
Talaulikar D, McDonald A, Pratt J, Prosser IW, Pidcock ME. Acquired haemophilia: profile in the ACT. Poster presentation at International Society for Thrombosis and Haemostasis XXth Congress Meeting 2005

Latimer M, Talaulikar D, D’Rozario J, McDonald A, Prosser IW, Brun M, McNernery K, Coupland L, Pidcock ME. Autologous peripheral blood stem cell transplantation in Multiple Myeloma – the ACT experience. Poster presentation at International Myeloma conference 2005

Baron P. Haematology experience with a knowledge based commenting system - Lab Wizard. Oral presentation at the AACB Annual Meeting 2005.


Micallef J. Anti-D in a category DIIIa individual. Oral presentation at NICE 2005.


Talaulikar D, Crispin P, Prosser IW. CNS involvement with Chronic Myeloid Leukaemia in a patient on Imatinib: a case report and review. Poster presentation at HSANZ 2004


AWARDS

Dr Dipti Talaulikar, Australian National University PhD scholarship, 2006

Dr Dipti Talaulikar, Arrow Bone Marrow Transplantation Foundation supplementary PhD scholarship, 2006

Dr Dipti Talaulikar, David S Nelson Prize for best oral presentation at the RCPA Pathology Update, Sydney 2006

Dr Dipti Talaulikar, RCPA QAP prize for best poster at the RCPA Pathology Update, Sydney 2006
STAFF

Associate Professor Nick Buckley - FRACP, MD, Director Clinical Pharmacology & Toxicology, Associate Professor in Clinical Pharmacology & Toxicology & Sub Dean Research, ANU Medical School, Australian National University, Associate Professor, Department of Pharmacology & Canberra Clinical School, University of Sydney.

Dr Harindra Karunatilake
Dr Dan McCormack
Dr Geoff Ding
Dr Darren Roberts

COLLABORATIVE ASSOCIATES

Professor Andrew Dawson, University of Peradeniya, Adjunct appointment with ANUMS
Professor Julia Potter, Pathology
Dr Mike Hall, Emergency Department.

STUDENTS

Dr Corrine Balit, Medicine honours (awarded 2003) University of Sydney
Dr Gabrielle Cooper, PhD (awarded 2004) University of Sydney
Dr Alison Moffat, Medicine honours (awarded 2005) University of Sydney
Dr Darren Roberts, PhD student, ANUMS
Gihan Gunawardane, PhD student, ANUMS
Bishan Rajapakse, MPhil student, ANUMS

RESEARCH PROJECTS

This South Asian Clinical Toxicology Research Collaboration (SACTRC)

A program of research formed by researchers from the universities of Oxford, Colombo, Peradeniya, Newcastle and the ANU. We aim to have a significant impact on the major public health problem of pesticide poisoning in the Asia Pacific through creating a centre of excellence in clinical practice and research, which will serve as a training centre for the region.

Clinical epidemiology of poisoning with pharmaceuticals in Australia.

This research aims to improve the diagnosis and management of poisoning with pharmaceuticals. Also, important findings of large differences in toxicity within drug classes have led to the withdrawal of drugs in some countries and prescribing restrictions in this country.

Systematic Reviews in poisoning

The movement towards evidence-based practice has largely ignored this field. The majority of systematic reviews conducted on the management of poisoning that have been published or are in preparation have involved ANU/TCH.
Randomised Clinical Trials in poisoning

The use of randomised clinical trials to assess the effect of treatment in poisoning had also largely bypassed poisoning. The majority of recent RCTs in clinical toxicology have involved ANU/TCH, and these have lead (for example) to marked reductions in the unnecessary use of gastrointestinal decontamination.

Adverse drug reactions and prescribing

More information on the adverse outcomes of drug treatment and the potential role of decision support and electronic prescribing at TCH are essential to reduce the epidemic rates of preventable adverse drug reactions.

FUNDING


PUBLICATIONS

Books/Book Chapters


**Refereed Journals**


PRESENTATIONS/AWARDS


Roberts DM, Buckley NA, Eddleston M, Dawson AH. Toxicokinetics of 4-chloro-2-methylphenoxyacetic acid (MCPA) in animals and humans. Asia Pacific Association of Medical Toxicology (APAMT). Manila, November 2004

Roberts DM, Dawson AH, Buckley NA. Mechanism of action of sodium bicarbonate in the treatment of organophosphorus (OP) insecticide poisoning. Asia Pacific Association of Medical Toxicology (APAMT). Manila, November 2004


Wong LS, Kuhl MA, Buckley NA. Increased Susceptibility to Hyponatremia Adverse Drug Reactions In Older Adults using Combination Antihypertensive Therapy. Australian Society for Geriatric Medicine Annual Scientific Meeting, Christchurch September 2006. Internal Medicine Journal 2006;36(Suppl 5): A176

Rajapakse BN, Eddleston M, Dawson AH, Eyer P, Worek F, Mohamed F, Buckley NA. RBC acetylcholinesterase as a predictor of intubation in organophosphate poisoned patients. Asia Pacific Association of Medical Toxicology (APAMT) meeting, Colombo, August 2006

Jayawardane P, Dawson AH, Buckley NA, Senanayake N. Neurophysiological Monitoring of the Effects of Pralidoxime in Acute Organophosphate Poisoning. Asia Pacific Association of Medical Toxicology (APAMT) meeting, Colombo, August 2006
Hittarage A, Dissanayake W, Azher S, Juszczak E, Buckley NA, Sheriff MHR, Warrell D, Eddleston M. Randomised Controlled trial of routine single or multiple dose superactivated charcoal for self-poisoning in a region with high mortality. Asia Pacific Association of Medical Toxicology (APAMT) meeting. Colombo, August 2006

Azher S, Dawson AH, Buckley NA, Eddleston M. Human Toxicity of pesticides in self-poisoning. Asia Pacific Association of Medical Toxicology (APAMT) meeting. Colombo, August 2006


Gunawardena G, Roberts MS, Buckley NA. Isoprostanes: potential markers and mediators of paraquat poisoning. Asia Pacific Association of Medical Toxicology (APAMT) meeting. Colombo, August 2006


EMERGENCY DEPARTMENT

STAFF
Associate Professor Drew Richardson MB BS (Hons), FACEM, Grad. Cert. H.E, NRMA-ACT Road Safety Trust Chair of Road Trauma and Emergency Medicine, Australian National University Medical School
Caroline Paini RN, Research assistant

STUDENTS
Matthew Lin Advanced Medical Science, University of Melbourne 2004
Jen Moran ANU Medical School
Devini Ameratunga ANU Medical School 2004
Abigail Atwell-Heap ANU Medical School 2004
Julian Cochrane ANU Medical School 2004
Barry Coulson ANU Medical School 2004
Kellie Bird ANU Medical School 2005
Chad Collins ANU Medical School 2005
Ryan Grant ANU Medical School 2005
Dayna Griffin ANU Medical School 2005
Vanessa Hughes ANU Medical School 2005
Sean Robison ANU Medical School 2005
TiTi Chen ANU Medical School 2005
Tom O’Connor ANU Medical School 2005

Vacation Scholars
2004: Richard Bradbury (Medicine, University of Sydney)
2005: Jen Moran (Medicine, ANU)

RESEARCH PROJECTS
Amalgamation of Police and Hospital Road Trauma Data in the ACT.
Short and Long term follow up of patients presenting to an Emergency Department.
In-hospital outcomes of Emergency Department Patients. This includes the definition of and effects of overcrowding, ED performance, process and flow, triage and access block.
Mortality associated with ED overcrowding

FUNDING
NRMA-ACT Road Safety Trust
Australasian College for Emergency Medicine

PUBLICATIONS
Richardson DB, Bryant M. *Confirmation of Association between Overcrowding and Adverse Events in Patients who Do Not Wait to be Seen.* Society for Academic Emergency Medicine Annual Meeting, Orlando, May 2004. Acad Emerg Med 2004 May; 11(5); 462

Richardson DB. *A New Definition of Emergency Department Overcrowding Using Point Occupancy.* Society for Academic Emergency Medicine Annual Meeting, Orlando, May 2004. Acad Emerg Med 2004 May; 11(5);461

Richardson DB. *Prospective Validation of Point Occupancy Definition of Overcrowding.* Society for Academic Emergency Medicine Annual Meeting, Orlando, May 2004. Acad Emerg Med 2004 May; 11(5);461


Richardson DB, Chan M. *Matching police and hospital data sources to describe the health burden of road trauma.* International Conference on Emergency Medicine, Cairns, June 2004. Emerg Med Aust 2004 Jun; 16 (S1): A116


Galloway H, Gray T, Lambeth P, Richardson DB. *Prospective Pre-implementation analysis of the Canadian Head CT Rule (CCHTR).* 54th Annual Scientific Meeting of the Royal Australian and New Zealand College of Radiologists. Australasian Radiology. 2004 Jun; 48: 2: A22


Cooper GM, Le Couteur DG, Richardson D, Buckley NA. *A randomized clinical trial of activated charcoal for the routine management of oral drug overdose.* QJM. 2005 Sep;98(9):655–60.


