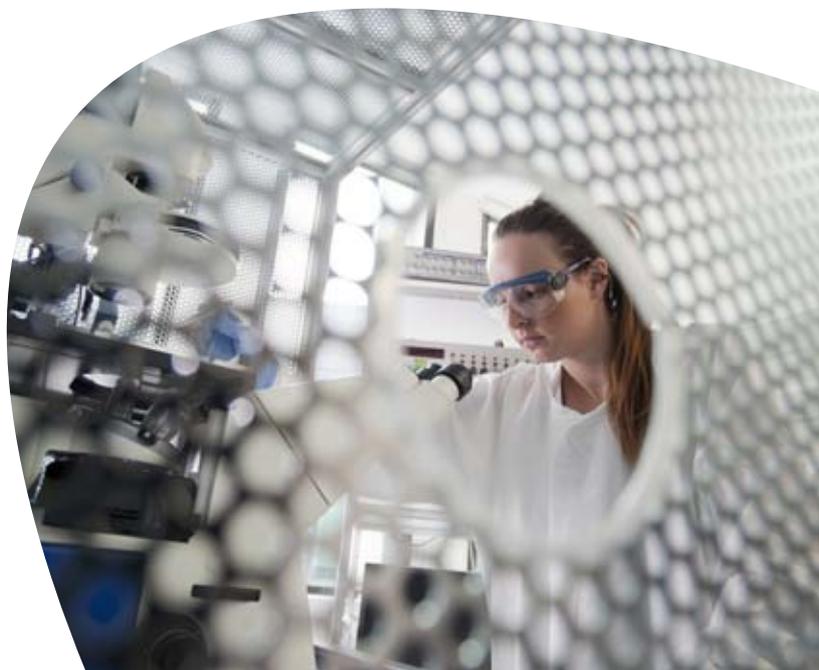


Western Health Research Report 2011



Western Health



OUR VISION

Together, caring for the West

Our patients, staff, community and environment

OUR PURPOSE

Working collaboratively to provide quality health and wellbeing services for the people of the West

OUR VALUES

Compassion – consistently acting with empathy and integrity

Accountability – taking responsibility for our decisions and actions

Respect – for the rights, beliefs and choice of every individual

Excellence – inspiring and motivating, innovation and achievement

Safety – working in an open, honest and safe environment

OUR PRIORITIES

Safe and effective patient care

People and culture

Community and partnerships

Research and learning

Self-sufficiency and sustainability

Acknowledgement of traditional owners

Western Health respectfully acknowledges the traditional owners of the land on which its sites stand as the Boon Wurrung and the Wurundjeri people of the greater Kulin Nation.



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Foreword

Western Health enjoyed another successful year for research in 2011, with a number of exciting developments coming to fruition during the period covered in this Report.

The innovative, \$51.6 million Western Centre for Health Research and Education building at Sunshine Hospital is leading the way with a breakthrough approach to research and learning. Officially opened in June 2011, it is the first purpose-built research and training facility for medicine and the health sciences in Melbourne's West.

The new Centre is a partnership between Western Health, Victoria University and the University of Melbourne, and also houses The Australian Institute for Musculoskeletal Science (AIMSS), established in 2011. The Institute's establishment has particular significance to the population in the Western suburbs of Melbourne, where conditions such as osteoporosis, arthritis and diabetes are widespread and where chronic disease presents major challenges.

The Western Health vision is to cement a strong foundation for the organisation's own investigator led research, and as we continue to implement and grow the Western Health Research Strategy this will drive the research effort, sustain our research capacity in priority areas, and support the development and management of patient-focused research at Western Health.

During 2011, Western Health researchers had over 200 published journal articles and delivered 112 seminar and conference presentations, both in Australia and overseas. Together with our collaborators, we were awarded or held a total of 36 research grants of

\$14.51 million for the duration of the grants. This is a remarkable achievement and we congratulate our researchers on their success.

In 2011 there were an unprecedented five prizes of \$1,000 awarded during Research Week, in the following areas: Best Poster presentation; Best Nursing Research presentation; Best Allied Health Research presentation; Best Medical Registrar Research presentation (Neville D Yeomans Prize) and Best Surgical Registrar Research presentation (Kendall Francis Prize).

We would like to convey our gratitude to all our prize sponsors and supporters for their ongoing loyalty and support of research at Western Health.

The research we carry out at Western Health is cutting edge practical research with direct patient outcomes involved. To accompany the Western Health Research Report 2011 we have produced 'Research and Discovery at Western Health', which provides a fascinating insight into what drives our researchers and also highlights some of the challenges they have overcome.

We look forward to the continual growth and expansion of Western Health's research capabilities and output, and to build upon the progress that we have made during 2011.



A handwritten signature in black ink that reads "K Cook".

