our research effort. This department leads the country with two surgeon scientists enrolled in our program in comparison to some of the other major capital cities who have not been able to attract suitable candidates. This program is actively encouraged and supported

by the department and has added scientific impetus and momentum to the research within the department and provided an example to other ENT departments around the country as to the value of incorporating research into the clinical training of our future surgeons.

The department in conjunction with the Neurosurgery Department is now a recognised world leader in the development of new transnasal intracranial surgical techniques. We ran the First Endoscopic Transnasal Intracranial and Skull Base Surgery Workshop in Adelaide in May this year. A large number of international surgeons came to Adelaide specifically to observe these new techniques resulting in up to 5 international observer surgeons in theatre at some of the procedures. These techniques allow brain tumours to be resected entirely through the nose with much reduced morbidity and improved loco-regional control of these tumours. A significant percentage of the patients operated upon in the department are referred from either interstate or overseas, emphasising the recognition of the department as a national centre of excellence.

Staff

Professor of Otolaryngology

PJ Wormald MD FCS(SA) FRCS(Ed)

Senior Lecturer

G Rees MBBS FRACS

Staff Specialist

S Floreani MBBS FRACS

J Ling MBBS FRACS

S Rajapaksa MBBS FRACS

Rhinology Fellow

E Weitzel MD

ENT Hospital Scientist

LW Tan BSc(Hons) PhD

ENT Research Assistants

L Baker

P Harris

Administration

L Martin

Postgraduate Students

T Le MBBS

T Athanasiadis MBBS

S Grasby BMBS

K Ha MBBS

E Ooi MBBS

H Pant MBBS

A Psaltis MBBS

I Wong MBBS

Vacation Student 2007 - 2008

M Thwin

Completed Theses

EH Ooi. 2003-2006. Thesis entitled: "The Effects of Apsergillus Fumigatus Protein Extracts on the Expression of Matrix Metalloproteinase and IL-5 and -12 in Nasal epithelium and its Role in Nasal Polyposis". Awarded Doctor of Philosophy December 2007.

I Wong. Thesis entitled: "The Effect of Co-Phenylcaine on Nasal Ciliary Beat Frequency in Healthy Volunteers". Awarded Master of Surgery June 2007.

Grants

Garnett Passe and Rodney Williams Memorial Foundation Grant-in-Aid "The localised application of antigen-CpG oligonucleotides to modulate chronic mucosal inflammation. A novel therapy for sinus disease" (\$90,000 2007) 2006-2008, Tan LW.

Garnett Passe and Rodney Williams Memorial Foundation Scholarship (\$40,000 2007) 2005-2007, Athanasiadis T.

Garnett Passe and Rodney Williams Memorial Foundation Scholarship (\$40,000 2007) 2005-2007, Psaltis A.

University of Adelaide Faculty of Health Sciences (Divisional) TQEH Research Foundation Postgraduate Research Scholarships (\$18,628 2007) Le T.

TQEH Research Foundation Vacation Scholarship (\$1,200 - 2007-2008) Thwin M.

Medtronic ENT. "Removal of Biofilms by hydrodebriders, CAZ and Gallium in sheep model of biofilms" (\$75,000 2007) Athanasiadis T, Wormald PJ.

Awards 2007

PJ Wormald. Australian Medical Association for "Significant Contribution to Medicine" Presented at AMA Meeting SA, Adelaide June 2007.

T Le. TQEH Research Foundation Award for best presentation, Higher Degrees (Clinical) Junior category, The Queen Elizabeth Hospital Research Day, Adelaide October 2007.

A Psaltis. The RP Jepson Medal for the best scientific presentation at the Royal Australian College of Surgeons, SA and NT Sub-committee - Annual Scientific Meeting.

A Psaltis. Best Poster Prize at the Inaugural Post-Graduate Research Day, University of Adelaide, Faculty of Health Sciences, October 2007.

A Psaltis. Best Oral Presentation and Overall Winner at the Inaugural Post-Graduate Research Day, University of Adelaide, Faculty of Health Sciences, October 2007.

T Athanasiadis. University of Adelaide Adelaide Research & Innovation Impact Award (ARIIA) for Most exciting new disclosure - "Anti-adhesion dressing for wound healing", September 2007.

T Athanasiadis. 1st poster prize for Rhinology at European Federation of Oto-Rhino-Laryngological Societies, Vienna 2007.

PSYCHIATRY, University of Adelaide Discipline of

Research Focus

- The impact of major common psychiatric disorders, such as depression and anxiety, on high prevalence chronic medical conditions such as coronary artery disease, chronic respiratory disease and diabetes.



Dr Geoff Schrader

Overview

Dr Geoff Schrader continued his collaboration with Professor Simon Stewart, Professor of Preventative Cardiology at the Baker Heart Research Institute and Professor David Wilson, of the Department of Primary Care at University of Queensland on the NHMRC funded "TakeHeart" project. This project involves a cluster randomized trial conducted in 24 general practices and is attempting to discover the impact of identifying and treating depression in patients with heart failure and angina. The intervention is based on findings from the IDACC project which was conducted by Dr Schrader and Dr Frida Cheek in Adelaide some years ago. During the year, 18 general practices and over 100 patients were recruited to participate in this study. Ms Kerena Eckert, Research Fellow, has joined the "TakeHeart" team as project manager.

Dr Schrader has also continued his collaboration with Dr John Beltrame from the University of Adelaide Discipline of Medicine, (TQEH) and together they supervise 2 PhD students whose projects focus on various aspects of the association between cardiac disease and depression. One of these students, Rosanna Tavella continued her investigation into the impact of depression on quality of life in cardiac patients and began a project examining

the association between the serotonin transporter gene and depression in cardiac patients. The other student, Alexis Wheeler began a project examining mortality rates in cardiac patients with depression. This work is being carried out in association with the Epidemiology Branch of the South Australian Department of Health.

Dr Nick Potts has continued his work with Dr David Wilson and Professor Richard Ruffin. The past 12 months has seen the completion of the second phase of the North West Adelaide Health Study data collection. This data set contains information on the rates of depression in the North West Adelaide population and the association of depression with a variety of chronic medical conditions including chronic lung diseases, diabetes, rheumatological disorders and general health risk questions and basic demographics.

Tracy Air collaborated with Professor Bob Goldney, Dr Geoff Schrader and Michael Wooden in an investigation of frequent psychiatric attendees at the Emergency Department. Therese Mayo continued her work in spatial working memory abnormalities in Post Traumatic Stress Disorder (PTSD). Dr Elaine Skinner continued her qualitative analysis of case records of patients seen in rural South Australia.



Staff

Senior Lecturer

GD Schrader MBBS PhD FRANZCP

Lecturer

NL Potts BMBS ABPN

Research Fellow

K Eckert MPH

Research Officer

T Air BA(Hons)

Research Nurse

E Jansen RN

Administration

DK Brown

D Alberton

Postgraduate Students

PhD Candidates

T Mayo "Spatial working memory abnormalities in PTSD"

N Potts "Major depression in chronic lung disease"

E Skinner "Morbidity patterns in psychiatric patients in rural South Australia"

R Tavella "Quality of life, depression and cardiac disease"

A Wheeler "Associations between depression and cardiac disease"

Masters Candidate

B Asokan "Measurement of trauma in acutely psychotic patients"

RENAL UNIT



Dr Andrew Southcott MP (centre) at the official opening of the SA NT Islet Transplant Laboratory, July 2007.

Research Focus

- Many aspects of the care of the patients with renal disease with special emphasis on kidney transplantation at clinical, epidemiological and experimental levels
- Pancreatic islet transplantation as treatment for Type-1 diabetes mellitus

Overview

2007 has again been an extremely productive year for research in the department. The highlights of the year have been:

- Ongoing funding from the Juvenile Diabetes Research Foundation for the Pancreatic Islet Transplant Project;
- Research funding to the department exceeding \$1 million for the second consecutive year;
- Thirty six publications in peer reviewed international medical journals;
- A record number of post graduate students;
- The awarding of Doctorate of Philosophy to Dr Wai Lim;
- A growth in contract research between commercial companies and the department;
- The awarding of prizes for presentations to Dr Michael Collins and Ms Sian Eng at National Scientific Meeting, and
- Three Honours Students (Tyson Matthews, Dieu Dang, Jessica McIntyre) being awarded first class Honours in BSc Honours Degree.



Laboratory Research

The laboratory research program carried out by Dr Krishnan continues to investigate the role of inhibitory molecules in allograft rejection by the use of gene therapy vectors. Another aspect of Dr Krishnan's work examines the role of adult Mesenchymal stem cells as cellular therapeutic agents for modifying the alloimmune response to facilitate the acceptance of transplanted organs with minimal immunosuppression. This work is being performed as a collaborative research project with the New York-based biotechnology company, Angioblast and Melbourne-based Mesoblast Ltd. This year Dr Krishnan has supervised two PhD students, Boris Fedorić and Darling Rojas, one Honours student, Jessica McIntyre and one international Master's student from China, Dongqing Yang.

South Australian Northern Territory Islet Transplant Program

The new clinical and laboratory program continued to come towards fruition, as we move closer to islet transplantations for South Australians with Type 1 Diabetes Mellitus. We have three new staff members join the team earlier this year; Chris Drogemuller (scientist), Daisy Mohanasundaram (scientist) and Toni Miller (Islet Transplant Nurse Coordinator). Toni recently won a travelling scholarship from JDRF which allowed her to visit the leading islet centre in the world in Miami.

We have sent numerous pancreata interstate (mainly to St Vincent's, Melbourne) for islet isolation and then have had the islets returned to us. We have excellent results from using pancreata from South Australia. By using a special transport medium for the pancreas, we have shown that the yield of islets isolated in Victoria from South Australia pancreata has been as good as that isolated from local Victorian pancreata, even though the pancreas from South Australia has had a longer ischaemic time. The rate of pancreatic organ donation from South Australia is still the highest in Australia at 2½ times the national rate which allows us to procure more islets to prepare for the transplant program. Ethics approval for the revised islet transplant protocol has recently been approved by the human ethics committee, as well as the inclusion and exclusion criteria for patient selection into the program.

In July, Dr Andrew Southcott MP officially opened our islet laboratory on Level 7, Basil Hetzel Institute. We were able to show dignitaries and families with type 1 diabetes what islets look like and how an islet transplant occurs. To bring a prominent awareness of diabetes to our state's parliamentarians, the JDRC recently organised a 'sitting' in the South Australian Parliament where local children with diabetes addressed the Legislative Council Members. We anticipate that this will encourage the decision makers to be aware of diabetes and how funding will assist in finding a cure for diabetes.

The three Australian centres participating in the Australian Islet Program (Westmead, Sydney, St Vincent's, Melbourne and TQEH, Adelaide) are acting as a consortium, pooling their knowledge and expertise. In our Clinical Pharmacology department we can measure the immunosuppressive drugs for the islet program. One South Australian islet recipient who received an islet transplant in Sydney is currently being followed up by South Australian clinicians.

Clinical Research

The Department of Nephrology and Transplantation Services continues to be an active participant in a number of international clinical trials in transplantation and nephrology. In 2007 the department recruited patients into three trials involving novel agents. A phase 3, multicentre international trial using tolvaptan, a vasopressin receptor blocker, enrolled patients with autosomal dominant polycystic kidney disease to assess the effect on the rate of renal volume change over 36 months. The department has also commenced participation in two phase 2 transplantation trials, using an inhibitor of Protein Kinase C, AEB 071, and an inhibitor of JAK3 kinase, CP-690,550 to assess the effect on acute rejection and transplant function.

A number of transplant and nephrology studies are continuing from previous years where patients are still being followed. These include trials examining the efficacy of new Erythropoiesis Stimulating Agents in the treatment of renal anaemia, the use of a new calcimimetic agent, Cinacalcet, to reduce the

development of renal bone disease and also a study of its efficacy in the reduction of cardiovascular events in chronic renal failure patients, and ongoing assessment of a new immunosuppressant, belatacept on transplant outcomes. The increasing clinical trial business has led to the employment of additional trial staff.

Tissue Typing Laboratory at the Australian Red Cross Blood Service

Tissue typing research has become a major research focus of the Transplant Immunology group. Currently we have one full time PhD student, Hooi Sien Eng, supervised by Professor Russ and Dr Toby Coates. Sien's work has been presented at several national and international meetings. She was awarded the Kidney Health Australia prize for the best Clinical Research at the Australian and New Zealand Society of Nephrology meeting in 2007. She was also awarded a prize for Clinical Research at the Transplantation Society of Australia and New Zealand meeting. Dieu Dang was awarded first class Honours for her Tissue Typing research on the MHC class I region of the Common Marmoset. Dieu is the first Honours student in the Renal Unit to work part time and complete Honours and was supervised by Dr Toby Coates and Dr Lindsay Dent from the Department of Molecular Biosciences at University of Adelaide. Presentations were given by other members of the Tissue Typing Laboratory on applied research at the ASEATTA meeting in Perth. In 2007 Dr Toby Coates was appointed as an Honorary Consultant to the Tissue Typing Laboratory, cementing a long term interest of the department initiated by Professor Graeme Russ.

Dr Shaundee Sen commenced a PhD in early 2007 under the supervision of Drs Steven McDonald and Toby Coates, and he will be examining the relationship between risk factors and markers of vascular disease among people with kidney disease. In particular, he has begun to look at the role of endothelial progenitor cells in renal disease. This work encompasses an overlap between clinical and laboratory-based research. In the laboratory he will study the effects of renal failure on Endothelial Progenitor Cells. This has resulted in a significant new collaboration with Dr Claudine Bonder at the Hanson Institute.

General Laboratory

Within the general transplantation immunology laboratory, major research interest in Dendritic Cells continues. Tyson Matthews commenced his Honours degree working on Ischaemia Reperfusion Injury and the role of Dendritic Cells in mouse models. Tyson won the best Honours presentation at Research Day in 2007 and was subsequently awarded first Class Honours (co-supervised with Dr Lindsay Dent) through the Department of Molecular BioSciences at University of Adelaide. Tyson will continue his studies in 2008 when he undertakes his PhD. Dr Natasha Rogers commenced her PhD studies working on the development of Dendritic Cell specific tolerogenic vaccines in collaboration with Professor Chris Parish at the Australian National University. This association has grown through a commercial collaboration, in which Svjetlana Kireta and Emma Leedham have worked to test specific DC based vaccines. This work has resulted in a commercial contract of \$135,000. Dr Shilpa Prasad continues to work on her PhD investigating the tolerogenic potential of dendritic cells in transplantation. Clyde Milner continues to provide laboratory supervision and supervised a significant commercial contract with the pharmaceutical company Shering Plough which provided \$152,000 income to the laboratory. Clyde continues to work on the Islet Transplantation Program. Austin Milton has become the supervisor of an Axiom Microscope purchased by the hospital for the Basil Hetzel Institute and Mrs Kireta has supervised the new 6 colour flow cytometer purchased with funds donated through the Research Foundation.

Epidemiological Research

The principal focus of epidemiological research has continued to be the Australia and New Zealand Dialysis and Transplant Registry, housed within the department. Dr McDonald acts as Executive Officer for this, and Professor Russ chairs the Executive Committee. The Registry is funded by an agreement with the Commonwealth Department of Health and Ageing, and is overseen by a steering committee with wide representation from nephrologists and others across Australasia. The ANZ Organ Donor Registry is also conducted in a similar fashion.