AWARDS

Prize for Best Research Paper, Australasian College for Emergency Medicine Meeting, Melbourne 2005
STAFF
Associate Professor J. D. Wilson – Clinical Director, Department of Endocrinology
Associate Professor Chris Nolan – Senior Endocrinologist
Ms Juliet Langridge – Endocrinology Nurse
Ms Elaine Slater – Endocrinology Nurse

COLLABORATIVE ASSOCIATES
Associate Professor Peter Hickman – Director Clinical Chemistry Department, The Canberra Hospital
Dr Charmaine Simeonovic – Transplantation Biologist, John Curtin School of Medical Research, Australian National University
Ms Faith Margrie and Ms Marilyn Hines – Central Clinical Trials Department, The Canberra Hospital

RESEARCH PROJECTS
The FIELD study – the randomised trial of the effects on coronary mortality and the morbidity of comirconised fenofibrate in patients with diabetes at risk of coronary heart disease.

A Phase 3, Randomised, double-blind, placebo controlled multicentre trial to evaluate the safety and efficacy of BMS-298585 in combination with glyburide therapy in subjects with type 2 diabetes mellitus who have inadequate glycaemic control on sulfonylurea therapy alone.

A phase 3, randomised, double-blind, placebo controlled multicentre trial to evaluate the safety and efficacy of BMS-298686 in combination with Metformin therapy in subjects with type 2 diabetes mellitus who have inadequate glycaemic control on Metformin therapy alone.

A 12 month multicentre, open label, randomised, parallel group, efficacy and safety trial comparing intensive treatment on pulmonary inhaled human insulin with Insulin Aspart administered subcutaneously both in combination with NPH in subjects with type 1 diabetes.

A factorial randomised trial of blood pressure lowering with a fixed low-dose Perindopril-Indapamide combination and intensive glucose control with a modified-release gliclazide-based regimen for the prevention of vascular disease among high risk individuals with type 2 diabetes.

The DREAM Study – Diabetes reduction assessment with Ramipril and Rosiglitazone medical trial.

The DIRECT Study – Diabetic Retinopathy Candesartan Trial

A multinational, randomised, double-blind, placebo-controlled, forced-titration, 2 x 2 factorial design study of the efficacy and safety of long term administration of Nateglinide and Valsartan in the prevention of diabetes and cardiovascular outcomes in subjects with impaired glucose tolerance (IGT).
A phase 2B, randomised, double-blind, placebo-controlled study to assess the efficacy, safety and tolerability of 24 weeks treatment with different doses of AOD9604 tablets on weight loss in obese adults.

A multicentre, randomised, double-blind factorial study of the co-administration of MK-0431 and Metformin in patients with type 2 diabetes mellitus who have inadequate glycaemic control.

Cushing’s Syndrome in a Diabetic Clinic Population – this survey investigated 171 consecutive overweight attendees at the Diabetes Clinic for occult Cushing’s Syndrome and unlike the studies published overseas none were identified.

FUNDING

2004 Diabetes Australia $40,000. **Dendritic cell-based immunotherapy for the re-establishment of self-tolerance to islet beta cells in NOD mice.**

Dr C Simeonovic, Professor I Ramshaw, Dr G Hoyne and Associate Professor J D Wilson.

2004 Diabetes Australia $40 000. **Development of vaccines for type 1 diabetes.**

Professor I Ramshaw, Dr B Charlton, Dr W Cowden, Dr C Simeonovic, Dr R Slattery, Dr S Thomson, Associate Professor J D Wilson, Dr R Schmidli.

2004/2005 National Health and Medical Research Council Project Grant $160,000 for each year. **Major xenoantigens for neovascularised porcine xenografts: the role of PERV and MHC in rejection and tolerance.**

Dr C Simeonovic, Professor A Gibbs, Dr P Milburn, Dr P McCullagh, Dr S Bain, Dr B Charlton, Dr H Warren, Associate Professor J D Wilson.

Diabetes Australia $45 000. **The role of matrix metalloproteinases in the development of destructive autoimmunity and clinical diabetes in NOD mice.** Dr C Simeonovic, Professor C Parish, Dr P Milburn, Dr B Cowden, Associate Professor J D Wilson, Dr R Rodgers.

PUBLICATIONS


PRESENTATIONS/ABSTRACTS


GASTROENTEROLOGY AND HEPATOLOGY UNIT

STAFF

Professor Geoff Farrell Director, Professor of Hepatic Medicine, Australian National University Medical School (ANUMS)
Dr Shiv Chitturi, Staff Specialist Gastroenterologist
Associate Professor Paul Pavli, Senior Staff Specialist
Dr Doug Taupin - Senior Staff Specialist
Dr Narci Teoh - Senior Lecturer in Medicine, ANUMS, Honorary Gastroenterologist
Associate Professor Lybus Hillman – Visiting Medical Officer Gastroenterologist
Dr Andrew Thomson - Visiting Medical Officer
Dr Mhairi Baird
Dr Kathy Francki
Dr Claire Larter
Dr Pawan Pyakurel
Dr Peter Tyrer – BSc (Hons) (Liverpool), PhD (Canberra)
Ms Elaine Bean
Mr Matthew Clyne
Ms Anna Powell
Ms Jacqueline Williams

RESEARCH PROJECTS

Nonalcoholic fatty liver disease (NAFLD) in patients with type 2 diabetes (Dr Shiv Chitturi)
The aim of this study is to examine determinants of NAFLD among persons with type 2 diabetes presenting to a community diabetes centre. Key factors that we will be looking at are differences in anthropometry, physical activity, dietary patterns and hormonal profiles between patients with and without NAFLD (as defined by abdominal ultrasound). The comparison cohort will be drawn from NAFLD patients referred to the Liver clinic at the Canberra hospital. A follow up assessment of both the community and hospital based cohorts will be carried out after 6 months.

Pathogenesis of steatohepatitis in the methionine and choline deficiency (MCD) murine model (Professor Geoff Farrell)
The aim of these studies is to clarify mechanisms of inflammatory recruitment and cell death in the progressive form of fatty liver disease, non-alcoholic steatohepatitis. The results of dietary studies show that impairment of hepatic lipid turnover occurs in the MCD model, with impairment of VLDL formation and secretion being particularly prominent. In collaborative work with colleagues in Seattle, we have started to characterise the lipid species that accumulate in steatohepatitis, and genes involved with hepatic lipid partitioning. In other work, the
mechanisms of cell death have been partially clarified, with intrinsic pathways (via p53 induction, mitochondrial toxicity and to a lesser extent endoplasmic reticulum stress) being most important.

Pathogenesis of fatty liver disease in obese mice with metabolic syndrome (Professor Geoff Farrell)
Work conducted within the ANUMS Gastroenterology, Hepatology and Endocrine-Metabolic (GhEM) laboratory on Level 5, Building 10 of TCH is directed towards understanding why fatty liver occurs in a novel model of steatohepatitis, the Alms-1 mutant obese mouse with metabolic syndrome. To date, studies have addressed the pathogenesis of obesity in this model, the time course of lesion development (we find significant fibrosis at 6 months), the effects of dietary lipid composition, and the importance of genetic background.

NHMRC Centre for Clinical Research Excellence (CCRE) – Improving outcomes for chronic liver disease (Professor Geoff Farrell)
GF is lead investigator (CIA) of the University of Sydney CCRE consortium that has been conducting this program since 2003. In 2006, a new aspect, the role of type 2 diabetes, dietary and life-style factors in the pathogenesis of non-alcoholic fatty liver disease, was commenced at TCH (see report of Dr Shiv Chitturi).

Barrett’s oesophagus (Lybus Hillman)
Prospective clinical data base analysis of factors predisposing to dysplasia and adenocarcinoma in patients with Barrett’s oesophagus. Multidisciplinary studies involving ACT Pathology looking at dysplasia outcomes and surveillance guidelines.

Reflux and Obstructive Sleep Apnoea (Lybus Hillman)
Collaborative study with Prof Geoff Hebbard (Melbourne) and Dr Stuart Miller (Sleep Laboratory) investigating the association of reflux and sleep apnoea using simultaneous monitoring of apnoea episodes and reflux events. Year 2 ANUMS student research project.