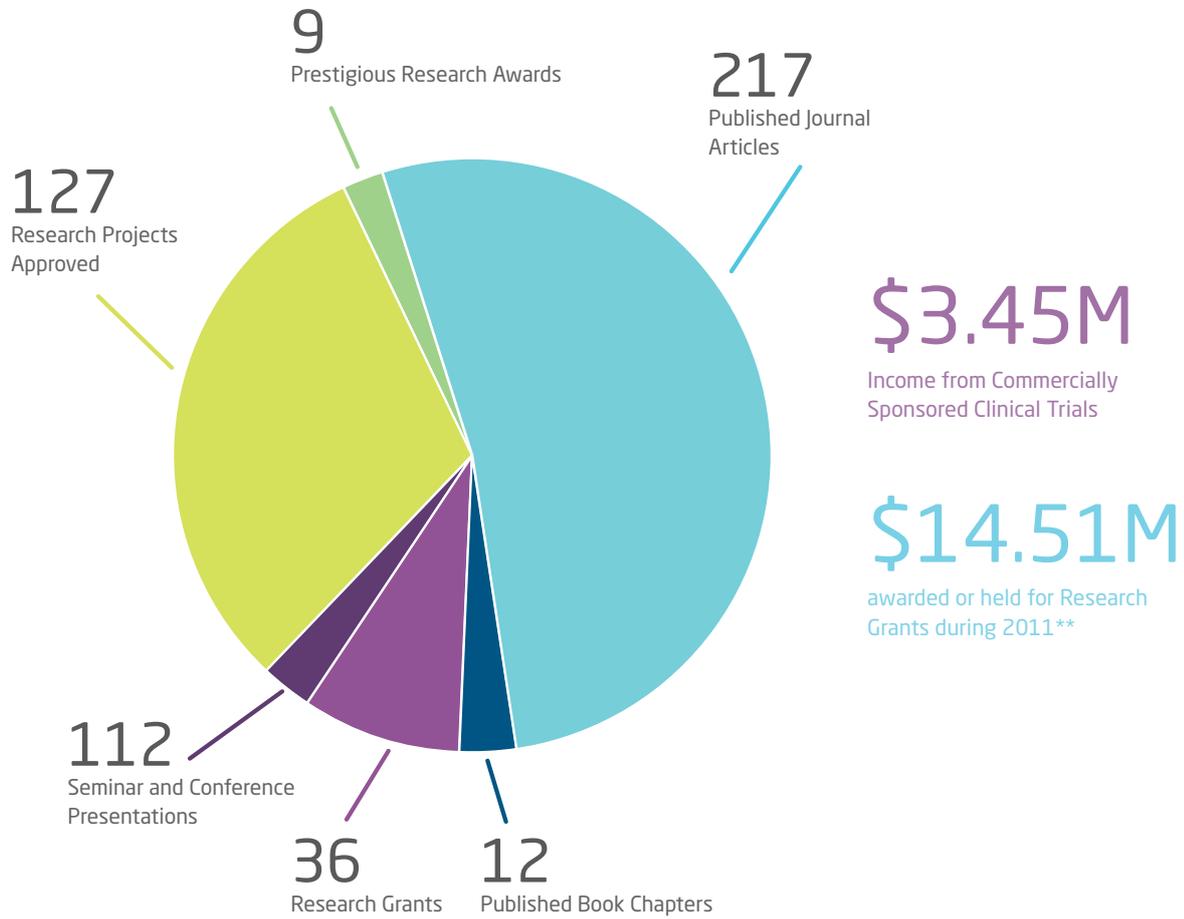
Kathryn Cook
Chief Executive



A handwritten signature in black ink that reads "David Newman".

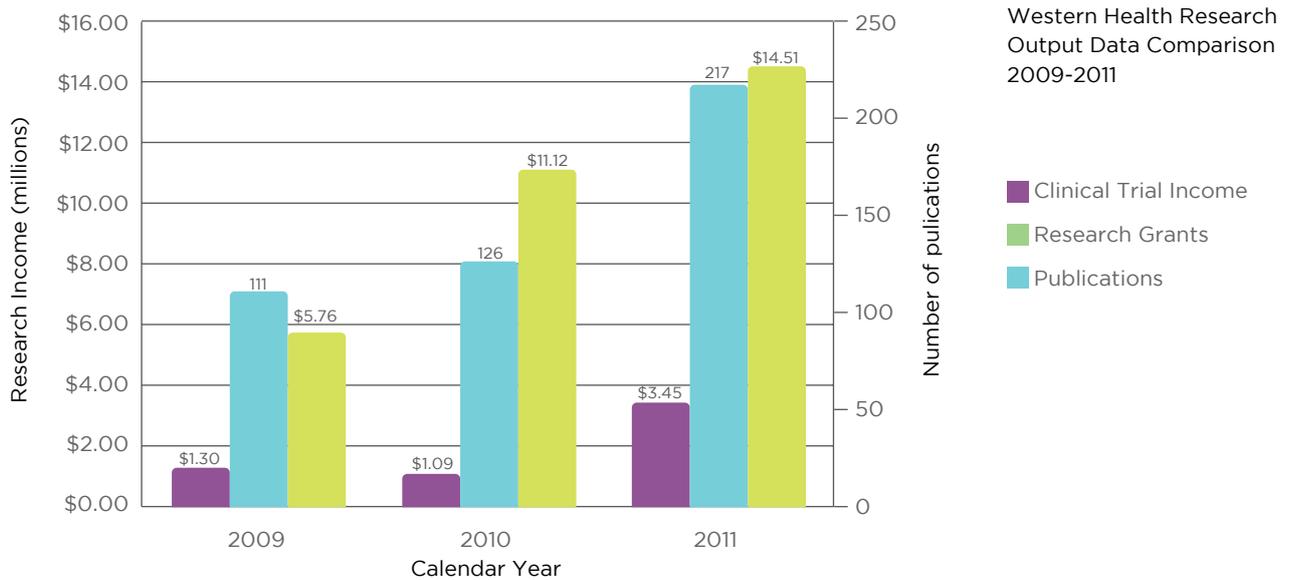
Dr David Newman
Director, Office for Research