For both Registries, the core roles are gathering and utilising information about the incidence, prevalence and outcomes of dialysis and transplantation across Australia and New Zealand (for the ANZDATA Registry), and the number and characteristics of deceased organ donors (for ANZOD Registry).

As part of this there is an active research role, with a number of papers produced and a wide network of collaborators. Dr Sean Chang continued as Epidemiology Fellow through 2007, with major interests in the relationship of body mass index to outcomes in both dialysis and transplant patients. Dr Emmanuel Villar, a nephrologist from Lyon, France who has recently completed his PhD, spent 2007 in the Registry examining outcomes among people with diabetes and renal failure.

Staff

Professor and Director Renal Unit and Renal Transplant Services

GR RUSS MBBS FRACP PhD

Senior Staff Nephrologists

APS Disney MBBS FRACP

SP McDonald MBBS(Hons) FRACP PhD

Transplant Surgeons

MM Rao BSc MS MCh FACS FRACS

CH Russell MB BCh FRACS BA(Hons) MA (Oxon) FRCS (Edin)

Renal Transplant Nephrologist

PTH Coates MBBS FRACP PhD

Senior Medical Scientist

R Krishnan BSc(Hons) PhD

Medical Scientists

C Milner BAppSc

S Kireta BSc

A Milton BSc (part-time)

C Drogemuller BSc

D Mohanasundaram MSc



Research Assistants

E Cannon BSc(Hons)
E Leedham BBiotech(Hons)
D King BSc(Hons)

Technical Officers

J Johnston

Clinical Trials

B Hockley RN
C Russ RN
M Hockley RN
K Fisher
L Trowbridge RN

ANZDATA Registry

L Excell
B Livingston B Surv
E Steinmetz
C Young
C Leitch
S Chan MBBS MRCP (Epidemiology Fellow)

Overseas Research Fellow 2007

Ei Villar PhD (From Lyon, France)

Administration

G Kecovic

Postgraduate Students

PhD candidates

S Prasad MBBS(Hons) FRACP "Plasmacytoid dendritic cell based islet cell transplantation in marmoset monkeys"

B Fedorić BSc(Hons) "Studies on the ability of ILT4 transduced dendritic cells to modify allograft survival in an ovine model of transplantation"

HS Eng BSc(Hons) "Analysis of the specificity and properties of Allo-antibodies associated with rejection of renal transplants"

N Rogers MBBS FRACP "Specific targeting of dendritic cells with tolerogenic liposomes in allotransplantation"

D Rojas BSc(Hons) "Studies on the immunomodulatory effects of the inhibitory molecule PDL-2 in dendritic cells"

S Sen MBBS FRACP "Investigation of classical and novel risk factors for cardiovascular disease and function in kidney disease"

Masters candidate

D Yang MBiotech "Generation of FoxP3 adenoviral constructs for the transfection of dendritic cells"

Honours candidates

D Dang BBiomed Sc "Characterisation of the major histocompatibility complex Class 1 Locus & T cell receptor B chain repertoire in New World Monkey, *Callithrix jacchus*"

T Matthews BSc "The role of dendritic cells subsets in immune responses in the kidney"

J McIntyre BSc "Studies on the ability of genetically modified dendritic cells to generate T regulatory cells"

Grants

Endeavour International Postgraduate Research Scholarship "Analysis of the specificity and properties of Allo-antibodies associated with rejection of renal transplants" (\$19,616 2007) Eng HS.

Juvenile Diabetes Research Foundation Program Grant "South Australian and Northern Territory Pancreatic Islet Isolation Program" (\$731,567 2006- 2007) 2006 – 2009, Russ G, Coates PTH et al.

NHMRC Postgraduate Medical Research Scholarship "Plasmacytoid dendritic cell based islet cell transplantation in marmoset monkeys" (\$29,172 2007) Prasad S.

NHMRC Postgraduate Medical Research Scholarship "Specific targeting of dendritic cells with tolerogenic liposomes in allotransplantation" (\$14,586 2007) Rogers N.

NHMRC #339374 Project grant "Tolerogenic dendritic cells in common marmoset renal transplantation" (\$70,000 2007) 2006-2007, Coates PTH.

NHMRC #457281 Capacity Building Grant in Population Health "Improving population health by a multidisciplinary, multi-method focus on kidney disease of the young, the old and of Indigenous Australians" (TQEH \$54,970 2007-08) 2007 – 2010, Craig J, Cass A, Irwig L, Chadban S, McDonald S, Devitt, Macaskill P, Jones M, Howard K.

The Queen Elizabeth Hospital Research Foundation Muriel T Gunn Foundation Equipment support (6 colour flow cytometer) Dendritic Laboratory (\$50,000 2007) Russ GR, Coates PTH.

The Queen Elizabeth Hospital Research Foundation Fotheringham bequest (salary support) Dendritic Laboratory (\$50,000 2006-07) Russ GR.

The Queen Elizabeth Hospital Research Foundation/University of Adelaide Divisional Scholarships (\$37,597 2007) Fedorić B, Rojas DM.

Kidney Health Australia Postgraduate Scholarship "Investigation of classical and novel risk factors for cardiovascular disease and function in kidney disease" (\$31,000 2007) Sen S.

Contract research

Lipotek Pty Ltd. "Mechanistic study on the cellular action of Dendritic Cell Targeted Vaccine" This study was performed in the marmoset monkey (\$135,318, 2007) Coates PTH, Kireta S, Leedham E.

CMAX in conjunction with Schering-Plough Research Institute. "Rising single and multiple dose, food and

formulation effects on a new bronchodilator drug – the inhibitory activity on Tumor Necrosis Factor α (TNF α)" (\$152,647, 2007) Milner CR, Coates PTH.

Awards

T Matthews. Best presentation of a research project, Honours Students, Basic Science Students category, The Queen Elizabeth Hospital Research Day, Adelaide, October 2007.

D Rojas and B Fedoric. Joint winners - best presentation of a research project, Higher Degrees, Basic Research Junior Students category, The Queen Elizabeth Hospital Research Day, Adelaide, October 2007.

S Prasad. Best presentation of a research project, Higher Degrees Senior Clinical Students category, The Queen Elizabeth Hospital Research Day, Adelaide, October 2007.

HS Eng. Kidney Health Australia Award for the best Clinical Research presentation, titled "Luminex® Investigation: Low Titer HLA Donor-specific Antibodies in Positive B-cell Crossmatches Predict Late Graft Loss" at The Australia and New Zealand Society of Nephrology (ANZSN) 43rd Annual Scientific Meeting, Gold Coast, Queensland, September 2007.

HS Eng. Amgen Young Investigator Award (\$500) for presentation titled "Luminex® Investigation of Positive B-cell Crossmatches in Renal Transplantation", The Transplantation Society of Australia and New Zealand 25th Annual Scientific Meeting, Canberra, March 2007.

Acknowledgements

The Renal Unit especially wishes to thank The Queen Elizabeth Hospital Research Foundation for its continuing project and scholarship support. We very much appreciate the generous support of the Muriel T Gunn Foundation to enable enhanced work to continue in the Renal Unit.

RESPIRATORY MEDICINE UNIT

Overview

In 2007 progress was made on an asthma education booklet, based on Cochrane reviews, by medical students, under the supervision of Dr Antony Veale and Associate Professor Brian Smith. This evidence based information booklet for patients encourages interaction between patients and clinicians. It follows on from a Chronic Obstructive Pulmonary Disease (COPD) booklet which has won national awards for the project and for a previous PhD student, Melanie Harris.

Registrar, Dr Ching Li Chai, completed a Cochrane review on CPAP interfaces in the treatment of obstructive sleep apnoea. A number of medical students working in Cochrane reviews, in conjunction with the Clinical Epidemiology Unit have completed reviews in lung volume reduction surgery, long acting beta agonist therapy and COPD, as well as ongoing work on depression in COPD.

The TQEH Respiratory Medicine Unit's Sleep Laboratory is investigating ways to achieve weight loss to reduce the burden of obstructive sleep apnoea and recruiting is well underway.

The clinical trials team of the Unit have been active in different areas related to Respiratory and Sleep Medicine. Projects undertaken in 2007 include testing a new long-acting anticholinergic bronchodilator in COPD, novel anti-inflammatory agents in asthma, new antifibrotic and anti-inflammatory treatments for interstitial lung disease, new compounds for the treatment of sleep maintenance insomnia and continuing studies in smoking cessation.

Research Focus

- New respiratory medications
- Obstructive sleep apnoea
- Evidence based respiratory medicine
- Smoking cessation
- Nitric oxide

Pulmonary function laboratory activities included a formal comparison of lung function in Asian and non-Asian patients and this is ongoing. Bronchial challenge techniques are also being reviewed in a formal research program. The pulmonary function laboratory also continues to provide data for several researchers in other units.

Staff

Director

BJ Smith MBBS FRACP Dip Clin Epi PhD

Senior Consultants

AM Southcott MBBS(Hons) FRACP

R Ruffin MBBS(Hons) MD BSc(Hons) FRACP

I Nikifins MBBS FRACP

A Veale MBBS PhD FRACP

J Polasek MBBS

Advanced Trainee

A Roy MBBS

Principal Medical Scientist

S Homan MSc

Pulmonary Function Laboratory

D Keatley BSc (Biomed)(Hons)

A Herrero Adv RSC Cert of Science

N Leonardis BSc

Clinical Trials Unit

Coordinator

K Boath Mgt Cert Adv Cert BHealth Sci

Research Nurse

P Gluyas RN RM CC Cert

Sleep Laboratory

M Smith BSc

T Faulkner BPsych(Hons)

T Hams (Admin)

Respiratory Nurses

L Kotai RN RM CC Cert Post Grad Dip Health Counselling

K Lawton BAN

Unit Pharmacist

T Jones B Pharm Dip Ed PhD

Secretarial

G Searle

M Ashley

V Daly

Grants

Commonwealth Dept of Health & Aged Care
"Australian Cochrane Airways Group Network"
(\$22,000 2007) Smith BJ et al.

Clinical Trials

Almirall COPD (\$24,568 2007) Southcott AM.

Boehringer COPD (2 studies) (\$29,660 2007)
Southcott AM.

Intermune (ILD) Southcott AM.

Novartis (ILD) Southcott AM.

Novotech/ Epigenesis (Asthma) Southcott AM.

Sanofi Aventis (2 Insomnia trials) (\$51,348 2007)
Southcott AM.

Sanofi Aventis (smoking cessation) \$5,500 2007)
Southcott AM.

RHEUMATOLOGY UNIT

Dr Maureen Rischmueller



Research Focus

- Autoimmunity
- Epidemiology
- Immunogenetics
- Osteoarthritis

Overview

The Department of Rheumatology strives to augment its clinical rheumatology services with research programs into the causation and complications of rheumatic diseases and evaluation of new generations of pharmaceutical agents for the treatment of arthritis. The major focus of this research is towards the immunogenetics, pathogenesis, and epidemiology of a number of rheumatic diseases.

Dr Catherine Hill is chief investigator on a NHMRC funded randomized clinical trial of fish oil in the treatment of knee osteoarthritis. Other current areas of investigation by Dr Hill include the prevalence and burden of musculoskeletal disease in the SA population using data from the North West Adelaide Health Study; cardiovascular disease perception and health literacy in early arthritis patients; systematic reviews of treatment for temporal arteritis and polymyalgia rheumatica; and PhD co-supervision of Dr Sally Cox (FMC) in an epidemiological and clinicopathological study of inflammatory myositis in SA.

Dr Maureen Rischmueller's research group, led by senior research officer Ms Sue Lester, continues to focus on the genetics of autoimmunity, providing insights into biological mechanisms underlying disease, and ultimately enabling identification of therapeutic targets. In addition to their large cohort of patients with Sjögren's syndrome, this year they embarked upon a program, in collaboration with Drs Simon Burnet, Catherine Hill, and Samuel Whittle, of archiving DNA and serum samples from a range of other autoimmune diseases such as systemic lupus erythematosus, myositis and scleroderma, and have the potential to broaden this research to other chronic diseases. An exciting development this year was their publication implicating genes associated with complement regulation as important susceptibility factors for Sjögren's syndrome. Their results suggest that genetic susceptibility to these complex diseases results from an individual carrying a number of susceptibility genes in certain combinations. Funding from Arthritis Australia in 2008 will enable refinement of this knowledge. Preliminary results from an international collaboration led by Professor John Harley at the University of Oklahoma, cite four new genetic regions which have been identified in a genome-wide scan as being

important in Sjögren's syndrome - work is continuing in this area. Another key development, in collaboration with Professor James Wiley, Nepean Hospital, Sydney, was obtaining preliminary evidence of a new autoantibody in Sjögren's syndrome. Although it is still early days, this autoantibody has great potential to be both specific (and therefore be of use in a diagnostic capacity) and functionally important in the dryness symptoms associated with this disease.

Ms Lester's genetic expertise has led to her involvement in a number of collaborative studies with other research groups, including a collaboration with South Australian Research and Development Institute (SARDI) evaluating the use of genetic markers to identify the contamination source (eg farm, abattoir, processing/packing, post-purchase) in Salmonella food poisoning outbreaks; paid consultancy/collaboration with the CY O'Connor ERADE Village Foundation for the development of assays using alternative techniques to measure structural genome variations, increasingly recognized as major contributors to human disease; collaboration with the RAH Gastroenterology unit for genetic studies into irritable bowel syndrome and peptic ulcers; collaboration with Dr Toby Coates, TQEH Renal Unit, on identification of genetic variation (or tissue matching) in the marmoset MHC region- these marmosets will be used as a future model for renal transplantation; collaboration with Dr Steven Holloway, University of Melbourne Veterinary School, on genetic studies of autoimmune disease in dogs, and both FIV infection susceptibility and tissue matching for renal transplantation in cats.

Registrar

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J McLean

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Study Coordinator

R Battersby BSc Grad Cert Drug Development

Clinical Trials Assistant

J Marrett BBus (Mkt)

Rheumatology Clinical Nurse

A Batty RN

Administration

M Devine

Grants

NHMRC Project Grant ID# 451900 "Fish Oil in knee osteoarthritis" (\$232,875 2007) 2007-2009, Hill C, Cleland L, Jones G, March L.

NHMRC Project Grant ID# 453511 "Regulation and activity of fatty acid delta-6-desaturase (D6D)" (\$169,000 2007) 2007 – 2009, James M, Gibson R, Cleland L, Cook-Johnson R, Lester S.

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Acknowledgements

The Rheumatology Unit would like to acknowledge Prof Les Cleland, Director of Rheumatology, RAH, for provision of laboratory space at the Hanson Institute, Arthritis Australia, and CY O'Connor ERADE Village, Western Australia.



Research Focus

- Surgery for cancer
- Minimally invasive surgery
- Assessing the evidence
- Understanding the biology of surgical disease

Professor Guy Maddern

SURGERY, University of Adelaide Discipline of

Overview

The tension between delivery of surgical services and meaningful and relevant surgical research continues to be a major problem for the Division of Surgery at The Queen Elizabeth Hospital. The surgical demands continue to escalate and the expectations of patients, Governments and hospital administrators are also increasing. At the same time, in order to attract and retain the surgical staff required to deliver an innovative and relevant surgical service, there needs to be the opportunity to research and appraise the activity that is taking place. Patient care is always the highest priority within a surgical service, and it makes research endeavours often difficult to pursue. Nonetheless, the Division of Surgery has continued to look at innovative programmes and has maintained throughout 2007 a strong research throughput with over 50 publications emerging during the year and in excess of \$2 million of research funding.