Colonic Polyp Surveillance Guidelines
Developing computer protocol for polyp surveillance using clinical data base in collaboration with Dr Bruce Shadbolt

The overall research program is directed at clinical and basic scientific aspects of inflammatory bowel diseases (IBD)

Genetic studies of the inheritance of IBD (Associate Professor Paul Pavli)
The Australian Familial IBD Register, established in 1991 by Associate Professor Paul Pavli with assistance of the Australian Crohn’s and Colitis Association and colleague gastroenterologists, now includes details of over 350 multiplex IBD families. There are >700 affected individuals. Studies are being performed on extracted DNA to find susceptibility genes for IBD.

Clinical trials in IBD (Associate Professor Paul Pavli)
The GEHU has participated in international multicentre drug trials of the following agents: interleukin 11, CDP571 (anti-TNF agent), onercept (anti-TNF agent), natalizumab (anti-integrin agent), infliximab (for ulcerative colitis), CDP870 (anti-TNF agent), OPC6535, abatacept and anti-mycobacterial agents (rifabutin, clarithromycin and clofazamine).

Intestinal macrophages (Associate Professor Paul Pavli)
The demonstration that the first genetic abnormality described in Crohn’s disease affects a monocyte lineage-specific gene has given considerable impetus to the further development of techniques to study intestinal macrophage and blood monocyte function. We are currently isolating highly enriched populations of blood monocytes to study the function of NOD2/CARD15 in peripheral blood. These studies will be complemented with studies on affected bowel tissue.

Interaction between intestinal epithelial cells and peripheral blood monocytes (Associate Professor Paul Pavli)
Intestinal macrophages exist in a state of relative “unresponsiveness” to activating stimuli when compared to peripheral blood monocytes. Studies of isolated blood monocytes and human intestinal epithelial cell lines in vitro will be used to study IBD and oral tolerance.
Prospective, longitudinal cohort study of inflammatory sarcopenia (Dr Doug Taupin with Dr Matthew Cook, Associate Professor Paul Pavli, Kieran Fallon, Dr Bruce Shadbolt, Tom Ruut)

Anti-TNF therapies could reverse the muscle wasting seen in Crohn’s disease (CD). This prospective, cohort study with 40 subjects aged 18-70 commenced February 2007. At baseline, and four weeks after each infusion of anti-TNF, subjects have MRI volume measurements of the thigh muscle compartment. CD Activity Index is assessed regularly during follow-up, and subject’s food intake, physical activity, and muscle strength are assessed by dynamometer at The Australian Institute of Sport.

Randomised, controlled trial of serum lipase versus clinical assessment in the establishment of oral refeeding in acute pancreatitis. (Dr Doug Taupin with Jonathon Bromley, Dr Bruce Shadbolt, Ms Marilyn Hines)

Acute pancreatitis is a severe acute gastrointestinal disease, with overall mortality of ~7%. Length of stay is governed by severity and relapse rate. Most patients with acute pancreatitis are fit for re-feeding and discharge by day 3. However, evidence-based criteria for re-feeding have not been determined. This is a randomized study of acute pancreatitis, lipase > 5 times the upper limit of normal, with the control group being re-fed according to clinical judgement, and the investigational group being re-fed upon the lipase level below 2.5 times the upper limit of normal. In both arms, the clinician is blinded to the lipase measurement and treatment arm.

Randomised, controlled trial of intravenous saline pre-hydration in patients undergoing outpatient colonoscopy (Dr Doug Taupin with Judith Dodd)

Outpatient colonoscopy and sedation are frequently accompanied by hypotension (systolic blood pressure < 95 mm Hg), which reduces the amount of sedation that can be used. Prophylactic infusion of normal saline may enhance colonoscopy completion rate, as well as patient comfort during and recovery from colonoscopy. Adult patients attending outpatient colonoscopy are randomised into one of two treatment arms: (i) a control arm, with standard sedation and monitoring during colonoscopy, and infusion of normal saline if systolic BP ≤ 95 mmHg for more than 3 minutes (two observation periods) until completion of the procedure; and (ii) a treatment arm, with an infusion of 1.0 litres IM saline immediately prior to colonoscopy.

Attitudes and knowledge of colorectal cancer as a predictor of screening behaviour (Dr Doug Taupin, Keith Dear, Dr Bruce Shadbolt, Leitha Scott)

One in 20 persons will develop colon cancer. While screening for colon cancer is cost-effective and saves more years of life more cheaply than current screening programs from breast and cervical cancer, no population-based program has been established in Australia or overseas. We have completed a population-based screening pilot using colonoscopy. In this study, respondents and non-respondents (n = 881) results of a survey of colon cancer knowledge and attitudes toward screening was correlated with past medical and screening history, family history, demographics and physical findings.

Candidate tumour-suppressor genes in gastric cancer (Dr Doug Taupin, Dr Mhairi Baird)

The Tumour Biology Laboratory is investigating candidate tumour-suppressor genes in gastric cancer using standard biochemical techniques and in situ hybridisation to tumour arrays. We are focussing on signal transduction mediated by the adapter protein Grb7.

A novel population-based approach to detection of hereditary nonpolyposis colorectal cancer in the ACT (Dr James Riddell, Ian Clark, Sanjiv Jain)

Nearly all colorectal cancers arise from adenomatous polyps. These typically grow slowly, allowing simple surveillance procedures such as colonoscopy to detect and remove polyps and reduce cancer incidence. Up to 5% of CRC patients however have Hereditary Nonpolyposis Colorectal Cancer (HNPPC), a dominant genetic disorder arising from mutations in the DNA repair machinery. Conventionally, these patients are identified through clinical suspicion based on family history. We have initiated a population-based strategies, and from April 2003, ALL CRC
cases diagnosed in the ACT have been tested for DNA repair deficiency, and all adenomatous polyps upon referral from the participating colonoscopist.

*Hepatic ischaemia-reperfusion injury (IRI)*
(Prof Narci Teoh)
The aims of this project are to establish novel strategies to protect the liver against hepatic IRI using an established murine model. A newer direction is to study the mechanisms of the exaggerated IRI that occurs in livers that contain fat (steatosis). In collaboration with Prof Tony Allison (Alavita Inc, California, USA), we recently characterized the role of a novel therapeutic protein, Diannexin, as a protective agent against hepatic ischemia-reperfusion injury. In 2006, we also published work concerning the hepatoprotective role of IL-6 against hepatic IRI, and characterized this cytokine as pivotal to the mechanism of ischaemic preconditioning.

*What causes liver cancer to develop (hepatocarcinogenesis)?* (Prof Narci Teoh)
The aim of this project is to investigate the role of DNA repair mechanisms in the pathogenesis of hepatocellular carcinoma (HCC). Using murine models, such as the Ku70 gene-deleted mouse (deficient in the non-homologous DNA end-joining pathway) and ATM-/- mouse (deficient in recognition steps for DNA breaks) we are testing the hypothesis that HCC development involves dysregulated hepatocyte apoptosis and cell proliferation (regeneration) coupled with defective repair of DNA strand breaks. In turn, these cause chromosomal breaks and recombinations, with loss of key regulatory elements of the genome.

*Effects of anaesthesia on safety of ERCP*  
(Prof Andrew Thomson)  
We are conducting an on-going investigation of anaesthetic issues in the context of ERCP, including haemodynamic and respiratory compromise that occurs as a result of ERCP. We are particularly interested in the relationship between patient demographics, anaesthetic risk status and outcome.

*Clinical outcomes of autoimmune hepatitis*  
(Prof Andrew Thomson)  
The aim is to create a database of patients with autoimmune hepatitis with a particular emphasis on clinical course and therapeutic strategies employed.

*Factors predisposing to gallstone pancreatitis and choledocholithiasis* (Prof Andrew Thomson)  
The factors predisposing to develop gallstone pancreatitis and choledocholithiasis. Gallstone pancreatitis is a disabling and life-threatening condition, the pathogenesis of which is still unclear. We are looking at a range of biochemical and clinical parameters which may be important in determining which patients with gallstones develop gallstone pancreatitis.

**FUNDING**

2003–2007 NHMRC Centre for Clinical Research Excellence #219282 $2,000,000.  
*Improving Outcomes in Chronic Liver Disease*  
Professor Geoff Farrell, Professor Geoff McCaughan, Dr Simone Strasser, Dr Tony Donaghy (University of Sydney)  
2004–2005 The Canberra Hospital Private Practice Trust Fund $160,000  
*Macrophage-lineage-specific candidate gene analysis in Crohn’s disease*  
Associate Professor Paul Pavli  
2006–2007 The Canberra Hospital Private Practice Trust Fund $99,000  
*Identification of signal transduction abnormalities of monocytes in Crohn’s disease*  
Associate Professor Paul Pavli  
ACRF Large Grant 2004: Prof Christopher Parish, Dr M Frances Shannon, Prof Philip Board, Prof Chris Goodnow, Dr David Tremethick, Dr Douglas Taupin, Dr Hilary Warren, Dr Ian Ramshaw, Prof Robert Saint, Dr Anneke Blackburn. The Australian Cancer Research Foundation Biomolecular Resource Facility $1,344,200  
2005–2009 NHMRC Program Grant #358398 $4,700,000  
*The molecular and cellular basis of human liver disease*  
Professor Geoff Farrell, Professor Geoff McCaughan (University of Sydney), Prof Narci Teoh  
2006–2007 Australian National University Medical School Establishment Grant, Pro-Vice-Chancellor (Research) $150,000  
Professor Geoff Farrell, Dr Narci Teoh  
2003–2007 L Hillman Mugga Wara and Brindabella Endoscopy Centres research allocation
PUBLICATIONS


Chitturi S, George J. NAFLD/NASH is not just a ‘Western Problem: some perspectives from the east. Fatty Liver Disease, NASH and related Disorders.. Edited by Farrell GC, McCullough AJ, Hall P and George J. Blackwell Scientific 2005:218–228


PRESENTATIONS/ABSTRACTS


Townsville Gut Club, 2004


Biologics in IBD – As good as claimed? Pavli P. Gastroenterological Society of Australia Australian Gastroenterology Week, Brisbane, October 2005.