Research Highlights*



\$3.45M
Income from Commercially Sponsored Clinical Trials

\$14.51M
awarded or held for Research Grants during 2011**



* These figures relate to the 12 month period of 2011

** Total awarded for the duration of the grants to our researchers and their collaborators

Ethics Panel

The Western Health Low Risk Human Research Ethics Panel continues to provide a means of ethical review and facilitation for low risk research projects undertaken at Western Health. In the future, it is likely that we will develop this panel into a full Human Research Ethics Committee, allowing ethical approval and oversight for a full range of research investigations.

MEMBERSHIP

Chairperson

Tissa Wijeratne, MBBS (Hons) FRACP FAHA Consultant Neurologist (From September 2010)

Deputy Chairperson

Debra Kerr, RN MBL PhD Senior Lecturer, Faculty of Nursing, Victoria University (From September 2010)

Lawyer

Paula Shelton, BA LLB Practice Group Leader- Medical Law Group Slater & Gordon Lawyers

Review Members

Angela Mellerick, RN Oncology Research Nurse (From September 2010)

Anne Marie Southcott, MBBS FRACP Director, Respiratory & Sleep Disorders Medicine (From December 2010)

David Newman, MBBS PhD MRAes FAICD FAIM Director, Office for Research (Until October 2011)

Elizabeth Hessian, MBBS FANZCA Consultant Anaesthetist

Harin Karunajeewa, MBBS FRACP PhD Director, Clinical Research - Division of Medicine (From October 2011)

Jenny Schwarz, MBBS FRACP GradDip Ed GradDip Pall Med Consultant Physician/Clinical Associate Professor in Geriatric Medicine (From February 2012)

Julian Choi, MD FRACS Consultant Surgeon (From October 2011)

Kent MacMillan, B.Pharm MSc Director of Pharmacy (until October 2011)

Lei Ching Yeoh, B.Pharm Clinical Trials Manager (From October 2011)

Keri Chater, PhD M.Nurs BSocSc RN Clinical Coordinator, Westgate Aged Care Facility (From October 2011)

Sathyajith Velandy Koottayi, MBBS MD FJFICM Intensivist

Terence McCann, PhD MA RMN RGN DipNurs (Lon.) RNT, RCNT Professor of Nursing, Faculty of Nursing - Victoria University (From October 2011)

Manager

Michelle Clemson, B.App.Sc Manager, Office for Research (Until August 2011)

Tam Nguyen, PhD B.Sc BE (Biomed) Manager, Office for Research (From August 2011)

The Western Health Research Advisory Committee, established at the end of 2011. L-R: Dr Harin Karunajeewa, Dr David Newman, Dr Tam Nguyen, Dr Debra Kerr, Professor Edward Janus, Ms Debbie Munro, Dr Sumitra Ananda, Dr Mark Garwood



Research Week Awards

Western Health's Annual Research Week was held from 7-11 November 2011, giving an exciting overview of the extent and variety of research undertaken by Western Health researchers, along with our two main partners, The University of Melbourne and Victoria University.

The Victorian Minister for Health and Ageing, the Hon. David Davis, officially launched Western Health Research Week at the Western Centre for Health Research and Education, Sunshine Hospital, pledging the Government's support for ongoing research.

Vice Chancellor and President of Victoria University, Professor Peter Dawkins presented a thought-provoking opening keynote address on the impact of research partnership to improve the health of Melbourne's West, highlighting the many significant projects already underway.

The Week featured a number of distinguished keynote addresses, research capacity building workshops and presentations from Western Health researchers including medical and surgical registrars, Allied Health and nursing staff, showcasing their research projects. A full program and abstracts book can be downloaded from the Office for Research website.

The program of events drew to a close with Professor Terry Nolan presenting a public lecture on the pandemic of non-communicable diseases and the associated challenges for the healthcare system and community, followed by the award presentations.

There were a record number of research abstracts entered in 2011, highlighting the vast amount of high quality of research occurring at Western Health. Sincere appreciation must be extended to the Research Week Committee for their time, support and contribution. Special thanks to all keynote speakers, abstract entrants, abstract reviewers, judges and administrative staff from the Office for Research and Centre for Education.

At the end of 2011 formal steps were taken to establish a standing Research Advisory Committee, providing operational oversight of research activities at Western Health.