In addition to this, steps are being taken to introduce a minimally invasive surgical Masters to capitalise on the considerable surgical expertise and clinical opportunities available within the hospital in a number of departments. This will hopefully attract a high quality post-Fellowship surgeon who wishes to develop not only their clinical expertise but also their ability to research the important clinical issues associated with the care of their patients.

During 2007 the Division of Surgery, through its relationship with the Australian Safety and Efficacy Register of New Interventional Procedures in Surgery (ASERNIP-S), has been able to attract a grant of \$5 million to work with the Royal Australasian College of Surgeons in developing a national research programme on the optimal type of training in a surgical simulated environment. This is a huge project with great potential for surgical training within the nation and will, when successfully completed, lead to substantial further initiatives enabling surgical trainees to be trained with a strong evidence base in the curriculum being offered.

The Division has also worked hard during 2007 in recruiting new consultant surgeons and it is because of the strong research infrastructure available within the Department that, in all cases, we have been successful. In particular, 2008 will see the arrival of new consultant surgeons in Breast Endocrine, Colorectal and Vascular Surgery, areas that have a strong research focus.

On balance, the challenges and successes of the Division over the past twelve months have been considerable and largely underpinned by a strong ethos of patient care and enquiry generated through the research endeavours. The future promises to be no less of a challenge.

Staff

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P Cowled PhD

Research Fellow

C Dobbins MBBS

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 S Krishnan BSc(Hons)

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 B Hutchens
 C Hutchison
 L Leopardi BSc BEng(Hons) Biomedical
 M Slawinski
 P Vanderzon BSc
 B Ramsey BMedRad(NucMed)

C Chian BSc(Hons) LLB GDLP
 M Smith

Clinical Trials Coordinator

L Borg BBiotech(Hons)
 J Stephens BSc(Hons) MPH

Personal Assistant

S Ireland

Completed Thesis

Morrison C. Reducing warm ischaemia time may increase the functional islet cell mass in patients undergoing total pancreatectomy with islet cell autotransplantation – intra-operative pancreas specific hypothermia using antigrade ductal perfusion: large animal studies. Doctor of Medicine, July 2007

Orthopaedics and Trauma, TQEH Department of Director

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A Sharma MBBS

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J Fintland MD

Arthroplasty Outcomes Officer

G West B Physio

Research Officers

P Mount BA(Hons) M Psych(Clin)

F Forbes B Psych(Hon) (Jan 07 – June 07)

T Mayo B Psych(Hon) (July 07 - present)

Secretarial staff

B Stoddard

E Smythe

L Georgeff

S Jenner

S Thomson

Nursing Staff

L Thomas CNC – Joint Replacement

J Gould CNM – Joint Replacement

Orthopaedics and Trauma current research activities

Recruitment complete

Bauze R, Clayer M, Lewis P, Stevenson T, Morrison G, Butcher C, Waters D, Mah E, Brook P, Cullen N. A Comparative Trial between the Spectron Total Hip Replacement and the Exeter Total Hip Replacement.

Munyard A, Cullen N. A Trial of the TRAC Mobile Bearing Total Knee Replacement.

Butcher C, Lewis P, Stevenson T, Morrison G, Waters D, Mah E, Brook P, Bauze R, Clayer M. A Comparative Trial between the NexGen Fixed Bearing Total Knee Replacement and the NexGen Rotating Platform Total Knee Replacement.

McGee A, Rickman M, Butcher C, Lewis P, Stevenson T, Morrison G, Brook P. A Comparative Trial between the NexGen Cruciate Retaining Total Knee Replacement (CR) and the NexGen High Flexion Total Knee Replacement (CR-Flex).

Recruitment continues

Lewis P, Butcher C, West G, Rickman M, Chatterji U, Prakash U, Gillespie P, Mount P, Ludbrook G. Cognitive Function following Total Joint Arthroplasty – is there a problem?

Mah E, Stevenson T, Morrison G, Waters D, Ng E S, Ng Y O, Gupta R, Thomsen N. A Comparative Study on the Clinical Outcome of Bipolar versus CTA Hemiarthroplasty in Rotator Cuff Tear Arthropathy.

Butcher C, Lewis P, Phillips S, Duncan W, Morrison G, van Essen J, Cullen N, West G. Functional and Perceived Outcome Study Comparing Posterior Cruciate Substituting and Cruciate Retaining Inserts in a Multi-axis Radius Knee.

Lewis P, Butcher C, Phillips S, West G. Functional Outcome Study Comparing Single and Multi-axis Femoral Component Designs of Knee Replacements.

Lewis P, Butcher C, Phillips S, Gillespie P, Morrison G, Cullen N, Duncan W, West G. Functional Outcome Study Comparing Small and Large Diameter Metal on Metal Hip Prostheses.

New trials

Nimon G, Bradshaw A, Sim S. Study of the effectiveness of pain pumps in shoulder surgery.

Deshaies A, Lewis P, Butcher C, Gillespie P. Evaluation of Blood Flow in the Proximal Tibia during Unicompartmental and Total Knee Replacements.

Deshaies A, Lewis P, Gillespie P, Shirumalla V. Clinical Outcome of the AVON Patellofemoral Resurfacing: A Retrospective Review.

Mah E, Sharma K. Comparative study on the clinical outcome of arthrodesis versus arthroplasty for small finger carpo-metacarpal arthritis – a prospective randomized study.

Ferris L, Cullen N, Wilkinson D, Fintland J. Functional Outcome Study Treating Tendinopathy in and around the foot using Hyperbaric Oxygen (HBO) treatment.

Funding for research in this department has been obtained totally from industry contributions to the Orthopaedic and Trauma Research fund. In 2007 contributions have come from Stryker (\$57,518) and Biomet (\$18,455).

Grants

Commonwealth Department of Health and Aged Care, Medical Services Advisory Committee (MSAC), ASERNIP-S (\$360,000 2007) 2005–2008, Maddern GJ.

South Australian Department of Health, ASERNIP-s "Assessment of new technologies" (\$175,000 2007) 2006–2007, Maddern GJ.

Commonwealth Department of Health and Ageing, ASERNIP-s Continuation grant (\$454,500 2007–2008) Maddern GJ.

Cook Australia, ASERNIP-s "Endoluminal audit" continuation grant (\$69,000 2007) 2006–2008, Maddern GJ.

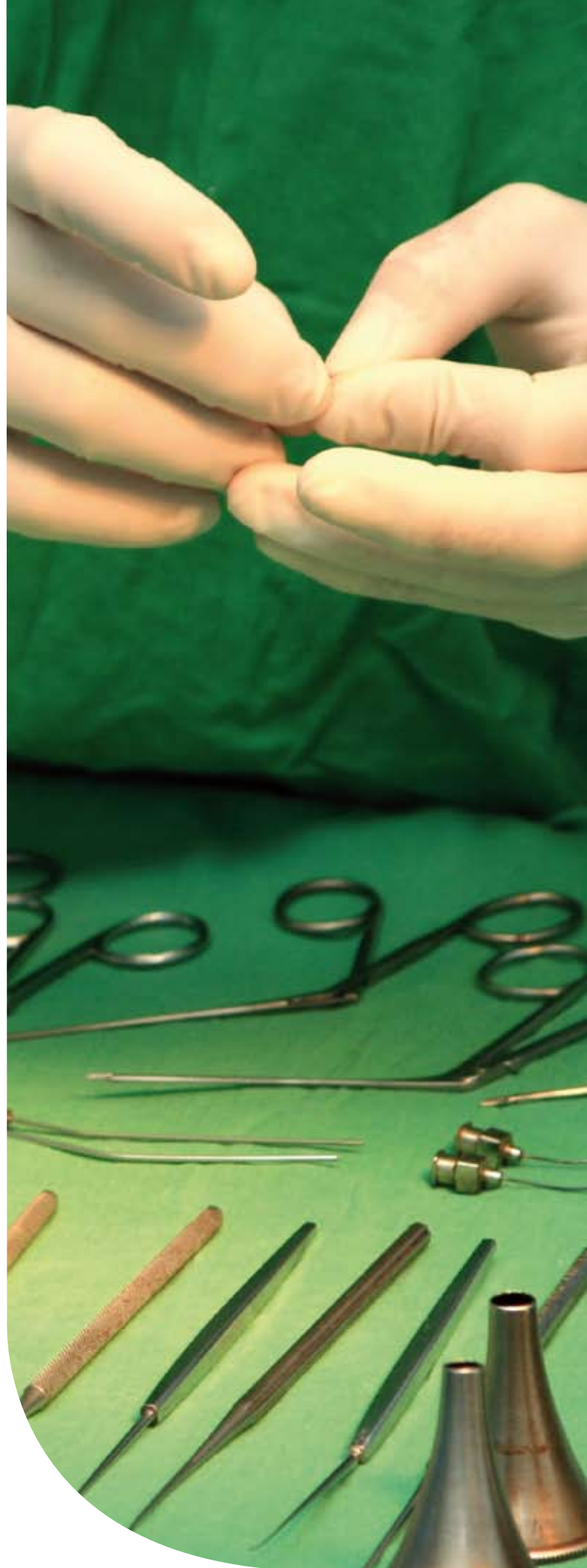
National Breast Cancer Centre, ASERNIP-s "National Breast Cancer audit" continuation grant (\$255,000 2007) 2006–2009, Maddern GJ.

Australian Research Council, ASERNIP-s in collaboration with Flinders University and Australian Computer Society (SA Branch) "Managing and mining evolving ontologies through pattern languages and data mining" (\$147,900 2006–2009) Maddern GJ.

Molecular Medicine Informatics Model (MMIM) and Colorectal Surgical Society of Australia & New Zealand (CSSANZ), ASERNIP-s "Colorectal cancer audit" (\$75,000 2007) 2006–2008, Maddern GJ.

Commonwealth Department of Health and Aged Care, ASERNIP-s "Horizon scanning" (\$159,000 2007) 2006–2009, Maddern GJ.

Tasmanian Department of Human Services, ASERNIP-s "Tasmanian Audit of Surgical Mortality" (\$8,800 2007) 2005–2008, Maddern GJ.



South Australian Department of Health, ASERNIP-s "South Australian Audit of Perioperative Mortality" (\$200,000 2007) 2005–2008, Maddern GJ.

Western Australian Department of Health, ASERNIP-s "Western Australian Audit of Surgical Mortality" (2007–2008 \$333,000) Maddern GJ.

Victorian Department of Human Services, ASERNIP-S "Victorian Audit of Surgical Mortality" (\$450,000 2007) 2007–2010, Maddern GJ.

Queensland Department of Health, ASERNIP-s "Queensland Audit of Surgical Mortality" (\$465,000 2007) 2007–2009, Maddern GJ.

Commonwealth Department of Health and Aged Care ASERNIP-s "Surgical Simulation" (2007–2010 \$5,100,000) Maddern GJ.

Cancer Council South Australia "The effect of portal venous pressure on remnant regeneration following liver resection" (\$71,750 2007) Maddern GJ.

AstraZeneca Upper GI Research Grant "Modified hepatic radiofrequency ablation: long term studies of morbidity using a large animal model" (\$10,000 2007) Maddern GJ.

Clive and Vera Ramaciotti Foundation "A fluorescent imaging microscope with DIC, phase, fluorescence and optical sectioning capabilities, comprising a complete imaging solution" (\$30,000 2007) Maddern GJ.

NHMRC "Australasian Randomised Clinical Trial comparing laparoscopic and open surgical treatment of colon cancer: Follow up" (\$69,750 2007) 2005–2007, Hewett P.

South Australian Department of Health ENT funding (\$650,000 2007–2008) Maddern GJ.

TQEH Research Foundation Postgraduate Research Scholarship/University of Adelaide Faculty of Health Sciences Divisional Scholarship (\$19,616 2007) Dobbins C.

TQEH Research Foundation Postgraduate Research Scholarship/University of Adelaide Faculty of Health Sciences Divisional Scholarship (\$4,100 2007) Corso O.

TQEH Research Foundation Postgraduate Research Scholarship/University of Adelaide Faculty of Health Sciences Divisional Scholarship (\$14,712 2007) Krishnan S.

Awards

GJ Maddern. Finalist, Premier's Science Excellence Awards 'Science Leadership and Management Excellence' category September 2007.







Photograph courtesy of Ben Searcy Photography

PUBLICATIONS

ANAESTHESIA

Papers

Pfifzner J, Stevens HJ, Lance DG. Identifying imminent displacement of a double-lumen tube caused by surgical traction at the pulmonary hilum. *J Cardiothorac Vasc Anesth* 2007 Oct;21(5):776-7.

Van Wijk RMAW, Geurts JWM, Lousberg R, Wynne HJ, Hammink E, Knape JTA, Groen GJ. Psychological Predictors of Substantial Pain Reduction after Minimally Invasive Radiofrequency and Injection Treatments for Chronic Low Back Pain. *Pain Medicine* 2007; DOI:10.1111/j.15264637.2007.00367.

Abstracts

Swadling SM, Mathias J, Tonkin J, Singh A, van Wijk RMAW. Biopsychosocial Predictors of Acute Postoperative Pain; a Metanalysis of the Literature. 26th Annual Scientific Meeting of the Australian Pain Society April 2007.

CARDIOLOGY

Papers

Ashrafian H, Horowitz JD, Frenneaux MP. Perhexiline. *Cardiovasc Drug Rev.* 2007 Spring;25(1):76-97. Review.

Chirkov YY, Horowitz JD. Impaired tissue responsiveness to organic nitrates and nitric oxide: A new therapeutic frontier? *Pharmacol Ther* 2007 Nov;116(2):287-305.

Friedell ML, Sandler BJ, Andriole JG, Martin SP, Cohen MJ, Horowitz JD.

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Worthley MI, Holmes AS, Willoughby SR, Kucia AM, Heresztyn T, Stewart S, Chirkov YY, Zeitz CJ, Horowitz JD. The deleterious effects of hyperglycemia on platelet function in diabetic patients with acute coronary syndromes mediated by superoxide production, resolution with intensive insulin administration. *J Am Coll Cardiol* 2007 Jan;23:49(3):304-10.

CLINICAL PHARMACOLOGY UNIT

Papers

Corso OH, Morris RG, Hewett PJ, Karatassas A. Safety of 96-hour incision-site continuous infusion of ropivacaine for post-operative analgesia following bowel-cancer resection. *Ther Drug Monit* 2007 Feb;29:57-63.

Westley IS, Taylor PJ, Salm P, Morris RG. Cloned enzyme donor immunoassay tacrolimus assay compared with HPLC-MS/MS and MEIA in liver and renal transplant recipients. *Ther Drug Monit* 2007 Oct;29:584-91.

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AA, Sallustio BC. Effect of CYP2D6 metaboliser status on the disposition of the (+)- and (-)-enantiomers of perhexiline in patients with myocardial ischaemia. *Pharmacogenet Genomics* 2007 May;17:305-312.

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Jones TE, Morris RG. Discordant results from real-world patient samples assayed for digoxin: where are the regulators? *Ther Drug Monit* 2007; 29(4): 522.

Westley I, Morris RG, Evans A, Sallustio BC. Glucuronidation of mycophenolic acid by Wistar and Mrp2 deficient TR- rat liver microsomes: Effect of mycophenolate acyl glucuronide, cyclosporin and metabolites AM1, AM1c and AM9. *Ther Drug Monit* 2007;29(4):473.