Controversies in enteral and parenteral nutrition. Thomson A. The Asia Pacific Frank Symposium in Sydney 2005


Managing Hepatitis C - What the Liver Clinic is Doing. Farrell G. ACT Hepatitis C Council.


Obesity-related Fatty Liver Disease — Where are we now and What are the implications for the Future? Farrell G. International Congress on Obesity (ICO). 10th Annual Congress on Obesity, Sydney, Australia, September 4–8 2006. Invited State of the Art Lecture


Poster presentation


AWARDS


GERIATRIC MEDICINE RESEARCH

STAFF
Associate Professor Marc Budge – Director, Geriatric Medicine Unit The Canberra Hospital
Dr Wichat Srikusalanukul – Research Manager
Clinical Associate Professor Michael Davies
Associate Professor Alex Fisher
Karen Gravenmaker – Registered Nurse/Research Assistant
Dr Mary-Ann Kulh
Dr Eddie O’Brien
Dr Anil Paramadhathil
Dr Mary-Ann Ryall
Dr Seeva Sivakumaran
Wendy Venn - Nurse Practitioner
Jennie Yaxley - Physiotherapist

COLLABORATIVE ASSOCIATES
Professor Jenny Abbey – Queensland University of Technology
Dr Walter Abhayaratna - The Canberra Hospital
Professor David Ames - University of Melbourne & St. Vincent’s Health
Associate Professor Kaarin Anstey - Australian National University
Professor Henry Brodaty - University of New South Wales.
Associate Professor Laurie Brown - University of Canberra
Professor Branko Celler - University of New South Wales
Professor Merril Elias - Boston University, USA
Dr Shyan Goh - The Canberra Hospital
Dr Andrew Janke - Brain Research Fellow, ANU Medical School
Dr Ahmad Javaid -The Canberra Hospital
Dr David Lie - University of Queensland
Professor Ralph Martins - Edith Cowan University
Professor Colin Masters - University Of Melbourne
Ms Lynette Moore - Executive Director, Alzheimer’s Australia Victoria
Associate Professor Christopher Reid - Monash University, Melbourne
Professor Elsdon Storey - Monash University, Melbourne
Professor Richard Telford - Commonwealth Institute
Associate Professor Andrew Tonkin - Monash University
Professor Tien Wong - University of Melbourne

RESEARCH PROJECTS
Lifestyle Of Our Kids (LOOK) project ($4.1M)
(Richard Telford, Commonwealth Institute, Budge MM and Javaid A).
Commonwealth Institute 2005-9: A longitudinal project with primary school children to study physical and psychological health over a four-year period from Grade 2 to Grade 6.


Catching Falls – Community Outreach Program ($750K) 2003-6 (Budge MM, Booth D, Yaxley J). Department of Health and Ageing, Injury/ Falls Prevention Unit and ACT Health, including the investigation of self-report of falls versus monitoring with the triaxial accelerometer and the impact of cognitive impairment.

Characterising the relationship between early left ventricular dysfunction and aortic pulse wave-derived parameters in older adults: a case-control study. (Abhayaratna W, Jeffery I, Budge M)

Thiamine sufficiency in heart failure in older adults. (Kuhl M, Abhayaratna W, Budge M). A cross-sectional study looking at thiamine levels in older adults with and without heart failure and the correlation with left ventricular functions.

Cardiovascular regulation in older adults: post-prandial and orthostatic hemodynamics. A prospective study to evaluate blood pressure indices on mortality in older low level care residents.

Dementia Studies Collaboration (UK) Meta-analysis of longitudinal data from 12 UK research centres/ memory clinics

Brain Changes with Ageing and Dementia: A Brain Imaging Collaboration between Canberra, Brisbane, Oxford and Montreal (30K) 2004-6 (Budge MM, Janke A, Collins L, Pruessner J). Canberra Medical Research Foundation.

Maine –Syracuse (Boston) Study: Arterial Stiffness, blood pressure and cognitive performance. ($2.9M) 2005-9 (Elias M, Boston University, Budge M) National Heart, Lung, and Blood Institute (NHLBI).


Wobble board training as an early intervention for falls prevention. ($40K) 2004-6 (Waddington G, Budge M). ACT Department of Health. Collaborative project with the University of Canberra and Sydney University.

Home Telecare for Managing Congestive Heart Failure (Budge M, Celler et al) Deployment trial of a home-telecare system in heart failure patients; current DVA funding application.

Guardian Angel: design of a geographic-tracking and communication system for cognitively impaired older individuals or those at risk of falls. ($47K) 2004–5 (Nicholls I, Budge MM), Business ACT Knowledge Fund Grant, Proof of Concept.

ARC Ageing Well Research Network ($2.5M). (Kendig H (Sydney University), Budge M and ANU core participants)

Calcium-vitamin D-parathyroid hormone axis in older patients with hip fractures 1999–2008 (Fisher A et al). A prospective study of parathyroid hormone and vitamin D status, and the relationship between these parameters with clinical signs and outcomes of hip fractures.


For the investigation of the use and effectiveness of walking frames in preventing falls & falls injury in high-risk fallers 2005 ($8,000) (Yaxley J). Primary Health Care Research Education & Development Scholarship.

Clinical Governance/Delirium Pathway. (Kulh M). A review of the management of delirium in the Acute Care of the Elderly ward at a tertiary referral hospital using a clinical governance approach. Patient involvement, dissemination and use of clinical pathways, performance measurement and feedback, and maintaining stability of care are key areas requiring further development.

Aged Care Nurse Practitioner Pilot Project (DoHA) ($600 K) 2004–05 (Budge MM – Chair of central clinical co-ordinating team). To train and deploy 3 nurse practitioners across different aged care sectors in the ACT.

UK Prospective Diabetes Study (UKPDS) ($140K) 2002–6 (Smith D, Budge MM) Medical Research Council UK.


45 AND UP Study (Budge M). Institute of Health Research, NSW: longitudinal study of 250,000 adults; older persons thematic committee.

Myocardial injury (cardiac troponin I elevation) in hip fracture patients 2004–8: (Fisher A, et al)

Pathway through Life Study. Centre for Mental Health Research, ANU


FUNDING

Lifestyle Of Our Kids (LOOK) project ($4.1M): A longitudinal project with primary school children to study physical and psychological health over a four-year period from Grade 2 to Grade 6. Richard Telford (AIS); M Budge Cardiovascular and Bone Health Research Team.


Thiamine sufficiency in heart failure in older adults ($26K PPT fund) A cross-sectional study looking at thiamine levels in older adults with and without heart failure and the correlation with left ventricular functions. Kulh, Abhayaratna, Budge.


Dementia Studies Collaboration (UK), ($125K): meta-analysis of longitudinal data from 12 UK research centres/ memory clinics


NIH (NHLBI, 2001–2006) Grant, $3.5M: Professor M Elias (Boston Uni, USA); Associate Professor M Budge - Consultant and Steering Committee member- Maine –Syracuse (Boston) Study: Longitudinal study of blood pressure and cognitive function; New Grant application: New cardiovascular risk factors for lowered cognitive functioning
NIH (NHLBI, 2001–2006) Grant, $3.5M: Professor M Elias (Boston Uni, USA); Associate Professor M Budge- Consultant and Steering Committee member- Maine–Syracuse (Boston) Study: Longitudinal study of blood pressure and cognitive function; New Grant application: New cardiovascular risk factors for lowered cognitive functioning.


PUBLICATIONS


Chapter Book

PRESENTATIONS/ABSTRACTS


The Effectiveness Of Early Intensive Geriatric Involvement In Management Of Older Patient With Hip Fractures: Our Experience And Literature Review. A Fisher. 11th European Forum on Quality Improvement in Health Care, 26–28 April, 2006 Prague, Czech Republic.