Inaugural Neville Yeomans Prize for the Best Medical Research (Registrars & Advanced Trainees) Presentation, sponsored by Pfizer Oncology was awarded to:

Dr Nadia Maqboul from Gastroenterology, for research on: A single centre study on the complications and outcomes following percutaneous endoscopic gastroscopy (peg) tube insertion

Kendall Francis Prize for the Best Surgical Registrar Research presentation sponsored by Covidien was awarded to:

Dr Tracey Lam, Surgical Registrar for research on: The determinants of complete pathological response to chemo-radiation for rectal cancer

Best Allied Health Research presentation sponsored by The Sandringham Club was awarded to:

Ms Narelle Watson, Physiotherapy for research on: The reliability of x-ray anatomic parameters for classifying distal radius fractures in adults

Best Nursing Research presentation sponsored by Novartis Oncology

Ms Margaret McCormick, for research on: The effectiveness of simulation training in neonatal resuscitation

Best Research Poster Prize, sponsored by Merck Sharp Dohme (MSD) was awarded to two joint winners:

Dr Linda Appiah-Kubi, from Aged Care for research on: The incidences of acute urinary retention in older acute inpatients at Sunshine Hospital

Ms Catherine Shore-Lorrenti, from Endocrinology & Diabetes, for research on: Determinants of Vitamin D requirements in a multi-ethnic group at high risk of developing Type 2 diabetes.



Allied Health

The focus for Allied Health research over the past year has been to further develop an integrated approach to research across Western Health. Allied Health research and quality initiatives commenced over the past year have been aligned with both the Allied Health and Western Health strategic plans. Future directions for research in Allied Health include the development of an Allied Health Research Committee to assist the current departmental research committees in coordinating and driving research.

This report covers the area of Allied Health with the following departments included:

- Care Coordination
- Nutrition
- Occupational Therapy
- Physiotherapy
- Speech Pathology
- Subacute Ambulatory Care Service
- Psychology

HEADS OF DEPARTMENTS:

Debbie Munro: Director Allied Health

Rebecca Power: Manager of Care Coordination

Kathryn Pierce: Manager of Nutrition

Susan Giles: Manager of Occupational Therapy

Alicia Martin: Manager of Physiotherapy

Meredith Swaby: Manager of Speech Pathology

Lindy Kraps: Manager of Subacute Ambulatory Care Service

Grey Searle: Manager of Psychology

Speech Pathologists and Nutritionists work closely together at Western Health



CARE COORDINATION

The need for a coordinated team approach to health care is a key principle underpinning work within the Care Coordination team at Western Health. Closely linked with this, the Care Coordination team throughout 2011 has focused their research efforts on the evaluation of interprofessional care models in sub-acute teams. The findings from this research will assist with further developing the interprofessional care models at Western Health.

OUR RESEARCH – CARE COORDINATION

Evaluating interprofessional care in sub-acute teams
Kate Cranwell, Rebecca Power Collaborator: Professor Terence McCann (Victoria University)

OUR RESEARCHERS

Kate Cranwell: Project Manager-Interprofessional Care

NUTRITION

During 2010 and 2011, the Nutrition department participated in five key research projects. A major area of research focus has continued to be in the area of malnutrition. A number of our research projects have investigated the prevalence of malnutrition in different patient cohorts, including Dialysis. Earlier nutrition intervention for these patients and the development of a clear referral pathway has assisted in decreasing the incidence of moderately malnourished patients from 61% in 2010 to 30% in 2011. The results obtained from these projects focusing on malnutrition were used as a platform to inform the development of a Malnutrition Strategy for Western Health in 2011.

Participation in the International Nutrition Survey 2011 was another major project completed. This project compared nutrition support practices in the ICU setting and benchmarked against other international ICUs. Overall ranking in 2011 for Western Health ICU, for energy received from all types of nutrition improved significantly from the previous study conducted in 2009. Future research in the nutrition department will focus on malnutrition identification and management in a range of patient cohorts. In 2011, Western Health, together with 14 other health services was successful in obtaining a Department of Health funded grant for 'Investigating Malnutrition in Victorian Cancer Services.' This project will conclude in 2012 and will be the first project in Victoria to determine the prevalence of malnutrition amongst the cancer population. The results of this project will enable the identification of areas

for local improvement with a long term goal to reduce cancer malnutrition prevalence and burden in Victorian cancer services.

OUR RESEARCH – NUTRITION

Australasian Nutrition Care Survey Day
Amber Kelaart, Rachael Evans, Kathryn Pierce

Malnutrition in Western Health Dialysis Patients
Sarah Pitt, Heather Jordan, Michelle Murray

International Nutrition Survey 2011
Caroline Calkin, Kathryn Pierce

Volunteer Meal Assistance Program
Rachael Evans, Kathryn Pierce

Experience of Western Health Inpatients: A food service quality survey
Rachael Evans, Allison Lauder, Kathryn Pierce