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Sallustio BC, Morris RG. Simultaneous measurement of tacrolimus, sirolimus and everolimus in whole blood using HPLC with tandem mass spectrometric detection. *Proc ASCEPT/SEAWP* 2007; 12: 3-39.

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ENDOCRINOLOGY UNIT

Papers

Phillips P. Sugar and salt: a recipe for problems. *Medicine Today* 2007; (8); (8):60-66.

Phillips P The WXYZ of cardiometabolic risk. *Medicine Today* 2007; (2) (8):47-52.

Phillips P, Braddon J. ABCss: s is for salicylates. *Medicine Today* 2007; (2) (8):55-58.

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Stanton C, Phillips P, Carapetis M. Fat facts: dietary fats. *Medicine Today* 2007; (4) (8):57-65.

Phillips P, Carapetis M, Stanton C. Choosing healthy foods: how to read food label nutrition panels. *Medicine Today* 2007; (1) (8):61-66.

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Phillips P KISS: 'keep insulin safe and simple' Part 1: initiating insulin in type 2 diabetes *Medicine Today* 2007; (3) (8):23-37.

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INVITED PRESENTATIONS AT INTERNATIONAL AND NATIONAL MEETINGS

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Anaesthesia, Department of		
RANZCP SA ECT Workshop, November 2007	Anaesthetic Considerations and ECT	G Miller
TQEH Division of Mental Health Electroconvulsive Therapy Nurses Workshop, October 2007	Anaesthetic Assessment, Procedures and Potential Complications	G Miller
Victorian ANZCA Annual Scientific Meeting, June 2007	Central Australian Indigenous Health and Anaesthesia	R Mitchell
SA & NT Combined ASA/ANZCA Continuing Medical Education Meeting, June 2007	Anaesthetic Workforce Issues: Are Non Medical Providers a Solution?	R van Wijk
Critical Care, Division of		
International Spark of Life Meeting, Gold Coast QLD, April 2007	Resuscitation issues among nursing home residents in the emergency department	J Smyth
The 5th Australasian Conference on Safety and Quality in Health Care	Managing the wait – responding to the consumer	TQEH Emergency Department Consumer Advisory Group
Cardiology Unit		
Cardiac Society of Australia and New Zealand/International Society for Heart Research, Christchurch, New Zealand, August 2007	Heterogeneity in Vascular Responses to L- and T-type Calcium Channel Blockers	C Ball et al
Clinical Pharmacology Unit		
Australian Islet Transplantation Consortium meeting, Sydney, July 2007	Why bother assaying ISDs by mass spec when immunoassays have been "OK" for decades?	RG Morris
Dade Behring Commercial Symposium, Sydney, Aug 2007	ISD monitoring. An Aussie perspective ISD monitoring 2007	
Renal Unit, RAH, Nov 2007	Immunosuppressant drug monitoring issues	RG Morris
Australasian Association of Clinical Biochemists, NSW Branch Meeting, Sydney, July 2007	Immunosuppressant drug analysis: an Australian perspective on changing from immunoassays to LC-MS	BC Sallustio
AACB Chromatography and Mass Spectrometry Meeting, Sydney, July 2007	Cyclosporine monitoring by LC-MS/MS (Chair, Roundtable)	BC Sallustio

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Clinical Pharmacology Unit (continued)		
Combined meeting of the South East Asian Western Pacific Regional Federation of Pharmacologists and the Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists, Adelaide, December 2007	Therapeutic Drug Monitoring Workshop (Co-Chair)	BC Sallustio
International Association of Therapeutic Drug Monitoring and Clinical Toxicology, Nice, France, September 2007	Can we expect comparable digoxin results when a range of laboratories are involved in routine testing on a patient? A preliminary report (presented by TE Jones)	RG Morris
International Association of Therapeutic Drug Monitoring and Clinical Toxicology, Nice, France, September 2007	Steady-state pharmacokinetics of the enantiomers of perhexiline in CYP2D6 extensive and poor metabolisers	BC Sallustio
International Association of Therapeutic Drug Monitoring and Clinical Toxicology, Nice, France, September 2007	Glucuronidation of mycophenolic acid by Wistar and Mrp2 deficient TR- rat liver microsomes: Effect of mycophenolate acyl glucuronide, cyclosporin and metabolites AM1, AM1c and AM9	IS Westley
International Association of Therapeutic Drug Monitoring and Clinical Toxicology, Nice, France, September 2007	Discordant results from real-world samples assayed for digoxin: where are the regulators?	TE Jones
Australasian Society of Clinical & Experimental Pharmacology and Toxicology, Adelaide, December 2007	Can we expect comparable digoxin results when a range of laboratories are involved in routine testing on a patient?	RG Morris
Australasian Society of Clinical & Experimental Pharmacology and Toxicology, Adelaide, December 2007	Simultaneous measurement of tacrolimus, sirolimus and everolimus in whole blood using HPLC with tandem mass spectrometric detection	BC Sallustio
Australasian Society of Clinical & Experimental Pharmacology and Toxicology, Adelaide, December 2007	Influence of CYP2B6 genotype on the pharmacokinetics of perhexiline in CYP2D6 poor metabolisers	NT Truong
International Society for the Study of Xenobiotics, Sendai, Japan, October 2007	Glucuronidation-dependent DNA nicking by carboxylic acid drugs in HEK293 cells expressing human UDP-glucuronosyltransferases	BC Sallustio
Endocrinology Unit		
The 19th IUHPE World Conference on Health Promotion and Health Education, Vancouver, Canada, June 2007	Osteoporosis: Underestimated and over represented: Prevalence of osteoporosis in the North West Adelaide Cohort Study	T Gill, A Taylor, PJ Phillips
ADEA Annual Scientific Meeting 2007 Christchurch, New Zealand, September 2007	Sleep Apnoea and Diabetes a wake-up call for detecting the impact of sleep disturbance on diabetes	L Pinto, N Smith, PJ Phillips, G Phillipov
ADEA Annual Scientific Meeting 2007 Christchurch, New Zealand, September 2007	Insulin Commencement in the Ambulatory Setting: How do the ADEA standards work at the coalface?	T Willson, J Giles

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Endocrinology Unit (continued)		
Australian Diabetes Society Christchurch, New Zealand, September 2007	Diabetes can ruin your day – Quality of life after diagnosis	C Chittleborough, PJ Phillips, M Drakoulas, K Baldock, A Taylor and the North West Adelaide Health Study Team
Australian Diabetes in Pregnancy Society (ADIPS) Conference, Christchurch, New Zealand, September 2007	Increasing access to the South Australian Gestational Diabetes Mellitus Recall Register	C Chittleborough, K Baldock, M Drakoulas, A Taylor, K McKenzie, T Willson, W Martin, J Wood, PJ Phillips, W Hague
ADEA, Christchurch New Zealand, September 2007	Paediatric diabetes continuing education in a remote setting	J Giles, G Dent, F Semmens, PJ Phillips
Australian Diabetes Society, Christchurch, New Zealand, September 2007	Renal function by stage of diabetes progression: impairment begins before diabetes develops	PJ Phillips, K Baldock, C Chittleborough, A Taylor
Australian Diabetes Society, Christchurch, New Zealand, September 2007	Lack of a Multifactorial Treatment Strategy within the Primary care Setting	B Mohapatram, PJ Phillips, G Phillipov
Gastroenterology Unit		
International Colorectal Surgery Conference, India, October 2007	Detection of colorectal polyps and cancer	IC Roberts-Thomson
International Colorectal Surgery Conference, India, October 2007	Medical treatment of inflammatory bowel disease	IC Roberts-Thomson
Gynaecology, TQEH Department of		
Open Minds Future Directions Women's & Children's Hospital, Adelaide, September 2007	A symposium for the multi-disciplinary current best practice in male and female pelvic floor dysfunction (Convenor)	C Barry
Intensive Care Unit		
The Australian College of Critical Care Nurses Institute of Continuing Education Conference (ACCCN ICE), Adelaide, May 2007	Acuity Scoring	B Grealay
The Australian College of Critical Care Nurses Institute of Continuing Education Conference (ACCCN ICE), Adelaide, May 2007	Hypothermia Post Cardiac Arrest	K Poulish

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Intensive Care Unit (continued)		
The Australian College of Critical Care Nurses Institute of Continuing Education Conference (ACCCN ICE), Adelaide, May 2007	Coagulopathy	S Hutton
The Australian College of Critical Care Nurses Institute of Continuing Education Conference (ACCCN ICE), Adelaide, May 2007	Ventilation Assessment	J Phillips-Hughes
Australian and New Zealand Intensive Care Society Clinical Trials Group Scientific Meeting, Rotorua, New Zealand 25-28 October 2007	Australasian Resuscitation in Sepsis Evaluation (ARISE)	SL Peake on behalf of the ARISE investigators
32nd Australian and New Zealand Annual Scientific Meeting on Intensive Care, Rotorua, New Zealand October 2007	Current resuscitation practices and outcomes in patients presenting to the Emergency Department with severe sepsis in Australia and New Zealand: a multi-centre observational study	SL Peake on behalf of the ARISE investigators
32nd Australian and New Zealand Annual Scientific Meeting on Intensive Care, Rotorua, New Zealand October 2007	Incidence of contrast induced nephropathy in Intensive Care patients	C Nottage
32nd Australian and New Zealand Annual Scientific Meeting on Intensive Care, Rotorua, New Zealand October 2007	Metformin associated lactic Acidosis; A Clinical profile and outcomes in patients admitted to Intensive Care	V Biradar
24th Annual Scientific Meeting of the Australasian College of Emergency Medicine, Gold Coast, November 2007	Outcomes of patients presenting to the Emergency Department with sepsis and septic shock in Australia and New Zealand	SL Peake
24th Annual Scientific Meeting of the Australasian College of Emergency Medicine, Gold Coast, November 2007	Current Resuscitation practices and outcomes for patients with early severe sepsis in Australia and New Zealand – a multi-centre observational study	SL Peake
Medicine, University of Adelaide Discipline of		
Thoracic Society of Australia and New Zealand & Australian and New Zealand Society of Respiratory Science, Annual Scientific Meetings, Auckland, 2007	How COPD is defined on spirometry: affects prevalence and disease burden in the community	R Adams et al
5th Australian Conference on Safety and Quality in Health Care, Brisbane, July 2007	Clinical Handover – expert panel discussion session	R Adams
Medicine, Aging and Nutrition Conference, International Academy Of Nutrition & Aging, Adelaide, September 2007	Airways obstruction in older people	R Adams
Medicine, Aging and Nutrition Conference, International Academy Of Nutrition & Aging, Adelaide, September 2007	Evidence-based medicine – practical issues	R Adams

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Medicine, University of Adelaide Discipline of (continued)		
European Respiratory Society Annual Congress, Stockholm, Sweden, September 2007	Relation of body composition to asthma in a population sample of older Australians	S Appleton et al
The 19th International Health Promotion Conference on Health Promotion and Health Education, Vancouver, Canada June 2007	Changes in Weight Gain in an Australian Population – New Younger Age Spread, Invited Conference Reviewer	DH Wilson et al
5th International Conference Behavioural Risk Factor Surveillance, Rome, October 2007	Surveillance Data Identifies an Obesity Syndrome. What are the Likely Determinants?	DH Wilson et al
5th International Conference Behavioural Risk Factor Surveillance, Rome, October 2007	Tipping Points in Obesity – Experts Views of Ways to Change the Problem	DH Wilson et al
5th International Conference Behavioural Risk Factor Surveillance, Rome, October 2007	Chair Scientific Committee of the Conference; Invited Chair, Population Surveillance Presentations; Invited Spokesperson	DH Wilson et al
Launch of the SA Health Literacy Alliance, Adelaide, October 2007	Health Literacy – A research agenda	R Adams
Obesity Conference, Adelaide, November 2007	The Shape of Things to Come, Conference planner, organization of PhD presentations	DH Wilson
Bangladesh Biofortified Rice Project (2007-2009) First Collaborator's Workshop, Dhaka, Bangladesh, February 2007	A Portable Device for determining Free Serum Zinc Concentrations	P Zalewski
12th Congress of the Asian Pacific Society of Respiriology (APSR) Gold Coast, November - December 2007	Relation Of Body Composition To Asthma in a Population Sample of Older Australians	R Adams et al
12th Congress of the Asian Pacific Society of Respiriology (APSR) Gold Coast, November - December 2007	Upregulation of zinc transporters in human airway cells and mouse lung after infection with respiratory viruses	C Lang et al
12th Congress of the Asian Pacific Society of Respiriology (APSR) Gold Coast, November - December 2007	Respiratory Population Health in South Australia	R Ruffin et al
Neurology Department		
Epilepsy Society of Australia 22nd Annual Meeting, Adelaide, November 2007	Epilepsy, Ageing and the Licence to Drive – A Changing Scene	AB Black
RANZCP, Gold Coast, Australia, May 2007	Baseline Demographics of Dementia Patients Seen at Australian Clinics: Preliminary Data from PRIME (Prospective Research In Memory Clinics)	D Ames, M Woodward, KL Boundy, H Brodaty, N Barnes
23rd Alzheimer's Disease International Conference, Venezuela, October 2007	Predictors of Burden in Caregivers of People with Dementia	H Brodaty, M Woodward, KL Boundy, D Ames
Association of Neurophysiology Technologists of Australia (ANTA) Workshop, Adelaide, March 2007	Epilepsy Artwork in Medical Education	MA Hamilton-Bruce

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Neurology Department (continued)		
Epilepsy Society of Australia 22nd Annual Meeting, Adelaide, November 2007	The Role of Neuropsychology in the Surgical Treatment of Epilepsy	AC Kneebone
Society for Neuroscience (USA), San Diego, CA. November, 2007	Ikaros Assay – neuroplasticity in stem cell therapy	S Koblar
Stroke Society of Australasia National Stroke Foundation Annual Scientific Meeting, Perth, October 2007	Clinical Guidelines for Acute Stroke Management Launch	E Leung
Annual Scientific Meeting of the Australian and New Zealand Society of Nuclear Medicine, Adelaide, April 2007	A comparison of radionuclide and MRI scans in the evaluation of osteomyelitis in the diabetic foot	A Jain, V Rubino, M Kitchener, R Sebben, N Liau, R Fitridge, S Unger
Nuclear Medicine Unit		
Annual Scientific Meeting of the Australian and New Zealand Society of Nuclear Medicine, Adelaide, April 2007	Feasibility of using normal brain SPECT databases that are not age-matched to the subjects under investigation with voxel-based statistical analysis	L Barnden
Annual Scientific Meeting of the Australian and New Zealand Society of Nuclear Medicine, Adelaide, April 2007	Variations in normal brain SPECT databases acquired at different times on the same gamma camera: origins and corrections	L Barnden
Annual Scientific Meeting of the Australian and New Zealand Society of Nuclear Medicine, Adelaide, April 2007	Quantitative measurement of infarct size using Tc-99m sestamibi SPECT and delayed-enhancement MRI	T Nguyen, S Unger
Annual Scientific Meeting of the Australian and New Zealand Society of Nuclear Medicine, Adelaide, April 2007	The salvage study – Tc-99m Sestamibi myocardial perfusion imaging to quantify successful stenting of coronary arteries: a case study	T Smith
Annual Scientific Meeting of the Australian and New Zealand Society of Nuclear Medicine, Adelaide, April 2007	Rare stomach uptake on a bone scan: metastatic gastric adenocarcinoma (linitis plastica)	P Sotiropoulos, N Farnham, M Kitchener
European Association of Nuclear Medicine, Copenhagen, October 2007	The use of normal brain SPECT databases that are not age-matched to the subject(s) under investigation: a feasibility study	L Barnden
European Association of Nuclear Medicine, Copenhagen, October 2007	High Sensitivity vs General Purpose SPECT imaging with 3D reconstruction	M Lichtenstein, L Barnden, J Westcott
IEEE Nuclear Science Symposium- & Medical Imaging Conference, Hawaii, October – November 2007	The signature of drifting sensitivity and centre-of-rotation in SPM analysis of multi-head gamma-camera brain SPECT and a method of correction	L Barnden
2007 Workshop on Clinical Applications of MonteCarlo Simulations in Nuclear Medicine, Paris, October 2007	Emulation of MonteCarlo simulations with scans as input models: propagation of noise and resolution	L Barnden