**A Geriatrician In An Orthopaedic Ward: To Be Or Not To Be.** AA Fisher, MW Davis, MM Budge. RACP Annual Congress, 7–11 May 2006, Cairns (platform presentation).


**Commonwealth Institute LOOK (Lifestyle of our Kids) Study.** Srikusalanukul W, Gravenmaker K. Australian Physiotherapy Association Research Symposium. 27th August 2006, Canberra (platform presentation).


**Under-utilisation of lateral chest x-rays in provision of appropriate osteoporosis treatment.** Paramadhathil A, Australian Society for Geriatric Medicine. 2006 ASM. 4–6 September 2006 Christchurch Convention Centre, NZ.

**Evolving strategies to reduce hospitalisation of people living in residential aged care facilities.** Paramadhathil A, Baynes A, Sivakumaran S, Davis MW, Budge MM. Australian Society for Geriatric Medicine. 2006 ASM. 4–6 September 2006 Christchurch Convention Centre, NZ.


**Increased susceptibility of hyponatremia as an adverse drug reaction (ADR) with combination antihypertensive therapy in older adults.** LS Wong, MA Kulh, N Buckley. Annual Scientific Meeting of the Australian Society of Geriatric Medicine, 4–6 September 2006, Christchurch, New Zealand.

**Venous Thromboembolism (VTE) Despite Thromboprophylaxis In Older Hip Fracture (HF) Patient.** LS Wong, A Fisher and M Davis. Annual Scientific Meeting of the Australian Society of Geriatric Medicine, 4–6 September 2006, Christchurch, New Zealand (platform presentation).

**Nutritional Status In Older People With Hip Fracture In Relation To Type Of Residence.** SL Goh, AA Fisher, SE Rubenach, MW Davis, PN Smith. Combined Scientific Meeting of Australian and New Zealand Orthopaedic Associations, 8–13 October, 2006, Canberra.


**Setting the healthcare agenda — The need for change.** Ageing and Tech Seminar- Alzheimer’s Aust, Canberra. 26 October 2006


**Aged Care Nurse Practitioner - developments in the ACT.** Australian General Practice Network Forum. Gold Coast. 24th November 2006.
HEALTH PROTECTION SERVICE

(ACT Government Analytical Laboratory Toxicology and Forensic Chemistry Unit)

STAFF
Mr Dennis Pianca, BSc (Chemistry)
Dr Ian Whittall, PhD, BSc Hons (Chemistry)
Dr Julieanne Dougherty, PhD, BSc Hons (Chemistry)

STUDENTS
The ACT Government Analytical Laboratory (ACTGAL) is an industry partner to the University of Canberra (UC). As part of this relationship ACTGAL provides supervisors for post-graduate students.

Co-Supervised by Prof Jennelle Kyd (UC), Dr Julieanne Dougherty (ACTGAL),


The Incidence and Involvement of Psychoactive Drug use Amongst Drivers Involved in Motor Vehicle Accidents in the Australian Capital Territory.

COLLABORATIVE ASSOCIATES
National Centre for Forensic Studies, University of Canberra

RESEARCH PROJECTS

The Incidence and Involvement of Psychoactive Drug use Amongst Drivers Involved in Motor Vehicle Accidents in the Australian Capital Territory

PUBLICATIONS


Apollonio LG, Pianca DJ, Whittall IR, Maher WA, Kyd JM. A demonstration of the use of ultra-performance liquid chromatography-mass spectrometry (UPLC/MS) in the...
determination of amphetamine-type substances and ketamine for forensic and toxicological analysis.

PRESENTATIONS/ABSTRACTS
Dennis Pianca, The cook, the crook, his speed and the chemist - a forensic tale. GADI Seminar, University of Canberra, 1 April 2005
Tim Rudd, Drugs in ACT Drivers, Drug Driving Road Safety Workshop, College of Road Safety and NRMA Trust, The National Museum of Australia, 21 October 2004
Tim Rudd, Drugs in Drivers Involved in Accidents in the ACT. DRI Corroboree Talks, University of Canberra, 16 November 2004

AWARDS
INTENSIVE CARE UNIT

STAFF
Dr Anne Leditschke - MBBS FRACP FJFICM MMgt, Director of Research, Intensive Care, Senior Specialist, Intensive Care
Dr Imogen Mitchell - FRCP FRACP FJFICM, Director Intensive Care
Dr George Nikolic - FCCC FRACP FJFICM, Senior Specialist Intensive Care
Ms Jelena Gissane – BA, Research Coordinator, Intensive Care
Dr Mark Oliver - BHB, MBChB, FANZCA, FFICANZCA, FJFICM

STUDENTS
Justin Gundara - MBBS University of Sydney
Paul Knight - MBBS Australian National University
Candida Marane - MBBS Australian National University
Chris Van Leuvan - MBBS Australian National University

RESEARCH PROJECTS
Normoglycaemia Evaluation in Intensive Care (NICE) A multicentre, randomised controlled trial of two glycaemic ranges in critically ill patients
Dori-10. A multicentre, randomised controlled trial of two antibiotics for nosocomial pneumonia
Captivate. A multicentre, randomised controlled trial of a novel agent and placebo in community acquired pneumonia
Cortisol Study (PPF-sponsored). An observational study of free and bound cortisol concentrations in the critically ill

PUBLICATIONS
The Normoglycaemia in Intensive Care Evaluation (NICE) (ISRCTN04968275) and Survival Using Glucose Algorithm Regulation (SUGAR) Study: Development, design and conduct of an international multi-center, open label, randomised controlled trial of two target ranges for glycaemic control in intensive care unit patients. http://ajrccm.atsjournals.org/cgi/content/full/72//358/DC


Strapps K, Giles LR, Nikolic G. *Paced escape-paced capture bigeminy*. Heart & Lung. 2005; 34(3):227–8,


**PRESENTATIONS**

*Tight glycaemic control in sepsis.* Mitchell I. Joint Faculty of Intensive Care Medicine, Annual Meeting, Melbourne, June 2006

*The NICE study update.* Mitchell I. Annual Scientific Meeting of Intensive Care, Hobart, October 2006


*Normoglycaemia in Intensive Care.* Mitchell I. ANZICS Clinical Trials Group 2004

*All things sugar and NICE.* Mitchell I. Australian and New Zealand Intensive Care Society Annual Scientific Meeting 2004

*No patient should die without steroids? Corticosteroid therapy in critical illness.* Leditschke IA. Royal Australasian College of Physicians Annual Scientific Meeting 2004
IMMUNOLOGY

STAFF
Professor Paul Gatenby
Dr Carolyn Hawkins
Dr Matthew Cook – Director

STUDENTS
Rominder Grover - BSc (Med) University of Melbourne
Amanda Omerod - MB BS honours student, University of Sydney
Nicholas Simpson - PhD candidate, ANU
Daniel Sheahan - PhD candidate (supervisory panel)

RESEARCH PROJECTS
B Cell Memory in Patients with Gram Negative Sepsis. Cook MC, Choo S, Leditschke A

Immunological memory following pneumococcal immunisation in patients with invasive pneumococcal disease. Cook MC, Zeigler J, Choo S

Antiphospholipid antibodies and stroke. Gatenby PA

Medical Education. (Gatenby PA)

Translational study of the genetics of systemic autoimmunity based on mouse mutagenesis. Goodnow CC, Vinuesa CG, Huttley GA, Cook MC

Lymphopenia-Bacteraemia Study: A prospective study of the association between bacteraemia and peripheral blood lymphopenia, morbidity and mortality. Kennedy K, Collignon P, D’Rozario J, Brun M, Bowden F, Cook M, Hawkins C

Prevalence of systemic vasculitis in the ACT. Omerod A, Cook MC

FUNDING
NHMRC Project Grant 2005-7. Translational study of the genetics of systemic autoimmunity based on mouse mutagenesis.

Goodnow CC, Vinuesa CG, Huttley GA, Cook MC. Vinuesa CG and Cook MC. NHMRC Equipment grant (Light scanner)


PUBLICATIONS


PRESENTATIONS/ABSTRACTS


From rare alleles to common autoimmune diseases. Mechanisms of self-tolerance and their relevance to clinical autoimmunity. Cook MC, Key note address. Canberra Region Annual Scientific Meeting, August, 2004

B cell biology, apoptosis and autoimmunity to phospholipids. Cook MC. 11th International Congress on Phospholipid Antibodies, Sydney, 2004

Autoantibodies and disease: Questions from clinical autoimmunity. Cook MC. Australasian Society of Immunology. 34th Annual Scientific Meeting/ HLDA8. Adelaide. 2004


Gatenby PA, Planning Committee member, 11th International Congress on Antiphospholipid Antibodies, Sydney, November 2004

CNS and Cardiovascular manifestations of APS. Gatenby PA. 11th International Congress on Antiphospholipid Antibodies, Sydney, November, 2004

Controversies in the antiphospholipid syndrome and stroke. Gatenby PA. 11th International Congress on Antiphospholipid Antibodies, Sydney, Australia, November 2004


Using forward genetics to identify novel lupus alleles. Vinuesa CG, Cook MC, MacLennan ICM, Goodnow CC. 7th International Congress on SLE. New York. May, 2004

Lupus pathogenesis: Mouse models and human disease. Cook MC. 11th Annual ICPMR Immunology Workshop, RCPA, Westmead Hospital, Australia 2005

Pathogenesis of lupus. Cook MC. Australasian Society for Clinical Immunology and Allergy Annual Scientific Meeting, Queenstown, New Zealand, 2005.