OUR RESEARCHERS

Kathryn Pierce: Manager of Nutrition

Rachael Evans: Senior Dietitian / Clinical Educator

Sarah Pitt: Senior Dietitian

Allison Lauder: Senior Dietitian

Michelle Murray: Senior Dietitian

Aranka Nenov: Senior Dietitian

Hollie Bevans: Senior Dietitian

Karon Markovski: Dietitian

Jacqui Young: Dietitian

Caroline Calkin: Dietitian

Heather Jordan: Dietitian

Alison Qvist: Dietitian

Aurora Ottaway: Dietitian

OUR PRESENTATIONS

Alison Qvist, Dietitian, Dietitians Association of Australia National Conference, May 2011 *Red Alert: Food and Drink Sold in Hospital Cafeterias, Not Always Black and White*

OUR AWARDS

Department of Health Cancer Strategy and Development grant, Nutrition department, Western Health, 'Investigating Malnutrition in Victorian Cancer Services', Cancer Strategy and Development, Victorian Department of Health, \$3500.00, 2011

Allied Health

OCCUPATIONAL THERAPY

The Occupational Therapy (OT) Department has an active quality and research team who are responsible for overseeing the quality activities undertaken by OT staff. A large number of research and quality projects, including the development of a therapist-led outpatient Hand Therapy clinic, and the development of a visual tool to assist patients to accurately report information regarding their home environment, are planned for 2012.

During 2011 members of the OT department delivered eight conference presentations at a National and State level.

OUR RESEARCH: OCCUPATIONAL THERAPY

Development of a visual tool to assist patients to accurately report information regarding their home environment

Brad Wilson, Judi Chambeyron, Jess Kline

Development of an outcome measure to demonstrate Occupational Therapy intervention increases patients' safety with personal care tasks in the acute hospital environment.

Karen Kessner, Brad Wilson, Jenn Wort

Development of outpatient therapist-directed clinic in Plastics/Hand Therapy

Angela Chu, Terri Johnston, Nicole Rantall

Development of Hands in Action upper limb rehabilitation group in Plastics/Hand Therapy

Kathy Jeczmonka

Development of a prioritisation tool for paediatric patients which is compatible with current CAHS service model and occupation based practice

Anna Williamson

Development of Occupational Therapy: clinical pathways in the management of post-operative flexor tendon injuries

Holly Pumpa

Investigation of the prevalence of DCD in school aged children who have been referred to the Neurodevelopmental Clinics

Renee Debrincat

OUR RESEARCHERS

Sue Giles: Manager of Occupational Therapy

Helen Nelson: Grade 4 Occupational Therapist

Angela Chu: Grade 4 Occupational Therapist

Karen Kessner: Senior Occupational Therapist

Brad Wilson: Senior Occupational Therapist

Anna Williamson: Senior Occupational Therapist

Judi Chambeyron: Occupational Therapist

Jennifer Wort: Occupational Therapist

Jessica Kline: Occupational Therapist

Kathy Jeczmonka: Occupational Therapist

Holly Pumpa: Occupational Therapist

Renee Debrincat: Occupational Therapist

OUR PRESENTATIONS

Susan Giles, *Identifying and measuring our core business*, Occupational Therapy Australia 24th National Conference & Exhibition 2011

Helen Nelson, *Challenges of choosing outcome measures in acute care: The use of the Home Assessment Profile to measure the impact of OT home assessments in the acute setting*, Occupational Therapy Australia 24th National Conference & Exhibition 2011

Helen Nelson (invited speaker), *Implementing Workforce Education*, The Western Health Experience Victorian Stroke Clinical Network (VSCN) - 'From Stroke Strategy to Practice' forum

Neo Damba, *The Process Model of Cognitive Rehabilitation in Occupational Therapy (poster presentation)*, Occupational Therapy Australia 24th National Conference & Exhibition 2011

Sarah Shipp, *Living with cancer: the occupational therapy role in exploring and enabling leisure participation*, Occupational Therapy Australia 24th National Conference & Exhibition 2011

Gabriela Veliz, *Transitions in a Pain Program: a practical example of developments over time*, Occupational Therapy Australia 24th National Conference & Exhibition 2011

Gabriela Veliz, *Community Based Functional Upper Limb Activity Group for Stroke Survivors: The Evidence, Challenges and Successes*, Occupational Therapy Australia 24th National Conference & Exhibition 2011.

Karen Waters, *Stroke WISE: A stroke education group in a community setting*. SMART Strokes Conference 2011

PHYSIOTHERAPY

The Physiotherapy Department strives to achieve excellence in service provision at Western Health. The Physiotherapy Department is continually focused on improving the service provided to patients and aims to



Over 40% of Western Health patients are aged over 80, with multiple co-morbidities and complex care needs

adopt evidence-based practice in all aspects of care. To assist in achieving these aims, the Physiotherapy Department experienced a rapid growth in the number of research and quality projects commenced and completed in 2011. The development of a Physiotherapy Research Committee and circulation of a quarterly Research and Quality Newsletter in 2011 has also assisted in providing momentum and guidance for staff in the area of quality and research.

The Physiotherapy Department completed a large number of research and quality projects in 2011 and developed two new Advanced Practice service models (Primary Care Physiotherapy in the Sunshine Emergency Department and the Development Dysplasia of the Hip Clinic). Evaluation of this work revealed significant changes to the quality, efficiency and suitability of the services provided by the Physiotherapy Department. To assist in sharing the knowledge and skills within the Physiotherapy Department of Western Health, staff delivered eight conference presentations in 2011 including one international presentation. Throughout 2011, the Physiotherapy staff members were recipients of five awards in the area of research.