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Nursing		
Association for Professionals In Infection Control and Epidemiology, San Jose, California, June 2007	The Missing Link in The Chain - The Infection Control Link Nurse (ICLN)	M Juraja
Association for Professionals in Infection Control and Epidemiology, San Jose, California, June 2007	Surgical Site Infections (SSI's)-How can one person make a Difference?	M Juraja
Communicable Diseases Conference Canberra, March 2007	The Tip of the Iceberg-Hospital Epidemic - Scabies-its not all in the book	M Juraja
Infection Control Workshop AUSMED, Adelaide, April 2007	Standard and additional Precautions, Chain of Infection, Cleaning and Reprocessing and Management of Exposures	M Juraja
CAREX Expo Adelaide, November 2007	Infection Control in the Acute Care setting	M Juraja
ICE Conference, Adelaide, May 2007	Disseminating Intravascular Coagulation Intra Aortic Balloon Pump	S Hutton, D Cunningham
Head and Neck National Conference Adelaide, March 2007	Endoscopic Decontamination	P Teekens
SAPNA Conference, Adelaide, October 2007	Sacred Cows and Myths in Perioperative Practice	P Teekens
College of Emergency Nursing Australasia, Adelaide, July 2007	Disaster Management	J Kenny
Infection Control Association of South Australia (ICASA) Adelaide, October 2007	From contagion to containment (Convenor)	M Juraja
8th Australian College of Critical Care Nurses- Institute of Continuing Education Conference, Adelaide, May 2007	Managing Coronary Artery Stents	P Whiston
Otolaryngology, Head and Neck Surgery		
Kyoto University – Japan Seminar, Japan, January 2007	Frontal Surgery Dacryocystorhinostomy; Endoscopic septoplasty; Powered inferior turbinoplasty	PJ Wormald
Functional Endoscopic Sinus Surgery, Tel Aviv, Israel, March 2007	The anatomy and surgical approaches to the frontal sinus; Management of meningo- encephaloceles; The management of the bloody surgical fields in ESS	PJ Wormald
Oculoplastic Course, Adelaide, May 2007	Endoscopic Septoplasty; Endoscopic DCR; Local anaesthetic and sedation for Endo DCR	PJ Wormald
1st Adv. Endoscopic Skull Base Course, Adelaide 2007	The anatomy sphenoid, clivus, pituitary and cavernous sinus; Complete sphenoethmoidectomy; Endoscopic medial maxillectomy, exploration of infra-temporal fossa; Exposure of the Vidian nerve, orbital apex, cavernous sinus and pituitary; Endoscopic Modified Lothrop, anterior and posterior ethmoidal artery ligation and anterior skull base resection	PJ Wormald

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Otolaryngology, Head and Neck Surgery (continued)		
Asian Pacific Rhinology Forum on Adv FESS and ESS Base Surgery, Hong Kong, July 2007	Management of Nasal Tumours; Anatomy for Endoscopic Anterior Skull Base surgery; Advanced techniques for the surgical management of frontal sinus disease; Combined ENT and Neurosurgical techniques; Cerebro-spinal Fluid Leak Management; Optic Nerve Decompression	PJ Wormald
2nd Advanced Functional Endoscopic Sinus Surgery Course, Winchester UK, July 2007	Axillary flap, Frontal recess; DCR anatomy and technique; DCR 'Mucosal Flap' technique; Endoscopic Medial maxillectomy; Endoscopic Pituitary Surgery; CSF Leak closure "Bathplug" technique; Modified Endoscopic Lothrop (MEL) Procedures; Extended Endoscopic Approaches	PJ Wormald
Cartesian Meeting, Baltimore, USA, July 2007	The pros and cons of the Australian Health Care System	PJ Wormald
12th ASEAN ORL Head & Neck Congress, Ho Chi Minh City, Vietnam, August 2007	The management of the "Bloody Surgical Field"; 3 Dimensional reconstructions of posterior ethmoids and sphenoids; The anatomy of the clivus, cavernous sinus with respect to management of posterior cranial fossa lesions; Endoscopic Modified Lothrop Procedure; The anatomy and surgical approach to the anterior cranial fossa with respect to tumours involving this region	PJ Wormald
37th National Course of Functional Endoscopic Sinus Surgery, Guangzhou, China, August 2007	The anatomy and surgical approaches to the frontal recess; The management of the Blood Surgical Field; 3-D reconstruction of posterior ethmoids and sphenoids; The anatomy of the clivus, cavernous sinus with respect to management of posterior cranial fossa lesions; The anatomy and surgical approach to the anterior cranial fossa with respect to tumors involving this region	PJ Wormald
American Rhinologic Society Washington DC, September 2007	A Sheep Model for the Study of Biofilms in Sinusitis	PJ Wormald
American Academy of Otolaryngology Head & Neck Society, September 2007	Comprehensive Management of Frontal Sinus Pathology; Powered Endoscopic Dacryocystorhinostomy; Medial Maxillectomy: An Endoscopic Approach to Tumors; Situations and Solutions in Endoscopic Sinus Surgery	PJ Wormald
10th Adv. Functional Endoscopic Sinus Surgery Course, Adelaide, October 2007	The anatomy and endoscopic approaches to the frontal recess; Management of bloody surgical field; Review of CT scans with reconstruction of the anatomy of the frontal recess; Frontal recess dissection; SPA ligation & Vidian neurectomy dissection; Bath Plug Closure CSF Leak dissection	PJ Wormald
1st Adv. Endoscopic Skull Base Course, Adelaide, June 2007	The anatomy of the anterior skull base, frontal sinuses and anterior ethmoidal arteries	S Floreani
2nd Advanced Functional Endoscopic Sinus Surgery Course, Winchester UK, July 2007	Sphenoid Sinus; Difficult sinuses and surgical landmarks; Optic Nerve Decompression	S Floreani
Australian Scientific Meeting, August 2007	Functional rhinoplasty	S Floreani

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Otolaryngology, Head and Neck Surgery (continued)		
10th Adv. Functional Endoscopic Sinus Surgery Course, Adelaide, October 2007	Mini-trephines; Sphenoid sinus in functional endoscopic sinus surgery; Cerebrospinal fluid leak closure and anatomy of anterior ethmoid artery	S Floreani
Australasian Society Otolaryngology Head & Neck Nurses Group at ASOHNS, Adelaide, March 2007	Facial Pain and Sinus Disease	S Rajapaksa
Australia Society of Otolaryngology Head & Neck Surgery Society 2007, Royal Hampshire County Hospital, Winchester, UK, June 2007	Endoscopic DCR 2nd Author	PJ Wormald
American Rhinologic Society Annual Meeting, Washington DC, September 2007	Effects of Topical Antifibrinolytics in Endoscopic Sinus Surgery: A Pilot RCT	T Athanasiadis, AG Beule, PJ Wormald
European Federation of Otorhinolaryngology, Head and Neck Surgery, Vienna, July 2007	The effect of plasminogen and tranexamic acid on wound healing using an in vitro nasal fibroblast model	AG Beule, T Athanasiadis, LW Tan, J Field, W Hosemann, PJ Wormald
Annual Meeting German Otorhinolaryngology Society, Munich, May 2007	Tranexamic Acid on wound healing using an in vitro human nasal fibroblast model	AG Beule, T Athanasiadis, LW Tan, W Hosemann, PJ Wormald
Australia Society of Otolaryngology, Head & Neck Surgery Society Annual Scientific Conference, Adelaide, April 2007	Tranexamic acid improves a marker for the quality of wound healing and decreases the proliferation of fibroblasts in vitro	T Athanasiadis, AG Beule, LW Tan, W Hosemann, PJ Wormald
Australia Society of Otolaryngology, Head & Neck Surgery Society Annual Scientific Conference, Adelaide, April 2007	Effect of Polyethylene Glycol adhesion barrier agents on nasal fibroblasts: An in vitro wound healing model	T Athanasiadis
University of Adelaide, Division of Surgery, Departmental dinner Meeting, June 2007	Biofilm and Sinusitis	A Psaltis
Australia Society of Otolaryngology Head & Neck Surgery Society Annual Scientific Conference, Adelaide, April 2007	Confocal Scanning Laser Microscopic Evidence of biofilm in Chronic Rhinosinusitis	A Psaltis
American Rhinologic Society, Washington DC, September 2007	The Effect of Biofilm on Post-Sinus Surgical Outcomes	A Psaltis
10th Adv. Functional Endoscopic Sinus Surgery Course, Adelaide, October 2007	Biofilms and CRS	A Psaltis
RACS SA & NT Sub-Committee Annual Scientific Meeting, Adelaide, August 2007	The Effect of Biofilm on Post-Sinus Surgical Outcomes	A Psaltis

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Otolaryngology, Head and Neck Surgery (continued)		
The Inaugural Post-Graduate Research Day, University of Adelaide, November 2007	A Sheep Model for the study of Biofilm in CRS	A Psaltis
Australia Society of Otolaryngology Head & Neck Surgery Society Annual Scientific Conference, Adelaide, April 2007	Longterm Alcohol Exposure Causes Silencing Of The Death Associated Protein Kinase Gene in Head & Neck Cancer Cells: The Role of DNA Methylation	LW Tan, G Rees, N Hatzirodos, PJ Wormald
Australia Society of Otolaryngology Head & Neck Surgery Society Annual Scientific Conference, Adelaide, April 2007	Mucin 7 Glycoprotein And Caspofungin: Antifungal Tag Team in the Treatment of Allergic Fungal Sinusitis	LW Tan, P Harris, AG Beule, K Rousseau, M McGuckin, D Ellis, H Alexiou, PJ Wormald
Australia Society of Otolaryngology Head & Neck Surgery Society Annual Scientific Conference, Adelaide, April 2007	Mucin 7 Glycoprotein And Caspofungin: Antifungal Tag Team in the Treatment of Allergic Fungal Sinusitis	LW Tan, T Rogers, N Hatzirodos, EH Ooi, PJ Wormald
Renal Unit		
Korean Society of Transplantation Seoul, Korea, October 2007	The role of Sirolimus in transplantation	GR Russ
2nd Asia Pacific Transplant Symposium, Taiwan, July 2007	Cardiovascular risk in Renal Transplantation; Long term management of Renal Transplantation	GR Russ
7th International Transplantation Symposium, Seville Spain, March 2007	Long term management of renal transplantation	GR Russ
WHO & Transplant Society, Key Opinion Leader Meeting, Geneva, June 2007	ANZDATA registry	GR Russ
World Congress of Nephrology, Rio de Janeiro, April 2007	Long term outcomes of paediatric transplantation	SP McDonald
American Society of Nephrology, San Francisco, October 2007	Paediatric dialysis outcomes – a multinational study	SP McDonald
The Australia & New Zealand Society of Nephrology (ANZSN) 43rd Annual Scientific Meeting, Gold Coast QLD, September 2007	Paediatric dialysis outcomes	SP McDonald
Transplant Society, Key Opinion Leader Meeting, Sydney, October 2007	Cancer post renal transplant	SP McDonald
World Congress of Nephrology, Rio de Janeiro, April 2007	The role of Dendritic cells in the Induction of transplant tolerance	PTH Coates
Invited speaker. Kanazawa, Japan. July 2007	Management of renal transplantation in Australia	PTH Coates
Transplant Society, Key Opinion Leader Meeting, Sydney October 2007	The role of dendritic cells in transplant tolerance	PTH Coates
Collaborative Islet Transplant Registry (CITR) 4th Annual Meeting, Atlanta, Georgia, USA, February 2007	South Australian and Northern Territory Islet Program	CR Milner

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Renal Unit (continued)		
The Australasian and South-East Asian Tissue Typing Association (ASEATTA) 31st Annual Scientific Meeting, Fremantle, WA, November 2007	Low Titre Donor-specific Antibodies in Positive B-cell Crossmatches Predict Late Graft Loss	HS Eng
SA General Physicians' Meeting, sponsored by the Servier Foundation, Adelaide, March 2007	Asthma Update	AM Southcott
Rheumatology		
World Day of Immunology at the South Australian Museum, 29 April 2007.	Autoimmunity	Lester S
Annual Scientific Meeting of the Australian Rheumatology Association (Victorian Branch), Melbourne, August 2007	Sjogren's Syndrome: a Dry Argument (Keynote scientific speaker)	Rischmueller M
Surgery		
Sims Travelling Fellowship, South Africa, January 2007	The future of surgical treatment for hepatic malignancy	G Maddern
Sims Travelling Fellowship, South Africa, January 2007	How to assess new surgical technologies in the 21st century	G Maddern
Sims Travelling Fellowship, South Africa, January 2007	Surgical audits	G Maddern
Sims Travelling Fellowship, South Africa, January 2007	Surgical training and the rural challenge	G Maddern
The Future of Academic Surgery in Australia and New Zealand, Royal Australasian College of Surgeons Section of Academic Surgery Workshop, Melbourne, February 2007	Academic Surgery: Mainstream or Sideshow?	G Maddern
The Future of Academic Surgery in Australia and New Zealand, Royal Australasian College of Surgeons Section of Academic Surgery Workshop, Melbourne, February 2007	Attracting Academic Surgeons: Research?	G Maddern
University of Adelaide Department of Surgery Research meeting, Adelaide, March 2007	Postgraduate surgical training and university departments of surgery	G Maddern
The Australian Society of Otolaryngology Head and Neck Surgery, 57th Annual Scientific Meeting, Adelaide, April 2007	The Royal Australasian College of Surgeons: Is it relevant?	G Maddern
Australian Society of Gynaecologic Oncologists Annual Scientific Meeting, Glenelg, May 2007	Evaluation of medical devices	G Maddern