INFECTION CONTROL/MICROBIOLOGY

STAFF

Professor Peter Collignon - MBBS BSc(Med) FRACP FRCPA FASM, Director Infectious Diseases and Microbiology, Professor, Canberra Clinical School University of Sydney

Dr Ashley Watson - MBBS, Grad Cert Ed, MPH, FRACP, Senior Specialist in Infectious Diseases, Associate Professor, ANU Medical School

Professor Francis Bowden - MBBS Grad Dip Epi & Biostats, FACSHP FRACP MD, Director Canberra Sexual Health Centre, Staff Specialist in Infectious Diseases, Professor of Medicine Australian National University

Dr Sanjaya Senanayake - MBBS, M Pub Health, FRACP, Specialist in Infectious Diseases, Senior Lecturer, ANU Medical School

Dr Jhumur Roy - MBBS, MD, FACTM, FRCPA, Staff Specialist in Microbiology

Dr Thomas Martin - MBBS, Microbiology Registrar

Dr Karina Kennedy - MBBS, Dip Trop Med & Hygiene, Infectious Diseases Fellow and Microbiology Registrar

Ms Dianne Dreimanis - RN RM BHSc Nursing MN, CNC Infection Control

Ms Wendy Beckingham - RN RM BHSc Nursing, CNC Infection Control

Ms Jan Roberts - RN RM BHSc Nursing, Bacteraemia Surveillance Project Officer

Ms Jillian Davis - RN BHSc Nursing, Surgical Site Surveillance Project Officer

Ms Sonja Eldridge - RN BAppSc, Surgical Site Surveillance Project Officer

Ms Susan Bradbury - BSc

COLLABORATIVE ASSOCIATES

Professor John Turnidge and Jan Bell - Microbiology/Infectious Diseases, Women’s and Children’s Hospital, Adelaide SA

AGAR - 27 Microbiology Depts around Australia involving their Medical Directors and Chief Scientists

Dr David Gordon - Zoology Department, ANU

Ms Jan Weetra - RN, Infection Control, Calvary Hospital

Ms Philippa Keating - RN Surveillance Project Officer, Calvary Hospital

Ms Carmel Spence – RN Infection Control, Calvry Hospital

Professor John Tapsall - WHO Collaborative Centre for Neisseria, Prince of Wales Hospital, Randwick

Dr Peter Braam and Dr Awa Aidara-Kane - WHO Geneva, Switzerland

Dr John Ferguson - Microbiology John Hunter Hospital Newcastle

Dr Fred Angulo - CDC, Georgia, USA

Professor Henrik Wegener - Danish Institute of Food and Veterinary Research, Copenhagen Denmark
Associate Professor Anne Gardner - RN BA MPH Crit Care Cert, Associate Professor Assistant Director of Nursing, Research Centre of Nursing Practice, Deakin University and Cabrini Hospital, Melbourne.

Dr JR Gowdman - Intensive care unit, The Canberra Hospital

Kelaher C - Medical student, the Canberra Clinical School

Dr Butler CD - NCEPH, ANU.


Dr Carolyn Hawkins - Immunology, The Canberra Hospital

Professor Michael Whitby - Infectious Diseases and Infection Control, Princes Alexandria Hospital, Brisbane

RESEARCH PROJECTS

Research projects have principally involved antibiotic resistance in bacteria and hospital-acquired infections.

**Antibiotic Resistance in Staphylococcus aureus in Australia.** This project is part of a collaborative ongoing project with the AGAR group (Australian Group Antimicrobial Resistance) of which Prof Collignon is the Chair. This involves testing resistance levels to the 16 different antibiotics that are used in the treatment of Staph. aureus infections. It has implications as to what the best appropriate therapy is for treating these infections, not only in the ACT but Australia wide. This project involves more than 25 teaching hospitals and private pathology laboratories from around Australia.

**Antibiotic Resistance in Pneumococcus.** A collaborative study involved collecting isolates of pneumococcus from around Australia, principally from community sites and involved the AGAR group. This study showed a marked rise in resistance to many antibiotics in this bacteria, which is a frequent cause of meningitis and pneumonia. This research has implications in antibiotic therapy Australia wide for this common infection. It also has implications for using other means to control infections such as immunisation not only in the ACT but Australia wide.

**E. Coli/Klebsiella antibiotic resistance in Australia.** These bacteria are common causes of infections both in hospitals and in the community and particularly any involving the abdomen. As part of the AGAR group we are involved at looking at antibiotic resistance including determining the patterns of resistance which will guide the most appropriate antibiotic therapy for these organisms not only in the ACT but Australia wide in an ongoing project.

**Surveillance of Healthcare Associated Infections at The Canberra Hospital and Calvary Hospital.** As a follow on from the blood stream infection project The Canberra Hospital and Calvary Hospital have continued to monitor surgical site and blood stream infections. The aim of the project is to lead to a significant reduction in problems associated with healthcare acquired infections specifically surgical site and blood stream infections through the introduction of clinician driven interventions.

**Blood Stream Infections (BSI).** Many life threatening infections are acquired following health care related procedures (especially intravascular catheters). At the Canberra Hospital and Calvary Hospital we are following all positive blood cultures and measuring the effects of interventions introduced to decrease sepsis rates.

**Air Sampling.** Air sampling undertaken to determine if MRSA is present in aerosol. A clinical research project was undertaken by Wendy Beckingham, Infection Control, for her Masters of Clinical Research. The project was set up using an air sampling machine. This project should be completed in mid 2007.

**Wound Care Study.** Study undertaken to gain a better understanding of nursing practices throughout TCH on wound care. This study and review has been undertaken by Nursing and Midwifery Research departments and supported by Infection Control. A survey was sent to all nursing staff at TCH. The results should be available in early 2007.

**Campylobacter and fluoroquinolone resistance.** Measure the levels of resistance in Campylobacter in Australia and compare this to USA data. Australia does not allow the use of these important antibiotics in poultry in
contrast to the USA where increasing and high levels of resistance are now seen.

*Is splenectomy associated with pulmonary hypertension?* There has been a single published report of a possible association between splenectomy and subsequent development of pulmonary hypertension. In this study, transthoracic echocardiography was performed on 75 patients recruited from the ACT Splenectomy Registry.

*Immuno-suppression induced by severe sepsis and lymphocyte deficiency.* We have noted that many patients with septicaemia have lowered blood lymphocyte counts. This can persist for up to 6 months after an episode of severe infection. People who have severe sepsis have an increased death rate for many months after an episode of septicaemia. We are following patients to see how often severe lymphopaenia occurs after sepsis and how long this abnormality persists. We will also be assessing their clinical outcomes including deaths, and see if poorer outcomes are associated with the degree of lymphopaenia.

**FUNDING**

*Surveillance of nosocomial bacteraemia and surgical site infection at The Canberra Hospital and Calvary Hospital* (Dianne Dreimanis, Wendy Beckingham, Peter Collignon). We received funding of $500,000 in 2002 to expand this project to Calvary as well as TCH so that it also involves Surgical Site Infections and means of preventing these infections. Funding and management by Dianne Dreimanis, Wendy Beckingham, and Peter Collignon. In 2006 funding for this project was incorporated into the Infection Control budget which now means these quality improvement projects can continue over the long-term.

**PUBLICATIONS**


PRESENTATIONS/ABSTRACTS


Di Dreimanis Chaired session ARCHI Conference (August 2005) Brisbane


Peter Collignon and Di Dreimanis – ACT Health delegation to East Timor – Infection Control

Peter Collignon at WHO meeting in Canberra February 2006 on “critical” antibiotic for human health. Invited speaker.

Peter Collignon at Royal Australian College of Pathologist at their annual scientific meeting on “the media”. Invited speaker.

Antibiotic resistant bacteria. Collignon P. Science and Ethics conference at ANU. Invited speaker.