OUR RESEARCH-PHYSIOTHERAPY

Does the addition of a specific Aquatic Physiotherapy balance program to land based physiotherapy and education improve balance and functional gait outcomes?

Claire Thwaites

Inter- and intra-observer reliability of anatomic parameters of X-rays that are used in classifying distal radius fractures in adults

Narelle Watson, Collaborator: Professor Jenny Keating (Monash University)

A randomised controlled trial investigating the effect of duration of immobilisation on function following open reduction and internal fixation for distal radius fractures in adults

Narelle Watson Collaborator: Professor Jenny Keating (Monash University)

Improving outcomes for the upper limb in severe stroke: the efficacy of rehabilitation interventions based on the Bobath Concept - a pilot study

Jane Tillyard, Dr Kim Brock (St Vincent Hospital)

Defining the benefits of exercise in interstitial lung disease: A multi-centre randomised controlled trial

Kathryn Barker, Claire Boote Collaborators: Anne Holland (The Alfred) Leona Knapman (The Austin)

Inter- and intra-observer reliability of wrist and forearm active range of motion measurements using a goniometer in adults following distal radius fracture

Narelle Watson Collaborator: Professor Jenny Keating

Novel Aquatic Physiotherapy group for balance impaired clients- Aqua Balance

Claire Thwaites

Systematic review: Aquatic Physiotherapy for shoulders post stroke

Claire Thwaites

Allied Health

Development of an Ai Chi aquatic group for patients with chronic pain

Amy Bach, Erin Casey

Evaluation of the implementation of a Tracheostomy Review Service at Western Health

Clare Holdsworth; Anita McKinstry and Dr Anne Marie Southcott

Development of criteria-based guidelines for rehabilitation following anterior cruciate ligament reconstruction

Rebecca Pile

Development of a 'Back To Life' treatment and education program for patients with chronic low back pain.

Erin Casey

Development of a common suite of functional outcome measures to be used by Western Health musculoskeletal physiotherapists.

Amy Bach

Development of physiotherapy post-operative guidelines following rotator cuff repair

Anna Nethercote

Development of physiotherapy Rehabilitation Guidelines following arthroscopic shoulder stabilisation

Darren Fraser

Development of physiotherapy rehabilitation guidelines following hip and knee arthroplasty.

Cindy Chan

Development of cardiovascular training guidelines for people with a diagnosis of stroke

Hanna Reynolds, Jane Tillyard

Implementing a Developmental Dysplasia of the Hip (DDH) Clinic

Sam Wills

OUR RESEARCHERS

Alicia Martin: Manager of Physiotherapy

Narelle Watson: Physiotherapy Research Coordinator

Charlotte Botting: Member Physiotherapy Research Committee

Shay Jayawardena: Member Physiotherapy Research Committee

Melanie Lloyd: Member Physiotherapy Research Committee

Jessie Mackay: Member Physiotherapy Research Committee

Kirsty May: Member Physiotherapy Research Committee

Bernie Sexton: Member Physiotherapy Research Committee

Paul Silk: Member Physiotherapy Research Committee

Claire Thwaites: Member Physiotherapy Research Committee

OUR PRESENTATIONS

Claire Thwaites, *Aquatic Physiotherapy for the Upper Limb After Stroke*, APA conference.

Clarice Tang, *Implementation of In-Patient Exercise Program for Patients During an Acute Exacerbation of COPD is Safe and Feasible*, TSANZ conference.

Clarice Tang, *Implementation of In-Patient Exercise Program for Patients During an Acute Exacerbation of COPD is Safe and Feasible*, APA conference.

Clare Holdsworth, *Measuring the Effect of Simulation Learning on Physiotherapist's Confidence in Cardiorespiratory Core Competencies*, APA conference.

Clare Holdsworth, *Measuring the Effect of Simulation Learning on Physiotherapist's Confidence in Cardiorespiratory Core Competencies (poster presentation)*, SIM Health Conference.

Paul Silk, *The Addition of an Advanced Practice Physiotherapist to a Rheumatology Outpatient Clinic First Asia Conference on Osteoarthritis*, Singapore.

OUR AWARDS

IPSEN Award for Achievement in Neurological Physiotherapy- Commendation, Claire Thwaites, Australian Physiotherapy Association, 2011

Best Oral Presentation (Cardiorespiratory), Clarice Tang, *Implementation of In-Patient Exercise Program for Patients During an Acute Exacerbation Of COPD is Safe and Feasible*, Australian Physiotherapy Association, 2011

Best Allied Health Research Presentation, Narelle Watson, *Inter- and Intra-Observer Reliability of Anatomic Parameters of X-Rays that are Used in Classifying Distal Radius Fractures in Adults*, Western Health, \$1000, 2011

Victorian Public Healthcare Award- Excellence in Service Provision (Silver Winner), Paul Silk, Narelle Watson, Darren Fraser, Alicia Martin, *Neurosurgery Physiotherapist-Led Clinic*, Victorian State Government, 2011