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Surgery (continued)		
Meeting of Councillors with Specialty Presidents, Regional and Training Board Chairs, Royal Australasian College of Surgeons Annual Scientific Congress, Christchurch, New Zealand, May 2007	College as a university and College collaboration with universities	G Maddern
Surgical Research Society of Australasia Annual Scientific Meeting, Christchurch, New Zealand, May 2007	Evaluation of surgical interventions. ASERNIP-S and how this works	G Maddern
Royal Australasian College of Surgeons Annual Scientific Congress, Christchurch, New Zealand, May 2007	Research and public health. Plenary presentation	G Maddern
Royal Australasian College of Surgeons Annual Scientific Congress, Christchurch, New Zealand, May 2007	Women in Surgery Committee – past its use-by date?” Debate – member of negative team	G Maddern
Royal Australasian College of Surgeons Annual Scientific Congress, Christchurch, New Zealand, May 2007	Big brother of surgical logbooks. The College's web-enabled bi-national logbooks for trainees	G Maddern
Royal Australasian College of Surgeons Annual Scientific Congress, Christchurch, New Zealand, May 2007	Death or taxes. Update regarding the College's surgical mortality audit	G Maddern
Law Week 2007, Adelaide, May 2007	“A lawyer's bill is a bitter pill” Debate – member of affirmative team	G Maddern
Australian Medical Students' Association Convention 2007, Adelaide, July 2007	Surgery in 2027	G Maddern
Royal Australasian College of Surgeons Western Australian Branch Annual Scientific Meeting, Mandurah, WA, August 2007	How is RACS going to reinvent itself in Research and Education?	G Maddern
Society for Medical and Biological Engineering Annual General Meeting, The Queen Elizabeth Hospital, Adelaide, August 2007	Surgery in 2027: Star Trek or Unemployment	G Maddern
Australian and New Zealand Hepatic, Pancreatic & Biliary Association (ANZHPBA) Annual Scientific Meeting, Melbourne, August 2007	Gallstones but no symptoms	G Maddern
International Clinical Trials Symposium 2007, Health Technology Assessment: Interpreting trial evidence for non-pharmaceutical trials II, Pre-Symposium Workshop, Sydney, September 2007	Surgical procedures	G Maddern
American College of Surgeons Clinical Congress, New Orleans, USA, October 2007	What is the evidence for new surgical procedures?	G Maddern
American College of Surgeons Clinical Congress, New Orleans, USA, October 2007	New surgical technologies in the 21st century	G Maddern

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Surgery (continued)		
Medical Industry Association of Australia Annual Conference, Sydney, October 2007	Health technology assessment challenges for new technology – Panel discussion	G Maddern
Provincial Surgeons of Australia Annual Scientific Conference, Whyalla, SA, November 2007	Surgical education – where are we going? Debate No. 1	G Maddern
Provincial Surgeons of Australia Annual Scientific Conference, Whyalla, SA, November 2007	Surgical education – who calls the shots? Debate No. 2	G Maddern
Cabrini Research Day Cabrini Institute, Melbourne, November 2007	New surgical technology – Star Trek or star struck? Key Note Speaker	G Maddern
Seminars in Operative Surgery, Flinders Medical Centre @ Stamford Grand, March 2007	Anal fissure: cut, paste or inject	P Hewett
Royal Australasian College of Surgeons Annual Scientific Congress, Christchurch, New Zealand, May 2007	Short-term outcomes of the Australasian, multi-centre, prospective, randomised, clinical study comparing laparoscopic and conventional open surgical treatments of colon cancer in adults. The ALCCaS Trial	P Hewett
Surgical Leaders Summit, Beijing, June 2007	Short-term outcomes of the Australasian, multi-centre, prospective, randomised, clinical study comparing laparoscopic and conventional open surgical treatments of colon cancer in adults. The ALCCaS Trial	P Hewett on behalf of the ALCCaS trial group
Colorectal Surgical Society of Australia and New Zealand Spring Meeting, Victor Harbor SA, October 2007	Laparoscopic Surgery for Colorectal cancer Do we know the facts?	P Hewett
Australian Gastro-intestinal Trials Group Annual Scientific Meeting: QUASAR 2 Investigator meeting, Melbourne, October 2007	Surgical complications and Bevacizumab	P Hewett
Seminars in Operative Surgery, Flinders Medical Centre @ Stamford Grand, March 2007	Laparoscopy is the gold standard for colon cancer resection	N Rieger
Adelaide Chinese Medical Association (ACMA) Annual Meeting, Adelaide, May 2007	Laparoscopy for bowel cancer. The Sino-Australian experience	N Rieger
Australian Association of Vaginal and Incontinence Surgeons (AAVIS) Colorectal Focus Group meeting, Sydney, July 2007	Complex perianal fistula	N Rieger
Australian Association of Vaginal and Incontinence Surgeons (AAVIS) 9th ASM, Sydney, July 2007	Options in faecal incontinence. Plenary session	N Rieger
Australian Association of Vaginal and Incontinence Surgeons (AAVIS) 9th ASM, Sydney, July 2007	Anorectal surprise. Plenary session	N Rieger
Continence in the Country Symposium, Mount Gambier Hospital, August 2007	Faecal incontinence	N Rieger

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Surgery (continued)		
Open minds / future directions, Women's & Children's Hospital, Adelaide, September 2007	Faecal incontinence. Symposium	N Rieger
Colorectal Surgical Society of Australia and New Zealand Spring Meeting, Victor Harbor, South Australia, October 2007	Mechanical bowel preparation for colorectal resection should be abandoned	N Rieger
Diabetic Foot Global Conference, Los Angeles, March 2007	Making a difference Down Under	R Fitridge
New Horizons 2007 Congress, Sydney, August 2007	Pathophysiology and principles of management of the diabetic foot	R Fitridge
Royal Australasian College of Surgeons Annual Scientific Congress, Christchurch, May 2007	Predictive model of success for EVAR	JL Anderson, R Fitridge, M Boulton, M Barnes, G Maddern
Vascular 2007, Melbourne, August 2007	Mid term results of EVAR based on ASERNIP-S audit and comparison with international data	R Fitridge
Vascular 2007, Melbourne, August 2007	Implications of new SET (Surgical Education and Training) pathway for vascular surgery in Australasia	R Fitridge
Medicine, Ageing and Nutrition, Adelaide, September 2007	Carotid artery stenting: current role in stroke prevention and current controversies	R Fitridge
Provincial Surgeons of Australia Annual Scientific Congress, Whyalla, November 2007	Contemporary management of abdominal aortic aneurysms	R Fitridge
Provincial Surgeons of Australia Annual Scientific Congress, Whyalla, November 2007	Vascular assessment and management of chronic leg ulcers and the diabetic foot	R Fitridge
Pfizer GP Seminar, Adelaide, June 2007	Early Breast Cancer in 2007	D Walsh
St Andrew's Hospital, Graduate Nurses Program, Adelaide, June 2007	Breast Surgery Update	D Walsh
SA Breast Endocrine Surgical Journal Club, Adelaide, July 2007	Highlights from the ANZBCTG Meeting 2007	D Walsh
Benson Radiology GP Breast Cancer Workshop, Adelaide, September 2007	Breaking Bad News	D Walsh
Benson Radiology Mammography Workshop, Adelaide, November 2007	Breaking Bad News	D Walsh
NWAHS Breast Endocrine Academic Day, Adelaide, November 2007	The IBIS II Study	D Walsh
First International Conference on Nitric Oxide (NO) and Cancer, Paris, France, November 2007	Inflammatory nitrite at low pH in active colitis: a promoter of malignancy	WEW Roediger, B Radcliffe
[NO news is good news] Detection, Measurement and Quantification of Nitric Oxide: Tools for NO Research, EUROSCICON, BioPark, Welwyn Garden City, UK, March 2007	Nitric oxide inhibits cellular lipid and protein synthesis without energy depletion: a process of chronic disease due to nitrosothiols	WEW Roediger, P Cowled

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Orthopaedics and Trauma		
Current trends in Arthroplasty John Flynn Hospital, Gold Coast, January 2007	Cognitive Function after Total Knee Arthroplasty	P Lewis
Current trends in Arthroplasty John Flynn Hospital, Gold Coast, January 2007	Review of the Oxford University Knee Arthroplasty	P Lewis
Current trends in Arthroplasty John Flynn Hospital, Gold Coast, January 2007	Computer Assisted Total Knee Replacement	P Lewis
Sports Medicine Fellowship Adelaide, February 2007	Revision of Hip Arthroplasty	P Lewis
APOA Spinal Operative Course, India, March 07	Predictors of Outcome of Lumbar Discectomy Surgery	O Osti
Australian Orthopaedic Association SA Branch Scientific Meeting March 2007	Clinical Case Study Presentation – Of Osteitis Cystica In A 23 year Old Male Presenting With Femoral Diaphyseal Fracture	A Bradshaw
Australian Orthopaedic Association SA Branch Scientific Meeting March 2007	Magnetic Resonance Investigation Of Cartilage Of The Knee using In-Vivo Compression	P Gillespie
Australian Orthopaedic Association SA Branch Scientific Meeting March 2007	Re-Operation After Oxford Uni-Compartmental Knee Replacement.	P Lewis
Australian Orthopaedic Association SA Branch Scientific Meeting March 2007	Extended Prophylaxis Against Venous Thromboembolism After Total Hip Replacement And Hip Fracture Surgery Using Enoxaparin	S Shahrokhi
Spine Course 2007 Thoracolumbar Kuantan, India August 2007	Recent Advances in Spinal Surgery	O Osti
Spine Course 2007 Thoracolumbar, Kuantan, India August 2007	Principles of Management of lumbar Disc Herniation	O Osti
Spine Course 2007 Thoracolumbar Kuantan, India August 2007	Lumbar Discectomy Surgery, Tips and Tricks	O Osti
Spine Course 2007 Thoracolumbar Kuantan, India August 2007	Predictors of Outcome of Lumbar Discectomy Surgery	O Osti
AOA COE (Australian Orthopaedic Association Continuing Orthopaedic) Perth, August 2007	Computer Assisted Surgery – TKR – Dangers and Limitations	P Lewis
AOA COE (Australian Orthopaedic Association Continuing Orthopaedic) Perth, August 2007	MIS (Minimal Invasive Surgery) and CAS (Computer Assisted Surgery) – Debate Mediator	P Lewis
Australian Orthopaedic Association SA Branch Scientific Meeting August 2007	Review of Management of Ruptured Achilles Tendon and Proposal of a Functional Treatment Using a Cam-Walker	K Shrestha
Australian Orthopaedic Association SA Branch Scientific Meeting August 2007	Outcomes movement: Instruments For Total Knee Arthroplasty	C Coyle
Arthroplasty Society of Australia Meeting, Kingscliff NSW, September 2007	Review of the Oxford University Knee Arthroplasty	P Lewis

CONFERENCE TITLE & DATE	TITLE OF TALK/POSTER	ATTENDEE NAME
Orthopaedics and Trauma (continued)		
Arthroplasty Society of Australia Meeting, Kingscliff NSW, September 2007	Arthroscopy in management of osteoarthritis: 10 – 20 year results	P Lewis
EuroSpine 2007, Brussels, October 2007	Management of Spinal Fractures	O Osti (for E Wong)
ASEAN Orthopaedic Association & Vietnam Orthopaedic Association & Vietnam Spinal Society, Saigon, December 2007	Management of Lumbar Disc Prolapse	O Osti
ASEAN Orthopaedic Association & Vietnam Orthopaedic Association & Vietnam Spinal Society, Saigon, December 2007	Mobilisation for Rigid and Dynamic Stabilisation in the Lumbar Spine	O Osti
10th Congress of the International Federation of Societies for Surgery of the Hand (IFSSH) Sydney Australia, March 2007	Are there Any Benefits of Locking Distal Radius Plates for AO C3 Distal Radius Fractures? What is the role of Shoulder Fusion in Complete Brachial Plexus Injuries?	E Wong
Australian Orthopaedic Association South Australian Branch Scientific Meeting Adelaide, March 2007	Bone Scaffold for Critical Defect : A Rabbit Tibial Osteotomy Model	E Wong
Spine Society of Australia (SSA), Hobart Australia, April 2007	Anterior Stabilization & Fusion of Unstable Lumbar Burst Fractures, Allogeneic Red Cell Transfusion Requirements in Scoliosis Surgery	E Wong
Zimmer Trauma Update, Perth WA, August 2007	Advances in Periarticular Fracture Management	E Wong
Australian Orthopaedic Association 67th Annual Scientific Meeting Gold Coast, October 2007	Bone Scaffold for Critical Defect: A Rabbit Tibial Osteotomy Model, Repeat Percutaneous Radiofrequency Facet Joint Denervation for Chronic Low Back Pain: A Prospective Study	E Wong

Research Support Structures





RESEARCH SUPPORT STRUCTURES

The Basil Hetzel Institute Policy Committee

Established in 1996, the Clinical Development Research Centre, now the Basil Hetzel Institute (BHI) Policy Committee's role is to provide strategic advice for the running of the BHI and to optimise the available support for research programs across The Queen Elizabeth Hospital (TQEH).

The Committee is comprised of senior representatives from:

- the two universities with whom the hospital is affiliated, Adelaide University and the University of South Australia;
- academic heads of departments at TQEH (Medicine and Surgery);
- Allied Health, and
- the scientific community

Professor Guy Maddern was reappointed to the position of Director of Research in February 2005 for a five-year term. This leadership position has been critical to furthering the aims of research excellence and enhancing the research reputation of TQEH.

Several sub-committees assist the BHI Policy Committee as required, notably the:

- Research Day Organising Committee, chaired by Dr Prue Cowled, University of Adelaide Discipline of Surgery, in the planning and running of the annual Research Day event.

- Scholarship Selection Committee, chaired by Professor Maddern, in awarding a range of scholarships funded by TQEH Research Foundation.
- BHI Management Committee, chaired in 2007 by A/Professor Ray Morris, Clinical Pharmacology Unit, in managing the existing BHI facility, to work with the architects and redevelopment team to develop the planned new facility and in due course to manage the new BHI facility, including managing the move.

The Hospital's Research Secretariat undertakes a range of activities to assist the Director of Research in supporting, fostering and administering quality research activity across TQEH.

Research Training

The BHI Policy Committee aims to support the research capacity within basic and clinical areas through its strategy of providing a number of scholarships at postgraduate, Honours and vacation levels.

Research training promotion

In 2007 research training opportunities and Scholarship support were actively promoted through posters distributed to key university disciplines and through the hospital's research Internet site with links from key university research training sites.



Strategy for 2007

The goals of the research support strategy were to provide up to:

- 7 TQEH Research Foundation Postgraduate Research Scholarships
- 15 TQEH Research Foundation Honours Scholarships
- 4 TQEH Research Foundation Vacation Scholarships

TQEH Research Foundation

Vacation Research Scholarships

9 placements offered in TQEH research settings over the 2006/2007 vacation were generously funded through the Research Foundation and provided scholars with the opportunity to gain valuable research experience in a clinical/laboratory environment. The excellent quality of the oral presentations given by students at the end of their placement clearly reflects the collaborative effort of both the students and their supervisors.

TQEH Research Foundation Honours Research Scholarships

Honours Scholarships continued to be offered at TQEH in 2007. 5 Scholarship recipients undertook projects across a range of Departments, including Clinical Pharmacology, Haematology-Oncology, Transplantation-Immunology, Gastroenterology and Cardiology.

Higher Degrees

In the year 2007 over 70 scholars were undertaking research towards Higher Degrees at TQEH. A continuing generous level of funding from the TQEH Research Foundation has allowed ten continuing higher degree candidates as well as seven new students to be supported in 2007. TQEH Research Foundation Scholarships provide for stipends which match the Australian Postgraduate Award (APA) rate, as well as a maintenance allowance for each student to assist the Department in which they are undertaking the research work. Sources of financial support for other higher degree students at TQEH include government (NHMRC) the University (APA, UAS, and Faculty 'Divisional' scholarships) and the non-profit sector (for example, Kidney Health Australia).