MACROPHAGE BIOLOGY RESEARCH GROUP

STAFF
Dr Paul Pavli MB, BS (Hons), PhD, FRACP – Senior Staff Specialist, The Canberra Hospital, and Associate Professor, ANUMs
Dr Peter C Tyrer – B.Sc. (Hons.), PhD, Post-Doctoral Fellow TCH, Visiting Fellow ANUMS, Adjunct Professional Associate Cell Biology, Immunology & Biochemistry University of Canberra
Dr Kathy Francki – B.Sc. (Hons), PhD, Post-Doctoral Fellow TCH, Visiting Fellow ANUMS (to January 2006)
Ms Elaine Bean – Associate Diploma Med. Lab. Sci., Laboratory Technician (to July 2006)

STUDENTS
Ms Michelle Nelson – University of Canberra, Dr Peter C Tyrer co-supervisor of PhD with Professor Roger T Dean and Associate Professor A Ruth Foxwell
Role of Protein-Bound DOPA in Antioxidant Defences

COLLABORATIVE ASSOCIATES
Dr Gwen Allison, School of Biochemistry & Molecular Biology, ANU
Dr Guy Barry - Institute of Molecular Biosciences, University of Queensland
Professor Jane Dahlstrom, TCH
Professor Roger T Dean – University of Canberra
Associate Professor A. Ruth Foxwell – University of Canberra
Professor David Hume – Institute of Molecular Biosciences, University of Queensland
Dr Ian Ross – Institute of Molecular Biosciences, University of Queensland

RESEARCH PROJECTS
The overall research program is directed at clinical and basic scientific aspects of inflammatory bowel diseases (IBD)
Genetic studies of the inheritance of IBD. Associate Professor Paul Pavli, Dr Kathy Francki, Elaine Bean. The Australian Familial IBD Register, established in 1991 by Associate Professor Paul Pavli with assistance of the Australian Crohn's and Colitis Association and gastroenterologists, now includes details of over 400 multiplex IBD families. There are >700 affected individuals. Studies are being performed on extracted DNA to find susceptibility genes for IBD.
Clinical trials in IBD. Associate Professor Paul Pavli.
The GEHU has participated in international multicentre drug trials of the following agents: interleukin 11, CDP571 (anti-TNF agent), onercept (anti-TNF agent), natalizumab (anti-integrin agent), infliximab (for ulcerative colitis), CDP870 (anti-TNF agent), OPC6535, abatacept and anti-mycobacterial agents (rifabutin, clarithromycin and clofazamine).
**Crohn’s Disease Associated Intracellular Signalling in Monocytes/ Macrophages.**
Dr Peter C Tyrer, Associate Professor Paul Pavli, Associate Professor A Ruth Foxwell, Elaine Bean.
The demonstration that the first genetic abnormality described in Crohn’s disease affects a monocyte lineage-specific gene, NOD2, has given considerable impetus to the further development of techniques to study intestinal macrophage and blood monocyte function. Unfortunately, although much research emphasis has concerned the downstream signalling event after activation of NOD2, nothing is known of the events that lead to NOD2 activation and little about its regulation. We are currently isolating highly enriched populations of blood monocytes and using monocytic cell lines to study the function of NOD2. We have used immunoprecipitation and fluorescence deconvolution microscopy with image analysis to show that NOD2 interacts with a known innate immune system receptor, in a muramyl dipeptide dependant manner, suggesting that the receptor operates upstream of NOD2. We have also examined the effects of the anti-inflammatory cytokine transforming growth factor-β (TGF-β), which is found at elevated levels within the gut, to regulate NOD2. Immunofluorescence microscopy of isolated monocytes shows that TGF-β downregulates the expression of NOD2 protein in monocytes from normal subjects, but fails to do so in monocytes from Crohn’s disease patients. Additionally, fluorescence deconvolution microscopy shows that NOD2 interacts with components of the TGF-β signalling cascade in the human monocytic THP1 cell line. This work is beginning to reveal the events that lead to the activation and regulation of NOD2 and has the potential to identify targets for therapeutic intervention in Crohn’s disease.

**Interaction between intestinal epithelial cells and peripheral blood monocytes.**
Dr Peter C Tyrer, Associate Professor Paul Pavli, Associate Professor A Ruth Foxwell, Elaine Bean.
Intestinal macrophages exist in a state of relative “unresponsiveness” to activating stimuli when compared to peripheral blood monocytes. We have developed a unique model of human monocyte-epithelial cell interactions. The model consists of freshly isolated peripheral blood monocytes cocultured with the human enterocyte-like Caco-2 cells separated by a semi-permeable polycarbonate membrane. This model displays the features of intestinal monocytes, for example reduced expression of pro-inflammatory markers, such as CD14. We have used the model to examine the pathophysiological effects of two bacterial pathogen-associated molecular pattern molecules, lipopolysaccharide and muramyl dipeptide. Both molecules increased the number of monocytes that were able to migrate across the membrane barrier, increased the expression of CD14, induced apoptosis, and reduced the integrity of the epithelial barrier. This model shows great promise for the study of intestinal pathogenesis, oral tolerance, and drug and vaccine delivery.

**Use of laser capture microdissection to identify bacteria in lymph nodes of Crohn’s disease patients.**
Dr Gwen Allison, Professor Jane Dahlstrom, Dr Kathy Francki, Associate Professor Paul Pavli.
The proposed study aims to determine whether bacteria can be identified in draining lymph nodes of patients who suffer from Crohn’s disease using new culture-independent techniques.

**Role of Protein-Bound DOPA in Antioxidant Defences.**
Professor Roger T Dean, Associate Professor A Ruth Foxwell, Michelle Nelson, Dr Peter C Tyrer.
Proteins are continually exposed to damaging free-radicals, resulting in the production of oxidised protein, a process that has been implicated in the initiation and progression of many age-related diseases. DOPA (3,4-dihydroxyphenylalanine) is a product of protein oxidation, formed through the oxidation of tyrosine residues and is currently the major treatment for Parkinson’s disease. DOPA, a redox active molecule, is involved in various pathologies, including neurodegenerative disorders, cataracts and atherosclerosis. Due to its chemical nature, DOPA is capable of acting as a either a pro-oxidant or an antioxidant and we propose that under
physiological conditions, DOPA is likely to act as an antioxidant, and may act as a signalling molecule, triggering the enhancement of cellular antioxidant defence systems. In support of this hypothesis, we have determined that in human monocytes, DOPA at physiological concentrations, is incorporated into cellular proteins, does not exhibit cytotoxicity, and able to protect cells from oxidative stress. Additionally, exposure to DOPA alters the expression of proteins involved in antioxidant defences, cytoskeletal organisation, protein chaperoning, metabolism and innate immunity. This work shows that DOPA has significant anti-oxidant effects on cells and has the potential to allow the use of DOPA in diseases such as atherosclerosis and cataracts.

FUNDING
2006–2007 The Canberra Hospital Private Practice Trust Fund $99,000. Identification of signal transduction abnormalities of monocytes in Crohn’s disease. Dr Peter C Tyrer, Associate Professor Paul Pavli, Associate Professor A Ruth Foxwell

PUBLICATIONS

Bromley J, Pavli P. How to treat: Disorders of the pancreas. Australian Doctor 2006;29–36
Tyrer PC, Ruth Foxwell A, Kyd JM, Otczyk DC, Cripps AW. Receptor mediated targeting of M-cells. Vaccine (accepted for publication)

PRESENTATIONS/ ABSTRACTS
Biologics in IBD – As good as claimed? Pavli P. Gastroenterological Society of Australia Australian Gastroenterology Week, Brisbane, October 2005.

AWARDS
STAFF
Lesley Thomson - Masters of Philosophy (Education) candidate, ANU and Medical Education Officer, The Clinical Training and Administration Unit and Canberra Clinical School, The Canberra Hospital. Registered Nurse, ACT Family Planning Certificate, Registered Midwife, Intensive Care Certificate, Bachelor of Health Science (Nursing), Graduate Certificate in Higher Educational Studies

RESEARCH PROJECTS
The impact of a Graduate Certificate in Higher Education on Medical Educators in Canberra and the surrounding region. To define outcomes that medical educators gain from successfully completing the graduate Certificate in Higher Education, in particular any change in their views of teaching and learning.

Successful completion of the Graduate Certificate in Higher Education enhances the personal and professional development of medical educators in the ACT and surrounding region.

FUNDING
Dr Rod Lambert, Senior Medical Advisor, The Canberra Hospital has given the investigator approval to conduct this research, and to provide study leave and any additional office resources deemed appropriate.

PRESENTATIONS
Represented The Canberra Hospital at the 9th National Prevocational Medical Education Forum in Queensland – November 2004
MEDICAL ONCOLOGY

STAFF

Associate Professor Paul Craft - MBBS, MPH, FRACP, Director Medical Oncology Unit, Senior Staff Specialist in Medical Oncology.

Professor Robin Stuart Harris - MBBS, MD, FRCP, FRACP, Senior Staff Specialist in Medical Oncology, Director Capital Region Cancer Service.