Highly Commended, Sam Wills, *Developmental Dysplasia of the Hip Clinic*, Western Health, \$500, 2011

SPEECH PATHOLOGY

The Speech Pathology Department is currently conducting research within a number of areas relating to the assessment and management of communication and swallowing impairments in both adults and children. Of particular focus in 2011 was the evaluation of outcomes associated with service development initiatives designed to improve stroke survivors' journeys through the continuum of care. The implementation of the ASSIST Dysphagia Screening Tool, for use with stroke survivors during the acute phase of their presentation, facilitated increased compliance with the National Stroke Foundation's Clinical Guidelines; whilst the implementation of a 6-week multidisciplinary education and conversational partner training program, for people with aphasia, resulted in increased knowledge in stroke survivors and their partners regarding the use of conversational repair strategies.

Additionally, 2011 saw an increase in the inter-rater reliability of Speech Pathology ratings of anatomic parameters within Videofluoroscopic Swallowing Studies (VFSS), following implementation of a newly developed VFSS rating scale and training package.

The Speech Pathology Department was responsible for delivering 14 conference/seminar presentations during 2011. It is anticipated that 2012 will be a productive year for the Speech Pathology Department, with a number of projects planned for completion. These include evaluating the outcomes of a number of service development initiatives including a Communication Therapy Group for stroke survivors within the acute hospital setting, a Swallowing Specific Outpatient clinic, and a Multi-disciplinary Tracheostomy Review Service (in conjunction with our Allied Health, Nursing and Medical colleagues).

OUR RESEARCH: SPEECH PATHOLOGY

CommuniMate: Fostering Communication and Wellbeing in Aphasia Group

Lisa Worthington

Outcomes of a Dysphagia Working Party - Ensuring Excellence, Reliability and Consistency in Videofluoroscopic Swallowing Studies

Louise Malcolm

Implementation of ASSIST: Dysphagia Screening Tool at Western Health

Jane Smith

OUR RESEARCHERS

Meredith Swaby: Manager - Speech Pathology & Audiology

Ruth Best: Speech Pathologist

Sally Howard: Speech Pathologist

Hemant Jeena: Speech Pathologist

Laura Kruse: Speech Pathologist

Louise Malcolm: Speech Pathologist

Claire Moody: Speech Pathologist

Courtney Pocock: Speech Pathologist

Jane Smith: Speech Pathologist

Rachel Smith: Speech Pathologist

Monique Stojkovski: Speech Pathologist

Sarah Ward: Speech Pathologist

Lisa Worthington: Speech Pathologist

OUR PRESENTATIONS

Sally Howard & Courtney Pocock, *Catering for our CALD Population*, St Vincent's Subacute Speech Pathology Forum 2011.

Louise Malcolm, *Dysarthria: a Case Presentation*, Head and Neck Interest Group 2011.

Louise Malcolm & Ruth Best, *Speech Pathology: Swallowing and Voice Assessment Using Endoscopy*, Olympus Australia Conference 2011.

Louise Malcolm & Hemant Jeena, *Case presentation - an Interesting Find*, Joint Meeting of the Dysphagia Interest Group & FEES Interest Group 2011.

Claire Moody, *The Good, the Bad, the Bold & the Beautiful...Experiences and Reflections of Group Based Student Placements*, Clinical Education Summit 2011.

Courtney Pocock, *Cultural Key Phrases Tool*, Speech Pathologists in Adult Rehabilitation Interest Group 2011

Courtney Pocock, *Western Health Speech Pathology Volunteers Program*, La Trobe University Student Orientation Day 2011.

Monique Stojkovski, *A Case Review of Rare Dysphagia: Going for the Jugular*, Joint Meeting of the Dysphagia Interest Group & FEES Interest Group 2011.

Allied Health

OUR AWARDS

Victorian Public Healthcare Award- Better health Outcomes (Silver Medal), Courtney Pocock, *Cultural Key Phrases Tool*, Victorian State Government, 2011

Innovations in Client Centred Care (Allied Health Innovation Award), Laura Kruse, *A Resource Package for Preadmission Counseling of Head and Neck Cancer Patients*, Western Health, 2011

Allied Health Innovation Awards: Major Prize, Rachel Smith, *The Global Mealtime Guide*, Western Health, \$250, 2011

SUBACUTE AMBULATORY CARE SERVICE (SACS)

The emphasis of 2011 in SACS was on participation. All SACS staff contributed to a range of quality and research activities with the emphasis on improving care for patients after stroke or patients with chronic pain. A range of activities including communication groups, water based physiotherapy and patient education were evaluated. A key achievement was the implementation and initial evaluation of the Back to Life Program, a multidisciplinary program for patients with chronic back pain. SACS staff also participated in a research project with Royal Melbourne Hospital focusing on upper limb spasticity and Botox. 2012 will focus on measuring patient outcomes from inter-professional quality and research projects.

The research and presentations completed by the SACS team have been reported above under their specific disciplines.