Research Day 2007

Research Day is an annual event in the research calendar at TQEH, and with the generous sponsorship support of the Research Foundation, provides a significant and useful training opportunity for research scholars "in training" from medical, scientific, nursing and allied health backgrounds. The purpose of the day is to further enhance the communication skills of those presenting, under conditions that are typical of most professional society congresses. With this opportunity and experience, it is hoped the research quality from TQEH will benefit as researchers move on to deliver their work to national and international congresses. This year the Day was once again very successful and our winners are identified in the Award section of the report.

Basil Hetzel Institute (BHI) Policy Committee

Current Members, December 2007

Prof Guy Maddern
 Prof Richard Ruffin
 Prof Justin Beilby (proxy - Prof Andrew Somogyi)
 Mr David Norton
 A/Prof Peter Bardy
 Prof Bernie Hughes
 Ms Diana Brown
 Dr Jenny Kennedy

Dr Prue Cowled
 Dr Ravi Krishnan
 A/Prof R D'Andrea
 A/Prof Ray Morris
 Mr John Michell
 Mr Maurice Henderson

Ex-officio

Dr Robert Adams

Executive Support

Ms Gwenda Graves

Basil Hetzel Institute Management Committee

Current Departments represented/appointed members, December 2007

Department/Unit	Representative	Proxy
Cardiology	Prof John Horowitz	Dr Jenny Kennedy
Clinical Pharmacology	A/Prof Ray Morris	
Gastroenterology	Dr Adrian Cummins	Ms Wendy Uylaki
Haematology-Oncology	Dr Richard D'Andrea	Dr Jenny Hardingham
Medicine	Dr Peter Zalewski	Dr Carol Lang
Neurology	Dr Anne Hamilton-Bruce	Mr Austin Milton
Renal	Dr Ravi Krishnan	Mr Clyde Milner
Rheumatology	Ms Sue Lester	
Surgery	Dr Prue Cowled	
Surgery (ENT)	Dr Lor Wai Tan	
Surgery (Surgical Suite)	Mr Matthew Smith	
Postgraduate Representative for 2007	Ms V Kopetz	
Ex officio	Ms Kathryn Hudson	
Executive Support	Ms Gwenda Graves	

A/Prof Ray Morris is the current Chair of the Committee.



L-R: Hayley Vasileff, Tyson Matthews, Tong Le, Alicia Chan, Nicola Leung, Boris Fedoric, Shilpa Prasad, Darling Rojas. Absent: Julia Kirby

2007 AWARD WINNERS

TQEH Research Day 2007

Honours Students, Basic Science Students

Tyson Matthews, Transplantation - Immunology Laboratory, Renal Unit, TQEH (Prize sponsored by TQEH Research Foundation)
"Modifying dendritic cell function by siRNA mediated silencing of PKC β II"

Higher Degrees, Basic Research Junior Students

(Prizes sponsored by TQEH Research Foundation)
Darling Rojas and Boris Fedoric (Joint Winners) Transplantation - Immunology Laboratory, Renal Unit, TQEH

D Rojas: "The divergent effects of interferon- γ : a proinflammatory cytokine that regulates alloimmune responses by modulating dendritic cells"

B Fedoric: "HLA-G expression in adenoviral transfected cells regulates immune responses relevant to organ transplant rejection"



Professor PJ Wormald receiving his award at the AMA Meeting Dinner with Dr Peter Ford (President, AMA SA).

Higher Degrees; Basic Research (Senior Students)

(Prize sponsored by TQEH Research Foundation)
Nicola Leung, Gastroenterology Unit, TQEH
"CD4+CD25brightFOXP3+T cells and TH17 effector cells in inflammatory bowel disease"

Higher Degrees Senior Clinical Students

(Prize sponsored by TQEH Research Foundation)
Shilpa Prasad, Transplantation-Immunology, TQEH
"Developing a primate model for testing dendritic cell-based tolerance strategies: propagation of dendritic cells from marmoset peripheral blood"

Allied Health

(Prize sponsored by TQEH Research Foundation)
Hayley Vasileff, Pharmacy, TQEH
"Continuity of care in therapeutics: examining the impact of pharmacist involvement in Emergency Department admissions"

Higher Degrees (Junior Clinical) and Clinical Trainees

(Prize sponsored by TQEH Research Foundation)
Tong Le, Department of Otolaryngology Head and Neck Surgery, TQEH
"The efficacy of topical anti-biofilm agents in a sheep model of rhinosinusitis"

Undergraduates: Medical and Summer Students

(Prize sponsored by University of Adelaide Faculty of Health Sciences)

Julia Kirby, Department of Surgery, TQEH
"TNF- α as a predictor of the development of sepsis following surgical repair of abdominal aortic aneurysm"

Poster Display

(Prize sponsored by TQEH Research Foundation)
Wai Ping Alicia Chan, Cardiology Unit, TQEH
"Dissociation between endothelial dysfunction, platelet nitric oxide resistance and endothelial progenitor cell counts in polycystic ovary syndrome"

International Award to Professor Basil Hetzel

Professor Basil Hetzel, has been recognised by the King of Thailand. Professor Hetzel, who researches iodine deficiency which can lead to brain damage, was presented with the Prince Mahidol Award by the King of Thailand King Bhumibol Adulyadej at the Royal Palace in January 2008.



From left: Prof Tim Flannery, Dr Theo Athanasiadis and Hon. Dr Jane Lomax-Smith at the ARIIA presentation. Insert left: Ms Hooi Sien Eng; Insert right: Dr Alkis Psaltis

Other Awards

HS Eng. Kidney Health Australia Award for the best Clinical Research presentation, titled "Luminex® Investigation: Low Titer HLA Donor-specific Antibodies in Positive B-cell Crossmatches Predict Late Graft Loss" at The Australia and New Zealand Society of Nephrology (ANZSN) 43rd Annual Scientific Meeting, Gold Coast, Queensland, 8 – 12 September 2007.

HS Eng. Amgen Young Investigator Award (\$500) for presentation titled "Luminex® Investigation of Positive B-cell Crossmatches in Renal Transplantation", The Transplantation Society of Australia and New Zealand 25th Annual Scientific Meeting, Canberra, 25 – 28 March 2007.

A Psaltis. The RP Jepson Medal for the best scientific presentation at the Royal Australian College of Surgeons, SA and NT Sub-committee - Annual Scientific Meeting.

A Psaltis. Best Poster Prize at the Inaugural Post-Graduate Research Day, University of Adelaide, Faculty of Health Sciences, October 2007.

A Psaltis. Best Oral Presentation and Overall Winner at the Inaugural Post-Graduate Research Day, University of Adelaide, Faculty of Health Sciences, October 2007.

T Athanasiadis. University of Adelaide Adelaide Research & Innovation Impact Award (ARIIA) for Most exciting new disclosure - "Anti-adhesion dressing for wound healing", November 2007.

T Athanasiadis. 1st poster prize for Rhinology at EUFOS, Vienna 2007.

PJ Wormald. Australian Medical Association for "Significant Contribution to Medicine". Presented at AMA Meeting SA, Adelaide, June 2007.

GJ Maddern. Finalist, Premier's Science Excellence Awards "Science Leadership and Management Excellence" category.

PJ Wormald. Australian Medical Association for "Significant Contribution to Medicine". Presented at AMA Meeting SA, Adelaide June 2007.

ACKNOWLEDGEMENTS

The Queen Elizabeth Hospital gratefully acknowledges and thanks the following organisations for their support to medical, scientific, nursing and allied health research:

Adelaide Integrated Biosciences (AIB) Laboratories
Adelaide Microscopy
Ann-Marie Trimboli Trust Fund
ASERNIPS
Australian and New Zealand Society of Nuclear Medicine (ANZSNM)
Australian Crohn's and Colitis Association
Australian Government Commercialising Emerging Technology (COMET)
Australian Gynaecological Endoscopy Society Research Committee
Australian Lung Foundation
Australian National University Canberra
Australian Red Cross Blood Service
Australian Research Council (ARC)
Australian Rheumatology Association
Australian Society of Otolaryngology Head and Neck Surgery (ASOHNS)
Baker Heart Research Institute Melbourne
Bayer Australia
BioInnovationSA
Boehringer Ingelheim Pty Ltd
Breast Cancer Research Association
Cancer and Bowel Research Association
Cancer Council of South Australia
Channel 7 Children's Medical Research Foundation of SA
Child Health Research Institute
Children, Youth & Women's Health Service – Familial Cancer Unit
Christian Medical College & Hospital, India
Clive & Vera Ramaciotti Foundation
Colin Matthews, Professor
Commonwealth Department of Health and Aged Care
Coopers Brewery Foundation
CY O'Connor ERADE Village WA
Department of Health SA
Diabetes Australia
Divisions of General Practice
Endeavour International
Flinders University of South Australia
Garnett Passe and Rodney Williams Memorial Foundation
Giving Imaging
Hanson Institute
Intensive Care Foundation
Janssen-Cilag
Juvenile Diabetes Research Foundation
Kidney Health Australia
Les Cleland, Professor
Monash University Melbourne
Muriel T Gunn Foundation
National Breast Cancer Centre
National Health & Medical Research Council (NHMRC)
National Heart Foundation of Australia
Novartis Pharmaceuticals
Osteoporosis Australia
Perpetual Trustees
Peter MacCallum Institute
Pierkos Society Women's Group
Repatriation General Hospital
Research Australia
Roche Pharmaceuticals
Rotary Club of West Lakes
Royal Adelaide Hospital
Royal Adelaide Hospital/IMVS Clinical Research Grants Committee
Royal Children's Hospital Melbourne
Royal Australian College of General Practitioners
Royal Australasian College of Physicians
Royal Australasian College of Surgeons
Royal Prince Alfred Hospital
Schering Plough
South Australian Research and Development Institute (SARDI)
Stem Cell Technologies Inc
Stroke SA
St Vincent's Hospital Melbourne
Surgical Synergies
Sydney Children's Hospital
The Queen Elizabeth Hospital Research Foundation
University of Adelaide
University of Adelaide – Faculty of Health Sciences
University of Adelaide – Roseworthy Campus
University of Queensland
Westmead Hospital Sydney
Women's and Children's Hospital Adelaide
Wyeth Pharmaceuticals



Photograph courtesy of Ben Searcy Photography



THE QUEEN ELIZABETH HOSPITAL
RESEARCH FOUNDATION INC.

THE QUEEN ELIZABETH HOSPITAL RESEARCH FOUNDATION

The Queen Elizabeth Hospital Research Foundation is a major source of funding for research projects at The Queen Elizabeth Hospital. We have supported numerous scientists, PhD and Honours students as well as clinicians to develop innovative treatments for disease.

The Queen Elizabeth Hospital is Adelaide's second largest teaching hospital. Since opening its doors in 1954, The Queen Elizabeth Hospital has established a reputation as a leading treatment centre in a variety of medical, surgical and allied health fields. This has been coupled with an active and dedicated research program, which aims to better understand health and disease and its management.

Over the last six years The Queen Elizabeth Hospital Research Foundation has donated \$6.3 million dollars to research.



Mr John Michell



Mr Ray McGrath



Mr Harold Anderson



Mr John Hender



Prof Richard Ruffin



Mr John MacPhail



Mr Peter Wylie



Dr John Beltrame

Not pictured:
Mr Ken Milne
Photography
courtesy of
Ben Searcy
Photography



BOARD DETAILS

Chairman

Mr John Michell – Chairman, Michell Pty Ltd

Deputy Chairman

Mr Ray McGrath – Managing Director, McGrath Real Estate Group

Board members

Mr Harold Anderson AM JP – Mayor, City of Charles Sturt

Mr John Hender – Business Development Manager, Great Southern Securities Pty Ltd

Professor Richard Ruffin – Director – Division of Medicine, The Queen Elizabeth Hospital

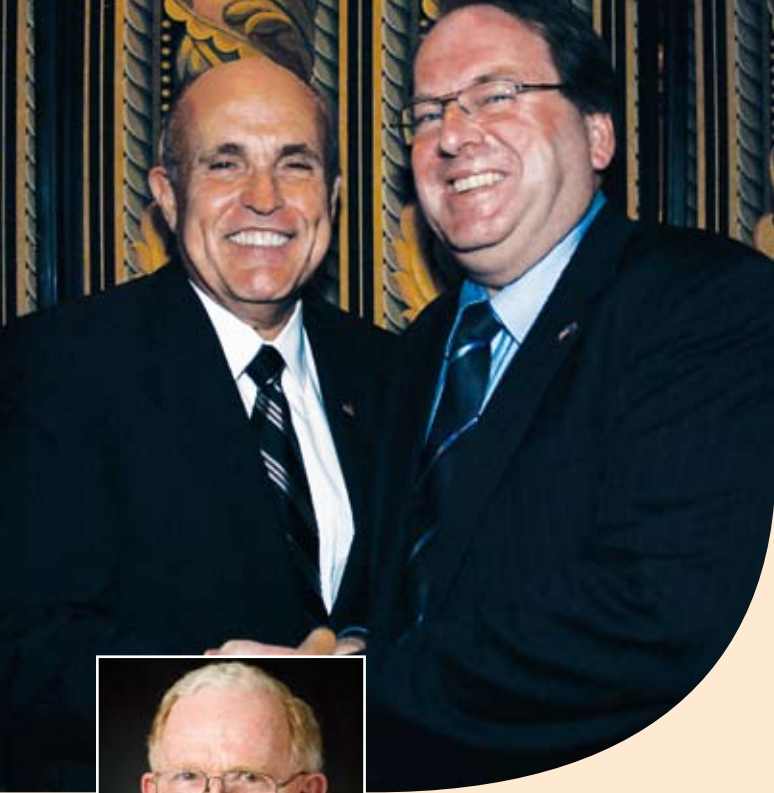
Mr John MacPhail – Partner, Finlaysons Lawyers

Mr Peter Wylie – Chairman, Advertiser Newspapers Pty Ltd

Dr John Beltrame – Senior Lecturer and Cardiologist, Cardiology Unit, The Queen Elizabeth Hospital

Mr Ken Milne – Architect at Milne & Zappia Architects Pty Ltd

Photograph courtesy of Ben Searcy Photography



Another milestone that has been achieved is the commencement of the building of the new research building. We are extremely grateful to the State Government for its funding of approximately \$19 million to construct this building. This is the combination of six years of hard work by the Research Foundation in negotiating and lobbying with the State Government for this facility.

Along with the State Government's commitment, the Research Foundation has committed to raising \$3 million for brand new equipment so that our researchers have the best facility and the best equipment available. To date, this is not going as well as we would wish. We will have to review our advisors early next year. In the meantime you can all help by making generous donations to this cause and introducing friends and acquaintances who are able to assist too.

A third milestone this year was the Home Lottery selling out by the early bird deadline. This lottery has grown from nothing four years ago to being one of the significant fundraisers for the Research Foundation. We are looking forward to it getting bigger and better in the future.

A unique experience was Mayor Rudy Giuliani putting on a dinner for the Research Foundation in New York. This was very successful with the most exciting outcome being Mayor Giuliani's offer to host another dinner in 2009.

The South Australian Medical Research Trust Annual Dinner was our most successful to date. The theme was Berlin Cabaret and was well received by all that attended. The dinner netted, after all costs, in excess of \$90,000.