Associate Professor Desmond Yip - MBBS, FRACP, Senior Staff Specialist in Medical Oncology.

Dr Alison Davis - MBBS, MSc, FRACP, Staff Specialist in Medical Oncology, Lecturer ANU Medical School.

Dr David Leong - MBBS, FRACP, Senior Staff Specialist in Medical Oncology.

Dr Nicole Gorddard – MBBS, FRACP, Staff Specialist in Medical Oncology.

STUDENTS

Dr Angela Rezo MB BS, FRACR - ANU Research Fellow

RESEARCH PROJECTS

Multicentre Clinical Trials

ANZGOG 02 01: A phase II trial of weekly docetaxel (Taxotere) for patients with relapsed ovarian cancer who have previously received paclitaxel.

BCIRG 006: Multicentre phase III randomized trial comparing doxorubicin and cyclophosphamide followed by docetaxel (AC-T) with doxorubicin and cyclophosphamide followed by docetaxel and trastuzumab (AC-TH) and with docetaxel, platinum salt and trastuzumab (TCH) in the adjuvant treatment of node positive and high risk node negative patients with operable breast cancer containing the Her2-neu alteration.

CO.17: Phase III randomised study of cetuximab (Erbitux, C225) and best supportive care versus best supportive care in patients with pretreated metastatic epidermal growth factor receptor (EGFR)-positive colorectal carcinoma.

CONFIRM1: A randomized, double-blind, placebo-controlled, phase III study in patients with metastatic adenocarcinoma of the colon or rectum receiving first-line chemotherapy with oxaliplatin/5-fluorouracil/leucovorin and PTK787/ZK 222584 or placebo.

ESPAC –3: Phase III trial comparing 5FU and folinic acid versus gemcitabine in patients with resected pancreatic cancer.

Phase III study of G17DT gemcitabine versus placebo plus gemcitabine in untreated subjects with locally advanced, recurrent, or metastatic adenocarcinoma of the pancreas.

TARGET: Randomized phase III trial of the Raf kinase and VEGFR inhibitor sorafenib (BAY 43-9006) in patients with advanced renal cell carcinoma (RCC).
VICTOR: Phase III randomized double blind placebo controlled study of rofecoxib (Vioxx) in colorectal cancer patients following potentially curative therapy.

ZEST: A double blind controlled trial of Zoloft’s effects on symptoms and survival time in advanced cancer.
A Randomised, Double-Blind, Placebo Controlled, Multicenter Phase III Study Comparing GW572016 and Letrozole in Subjects with Estrogen/Progesterone Receptor Positive Advanced or Metastatic Breast Cancer.

AMGEN 103: A multicentre, randomised double blind placebo controlled study of darbepoeitin alfa for the treatment of anaemia of cancer.
A randomised double blind multicentre two stage phase III study of bevacizumab in combination with cisplatin and gemcitabine versus placebo, cisplatin and gemcitabine in patients with advanced or recurrent non squamous non small cell lung cancer who have not received prior chemotherapy.
A Randomised, Double-Blind Phase III Study to Evaluate the Efficacy and Safety of Bevacizumab in Combination with Interferon Alpha-2a (Roferon) versus Roferon and Placebo as First Line Treatment Administered to Nephrectomised Patients with Metastatic Clear Cell Renal Cell Carcinoma

FACE: A Randomised, Multi-centre, Phase 3b, Open label, study of letrozole versus anastrozole in the adjuvant treatment of postmenopausal women with hormone receptor and node positive breast cancer.

SOFT: A Phase 3 trial evaluating the role of ovarian function suppression and the role of exemestane as adjuvant therapies for pre-menopausal women with endocrine responsive breast cancer.
A Randomized, Double-blind, Multicentre Study of Denosumab Compared with Zoledronic Acid (Zometa®) in the Treatment of Bone Metastases in Patients with Advanced Breast Cancer

A multicentre, randomized double blind placebo controlled phase III study of the efficacy of Xaliproden in preventing the neurotoxicity of oxaliplatin in patients with metastatic colorectal cancer receiving first line therapy with oxaliplatin/SFU/LV.
NAVXEL: Phase II Study of intravenous vinorelbine (Navelbine) + capecitabine (Xeloda) in patients with advanced breast cancer. Principle investigator: Dr Alison Davis

A Feasibility Study of Patient-initiated outpatient management of febrile neutropenia. (Principal investigator: Dr Nicole Gorddard)

Other Projects


A retrospective analysis of tumour size and lymph node status in multifocal/multicentric breast cancer in Australian Capital Territory and South-East New South Wales. Rezo A, Davis AJ, Rodins K, Dahlstrom J.

Follow-up practices after treatment for early breast cancer: Survey of practitioners in the ACT and SAHS. Gorddard N, Davis A, Tait N.

Investigation of EGFR expression and cetuximab responsiveness in colorectal carcinoma using fluorescence or chromogen in-situ hybridisation and immunohistochemistry. Hemmings CT, Yip D.

FUNDING


PUBLICATIONS

Journal Publications


Book Chapters


Books


PRESENTATIONS/ABSTRACTS


Reduced Proliferative Activity Does Not Explain Loss of Avidity on PET scan in a Case of Metastatic GIST. Hemmings C, Yip D. Royal College of Pathologists (NZ) Annual Scientific Meeting, Christchurch, 2005. Presentation.

Surgical management of ductal carcinoma in situ in the ACT & NSW. A Koshy, J Buckingham, Y Zhang, P Craft, J Dahlstrom, N Tait. Royal...
Australian College of Surgeons Annual Scientific Meeting 2005.


MEDICAL PHYSICS

STAFF
Dr Brendan Hill - BSc, MSc, PhD, Chief Medical Physicist ACT Health
Professor Clive Baldock - Professor, School of Physics, Sydney University
Dr Lyn Oliver - Royal North Shore Radiation Oncology Section, Associate Supervisor, Associate Professor Sydney University

RESEARCH PROJECTS
Investigation of polymer gel dosimetry for measurement of computer tomography (CT) radiation dose.
This technique of radiation measurement provides a complementary alternative to existing methods however gives superior radiation dose information that no other dosimeter can currently provide. Optimisation of radiation dose compared to image quality is essential for safe and efficacious patient diagnosis and is key to marketing CT sales internationally.

FUNDING
Private Practice Seed Funding

PUBLICATIONS
Mental Health ACT

Staff

Leslie Raymond Hill Drew A.M.; BSc, MB, BS, DPM, FRANZCP, FACHAM. Senior Staff Specialist, Mental Health ACT; Senior Lecturer, Academic Unit of Psychological Medicine, Australian National University and University of Sydney.

Kim Hooper: Registered Nurse & Program Primary Care Nurse, Better General Health Program, City Mental Health Team (2006 onwards).

Research Projects

Mortality and mental illness.
Aimed to replicate a study (Duty to Care), which showed a major increase in mortality in the mentally ill. This study failed to repeat those results, but highlighted methodological problems in a population based approach to assessment.

Improving the general health of persons with psychosis.
Aims to improve the access of persons with psychosis to the services of general practitioners, in the City region of the ACT. Persons with psychosis, generally, receive poor general health care, which compounds their poor general health. Improved care is necessary.

Funding

The Canberra Hospital Private Practice Fund.
The Better General Health Project was funded for 18 month, pilot period and has since received recurrent funding (in 2006) as a Program at City Mental Health Team, from the ACT Government.

Publications

Drew LRH & Fiona DeLacy Improving the general health of persons with psychosis Australasian Psychiatry Vol 15 No 4 August 2007.


Awards

The Better General Health Program-Mental Health ACT
NEONATOLOGY

STAFF
Dr Zsuzsoka Kecskes - Dr Med FRACP PhD, Staff Specialist Department of Neonatology, The Canberra Hospital, Senior Lecturer ANUMS
Dr Alison Kent – MBBS, FRACP, Staff Specialist and Senior Lecturer ANUMS, Department of Neonatology, The Canberra Hospital
Associate Professor William McGuire – MD, FRACP, Senior Staff Specialist
Dr David Todd, Neonatologist, FIMLS, MSc, PhD, MBBS, Neonatal CMO and Lecturer

COLLABORATIVE ASSOCIATES
Associate Professor David Croaker – MBBS FRACS FRCS PhD, Dept of Paediatric Surgery, TCH, ANUMS, Canberra
Dr Michael Falk – Nephrologist
Professor Paul Colditz – MBBS FRACP MbiomedE Dphil (Oxon), Director, Perinatal Research Centre, Royal Women’s Hospital, Brisbane, Queensland
Dr Barbara Lingwood – BSc MSc PhD, Postdoctoral Research Fellow, Perinatal Research Centre, Royal Women’s Hospital, Brisbane, Queensland
Kimble Dunster – BSc, Scientist, Perinatal Research Centre, Royal Women’s Hospital, Brisbane, Queensland
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