The Fit2Play program, while proving to be extremely successful in educating children in regards to obesity and healthy choices, has continued to be frustrating in obtaining government funding to roll the program out at either a state or national level. There are some opportunities on the horizon that may assist us to take this program into all South Australian schools in the near future. Our ultimate aim is to have Fit2Play as a national obesity program. Whether the new Federal Labor Government will follow the State Labor Government's intention to contribute is still unknown.



CHAIRMAN'S REPORT

It gives me great pleasure to present my eighth Chairman's report and complete my 23rd year of membership at The Queen Elizabeth Hospital Research Foundation. Once again, I would like to report that TQEHRF has had another record year. Our surplus has increased by over 20% on last year's figures. This is our seventh consecutive year of surpluses that have averaged greater than 20%. Much of the surplus is due to the income from bequests, where we are now beginning to reap the rewards of decisions that the board has previously made to invest in this program.

This year has seen a number of milestones for the Research Foundation being achieved.

We now have our own Research Advisory Committee that is made up of prominent researchers from both within the hospital and from the South Australian research community. The Research Advisory Committee will be recommending to the board where the funds we generate for research should be spent. In the past this has been done on an ad hoc basis. Due to the amount of funds now being generated for research by the Foundation, it was advised that we should take formal and professional advice on where to allocate it and not rely on guess work.

Our research commercialisation opportunities are still frustrating, as we often have two steps forward and one step back. It is a new experience to manage such an area as the business of research is far more difficult to manage than the day-to-day operations of the Foundation.

The Research Foundation is now more secure than it has been in its lifetime. Not only do we have additional income generating programs, we also have, for the first time, financial reserves. These have been invested to ensure the long term security of the Research Foundation.

The board continues to work well to oversee the operations of the Foundation. I believe the reduction in board meetings has been beneficial and the establishment of our first major "committee" - marketing media - will prove in the near future to be extremely worthwhile to the Foundation.

Our Executive Director, Maurice Henderson, and his staff continue to be dedicated to the cause. It is through their efforts that we have had the most successful year to date.

In the next year there will be a number of challenges and some new opportunities for the Foundation. We plan to get more involved in supporting the management of research at the hospital and will make an offer to the government to lease the new research building. We are also looking at directly employing research administration staff as this would be a cost saving device to benefit the hospital and its research. It will also reduce duplication of resources.

Once again, we are looking for a further 20% growth in the surplus and believe we have the right governance, management and resources in place to make this happen.

I apologise again for missing this year's Annual General Meeting. I hope I will be able to make the next one, rather than having to travel around the world visiting rather doubtful places.

Good luck for 2008 .

John Michell
CHAIRMAN



Photograph courtesy of Ben Searcy Photography

FUNDRAISING INITIATIVES



Photograph courtesy of Ben Searcy Photography

The Queen Elizabeth Hospital Research Foundation has a proud history of excellence in fundraising. We have established a number of innovative programs to continue our fundraising work.

Life Guardian – Planned Giving

Our planned giving program, Life Guardians, offers our donors the opportunity to leave a lasting legacy to research by making a gift in their will. A strong base for future funding has been created through this program, as over 700 supporters have made a generous commitment.

Basil Hetzel Society

The Basil Hetzel Society acknowledges donors who have left significant gifts of \$10,000 or more in their wills. Over 200 donors have already made this commitment and have been acknowledged as members of this special group.

Tribute Funds

Tribute Funds are a positive and simple way for family and friends to remember a loved one. A Tribute Fund carries the name of your loved one and is a living tribute. In their name, we can continue to ensure that vital medical research takes place to improve the health of our community.

Family and friends can support the Fund through numerous ways such as making contributions on significant dates such as anniversaries and birthdays, by making monthly gifts or by choosing to fundraise through dinners, auctions or quiz nights.

In Memory Gifts

This program provides a meaningful way for bereaved families to invite mourners to give a gift to medical research to express their sympathy. Making a gift in memory of a loved one is a thoughtful and generous gesture which represents a valuable contribution towards healthier solutions for our community.

Lotteries

The 2007 Home Lottery was our most successful to date. All 40,000 tickets were sold before the early bird deadline – 21 days before the actual deadline.

The Home Lottery concept was introduced as a major fundraising initiative by the Research Foundation four years ago. It offers the highest value prize pool any fundraising lottery South Australia has ever experienced. With more than 3,000 prizes ranging from a magnificent Scott Salisbury Home, luxury vehicles, worldwide holidays, entertainment and electrical prizes, there is something for everyone.

We hope the 2008 lottery will be just as successful.

EVENTS

The Queen Elizabeth Hospital Research Foundation holds numerous innovative events throughout the year to raise vital funds for the continuation of medical research into illness and disease that can touch us all. The Foundation established The South Australian Medical Research Trust (SAMRT) as a division in 2001. SAMRT is committed to funding research which has the power to change lives and bring hope for a better quality of life.

One of the major fundraising activities of the Trust is the Annual Black Tie Dinner. Through the generous support of corporate and wider South Australian communities, this event raises a significant amount of money each year.

The 2007 Berlin Cabaret Annual Dinner was no exception raising more than \$90,000 net for The South Australian Medical Research Trust, funding research into breast, prostate and other cancers conducted at The Queen Elizabeth Hospital.

The dinner was a huge success with many of our sponsors and supporters believing it was the best one ever!

The outstanding amount raised was the result of lots of hard work and planning by the events team and our outstanding volunteer SAMRT committee. They worked tirelessly to help make the night a winner.

AMP & MBA Financial Strategists were once again our naming sponsors for the evening. Their on-going support is greatly appreciated.

A major highlight of the night was the \$100 a ticket raffle, which gave the opportunity for two lucky people to win a trip to Berlin and was valued at over \$10,000. This was kindly donated by Malaysia Airlines and Venture Holidays. The lucky winner, Tricia Karpluk from West Lakes, was drawn by the Patron of The South Australian Medical Research Trust, Mary Henderson.

Special thanks must go to our major sponsors Lexus of Adelaide, Scott Salisbury Homes, McGrath Real Estate Group, URS, Finlaysons, Edwards Marshall, Kendacraft Jewellery and Channel 9.

Thank you also to our silver sponsors Charterhouse, Australia Post, Infront Events, Bank SA, Macquarie Telecom, Commonwealth Private and the Marina Hindmarsh Island and the many generous auction item donors, in-kind supporters and guests.

The Queen Elizabeth Hospital Research Foundation was the beneficiary of several other major events throughout 2007 including The Advertiser/Sunday Mail Foundation Male Famous Faces Luncheon, The Asia Pacific Business Council for Women Gala Dinner, The Tea Tree Gully Mayoral Ball and the American Chamber of Commerce (AMCHAM) Internode Lunches held throughout the year.





Hon. A Downer MP and M Henderson, Bunnings Fundraiser for Prostate Cancer Research

DEVELOPMENT

Community Fundraising

The driving force of the Research Foundation's ability to continue funding research is the ongoing commitment of many community groups and individuals who raise funds to support research at The Queen Elizabeth Hospital. Community groups, such as the Rotary Club of West Lakes who generously donated \$5,000 in 2007, have committed themselves to continue raising funds.

Since 2002, Maria Giannoudis, along with the Women's Group of the Pierkos Society, have held cancer support dinners to raise money for cancer research at The Queen Elizabeth Hospital. This year's dinner raised \$8,100. Money was raised from ticket sales, auctions and a raffle. The group has had huge support from the Pierkos Society and the local Greek community and businesses. There have also been concerts, quiz nights, dinners, bingo nights, afternoon teas and school fundraisers.

This year, we also had support from Bunnings, who sold aprons for Father's Day and donated the proceeds to prostate cancer research.

We have also had support from the many researchers who have given their time and energy to act as guest speakers at community events. By doing this, we ensure members of the community are directly aware of the research happening and why they are raising the funds. We rely on these groups and their innovative ideas and fundraising to help us in our mission to raise much needed funds for research.

Direct Marketing

Our Direct Marketing program is one of our major sources of income into the Research Foundation. This is from our direct Mail program and our telemarketing operations.

The direct mail program is used to communicate with our existing donors as well as making contact with potential donors. We send out quarterly appeals to our donors telling them of specific research projects happening in the Basil Hetzel Institute and stories of people who have benefited directly from this research. This program generates a steady income source for the Foundation.

The telemarketing program is used for the acquisition of new donors as well as to keep in touch with existing donors. Our telemarketing program generates money from our Key Medallion program and Australian Breast Cancer Research brand.

We also have a 'regular giving' program where donors pledge an amount to be given at regular intervals. Regular giving allows the Research Foundation to raise money with a guaranteed minimum level of income from each month, making it one of the best ways to fundraise or give.

MEDIA COMMITTEE

In 2007, The Queen Elizabeth Hospital Research Foundation established a Media Committee to assist the Foundation to develop its branding and profile across all forms of media. The Committee consists of representatives from a number of prominent media and business organisations in Adelaide. These include:

- Peter Wylie – Chairman Advertiser Newspapers Ltd and Research Foundation Board Member
- Ken Milne – General Manager Ken Milne Architects and Research Foundation Board Member
- Mark Colson – General Manager Channel 9 Adelaide
- Paul Bartlett – General Manager FiveAA and Nova 91.9
- Tim Hughes – Managing Director Hughes Public Relations
- Maurice Henderson – Executive Director TQEHF
- And former member Hermine Bergmann – General Manager Jarvis Marketing

The role of this committee is to assist The Queen Elizabeth Hospital Research Foundation to increase its awareness in the community through critically analysing current marketing and media strategies as well as suggesting future direction. It is a committee of the board of the Foundation and reports to the board through the committee chair.



Photograph courtesy of Ben Searcy Photography

FIT2PLAY

For two years, The Queen Elizabeth Hospital Research Foundation has been financially supporting the Fit2play program. This is an evidence-based health and wellbeing program for primary school children designed to prevent obesity-related diseases such as heart disease, diabetes and other chronic illnesses.

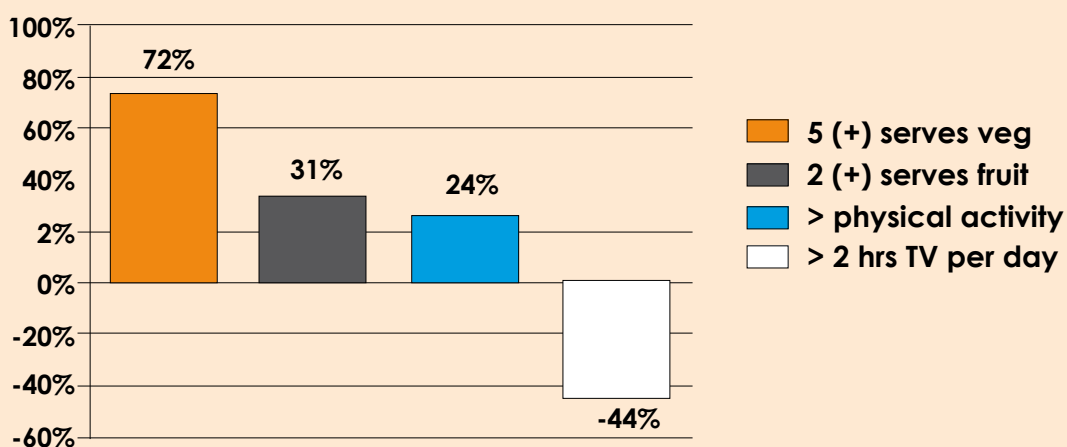
Studies have shown that banning access to things such as soft drink actually makes them more desirable. Therefore, the Fit2play program is based on the self determination theory and encourages children to eat more fruit and vegetables, do more exercise, watch less TV and drink more water rather than banning certain foods or behaviours.

Fit2play educates children about the importance of good health choices. This approach results in children developing behaviours which can be sustained for life. Late in 2007, The Queen Elizabeth Hospital Research Foundation received notification it had been selected to receive funding under the Federal Government's Healthy Active Australia

Community and School Grant Program to offer the Fit2play program in 2008 to the 24 schools involved in the 2006 trial. Also in 2007, the University of South Australia released the results of the stage 2 evaluation of Fit2play. This evaluation was funded by a grant received from the Telstra Foundation. The aim of the evaluation was to ascertain how the Fit2play program impacted students on a long-term basis. Conducted approximately nine months after the completion of the Fit2play pilot program, this evaluation shows that children participating in the Fit2play program sustained the behavioural changes in the nine months since the program finished.

The significance of this program has already been acknowledged with Gawler Health Service and Gawler High School winning two prestigious Children's Week Awards in 2007.

Students reported relative change in lifestyle variables following Fit2Play evaluation



Students reported improved lifestyle habits which can be seen in the above graph.

SUPPORTING STUDENTS AT TQEH

Nurturing and supporting talented students is a high priority for The Queen Elizabeth Hospital Research Foundation. Each year, the Research Foundation supports students by granting scholarships.

In 2007, the Research Foundation sponsored the Ausbiotech Student Association Careers Night and the Australian Society for Medical Research Annual Gala Dinner. These functions provide important opportunities for the The Queen Elizabeth Hospital to attract high calibre students to study Honours and PhD research programs at TQEH.

RESEARCH DAY

The Queen Elizabeth Hospital Research Day is an annual event aimed at providing an opportunity for young student researchers to present their data before an audience under conditions which are typical of most national and international scientific conferences. Students receive awards in various categories, with most of the awards being sponsored by The Queen Elizabeth Hospital Research Foundation.

For the first time, the Research Foundation sponsored a passport prize. Students who attended four or more sessions during the day and had their programs stamped were eligible to go in the draw to win a Panasonic stereo. Honours student Dieu Dang won this inaugural prize.

Photograph courtesy
of Bridget Penna





Photograph courtesy of Ben Searcy Photography

ALLOCATION OF FUNDING

Research Advisory Committee

To increase the accountability of money spent and to ensure a transparent transfer of funds from The Queen Elizabeth Hospital Research Foundation to researchers at The Queen Elizabeth Hospital, Research Foundation funding will now be gifted on a competitive application basis. To ensure this application and review process is fair and equitable The Queen Elizabeth Hospital Research Foundation has established a Research Advisory Committee (RAC). This committee is comprised of esteemed South Australian researchers and has representation from The Queen Elizabeth Hospital, Children's Health Research Institute, Women's and Children's Hospital and the three South Australian Universities. The Committee will determine the best way to allocate the money donated by The Queen Elizabeth Hospital Research Foundation to the Hospital. The chair of this committee is required to be a member of The Queen Elizabeth Hospital Research Foundation board and in the inaugural year is Professor Richard Ruffin. This Research Advisory Committee system is vital as it now allows money to be allocated on strong scientific plan and capability, and is an important step towards creating an impartial system that demonstrates consistency across all major funding.

The Queen Elizabeth Hospital Research Foundation Inc Distributions to Research 2006/07

TQEH - Research Infrastructure	200,000
BHI	350,000
Research Advisory Committee Grants Provision	288,000
Intellectual Property	46,391
Commercialisation of Research Projects	140,195
Targeted Funds:	
Fluorescent Microplate Reader - Haematology/Oncology	49,500
Digital Camera and Laptop - Cardiology	8,265
Upright Freezer - Medicine	13,076
Biofuge Centrifuge - Medicine	9,055
Motor vehicle - Palliative Care	18,685
Proteomics Work - Colorectal Cancer	6,000
Dr Ooi Project - Emergency	17,545
Contribution to Apo Tome Microscope	17,945
Other Targeted Funds Allocations	121,461
Research Day Prizes	3,850
Other Research Distributions	1,607
	\$1,291,575



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