PSYCHOLOGY

The Psychology Department comprises Adult Neuropsychology, Paediatric Neuropsychology and Adult Clinical Psychology across three campuses. There has been a focus on patient participation in the Oncology area with a research project undertaken in collaboration with Western and Central Melbourne Integrated Cancer Services. Two further areas have focused on paediatric neuropsychology and culturally specific patient cohorts in Clinical Psychology

OUR RESEARCH: PSYCHOLOGY

Dr. Renee Testa – See under Melbourne Neuropsychiatry Centre

Validation of the Turkish version of the DASS21 in a Turkish immigrant outpatient population – recruited participants through general outpatients at Western Health

Dr Litza Kiropoulos, Collaborator: The University of Melbourne

Examination of psychosocial risk factors in Greek-born and Italian-born immigrants and Anglo-Australians with coronary heart disease: The healthy mind, healthy heart study – recruited participants through the coronary care unit at WHF.

Dr Litza Kiropoulos, Collaborators: The University of Melbourne, Monash University, MonashHeart and Southern Health

OUR RESEARCHERS

Dr Litza Kiropoulos: Senior Clinical Psychologist

Dr Renee Testa: Paediatric Clinical Neuropsychologist

OUR AWARDS

Beyond Blue Major Research Grant, Dr Litza Kiropoulos, Senior Clinical Psychologist, Western Health, Lecturer in Clinical Psychology, The University of Melbourne and Senior Research Fellow, Monash University, *Healthy Mind, Healthy Heart: Assessment of Depression and Related Psychosocial Factors in CALD People With CHD*, Beyond Blue: The national depression initiative, \$91, 075, 2009-2011

A woman with dark hair in a ponytail, wearing a white polo shirt, is seated at a curved wooden desk, looking at a computer monitor. The background features a prominent red ceiling with circular perforations and industrial-style lighting. The overall scene is a modern, professional office environment.

“There’s an enormous reward from discovery”

Professor Edward Janus,
Head of General Medicine, Western Health

Anaesthesia and Pain Management

The Department of Anaesthesia and Pain Medicine is participating in recruitment to several national and international multicentre trials. These trials have been designed to answer clinically relevant questions such as 'what effect does the use of nitrous oxide have on patient outcomes?' and 'does acupuncture have a role to play in the management of chronic pain?'

Department researchers have also been responsible for the design of a randomised controlled, multicentre trial investigating the role of fascial plane blocks in providing post operative analgesia. The study is being conducted at four sites across Victoria, and has been initiated and coordinated by the Western Health researchers.

OUR RESEARCHERS

Dr Andrew Jeffreys: Director, Anaesthesia and Pain Management

Dr David Bramley: Consultant Anaesthetist

Dr Elizabeth Hessian: Consultant Anaesthetist

Dr Stephen Hur: Consultant Anaesthetist

Dr Zamil Karim: Consultant Anaesthetist/Pain Specialist

Dr Forbes McGain: Consultant Anaesthetist/Intensivist

Dr Catherine Algie: Anaesthetic Registrar

Ms Jill Woods: Clinical Nurse Consultant Acute Pain Service

Ms Ellen Kinkel: Research Nurse

OUR RESEARCH

POISE2

Dr Andrew Jeffreys, Dr Elizabeth Hessian, Ms Ellen Kinkel, Collaborator: Population Health Research Institute, Canada

This is a large international placebo-controlled factorial trial to assess the perioperative impact of clonidine and acetylsalicylic acid (ASA-Aspirin) administration in patients undergoing noncardiac surgery who are at risk of a perioperative cardiovascular event.

The aim of this study is to determine the impact of clonidine versus placebo, and aspirin versus placebo, on the risk of all-cause mortality or MI in patients with, or at risk of, atherosclerotic disease who are undergoing non-cardiac surgery. Complications from heart problems during or after major surgery represent a large health problem. Evidence suggests that small doses of aspirin and clonidine (for high blood pressure) given before surgery and after surgery may prevent these complications.

SUSTAIN for PAIN: Research trial of transversus abdominis plane (TAP) ropivacaine infusions for pain relief following abdominal surgery

Dr Elizabeth Hessian, Dr Catherine Algie, Ms Jill Woods and Ms Ellen Kinkel, Collaborators: Royal Melbourne Hospital, Geelong Hospital, Wangaratta Hospital, Royal Women's Hospital

The aim of this study is to evaluate the effectiveness of a post-operative infusion of local anaesthetic into the abdominal wall to assist with analgesia. TAP local anaesthetic infusions provide an analgesic technique that may improve post-operative recovery following abdominal surgery. This project is a randomised controlled trial of the technique. The study is being conducted at four sites across Victoria, and has been initiated and coordinated by the Western Health researchers. Following surgery, pain can cause distress and also affect the patient's breathing and recovery from surgery. The infusion of a continual stream of local anaesthetic into the abdomen following abdominal surgery may improve pain relief.



Dr Andrew Jeffreys, Director,
Anaesthesia and Pain Management

Photo courtesy of ANZCA

Enigma 2: Nitrous oxide anaesthesia and cardiac morbidity after major surgery: a randomised controlled trial

Dr Andrew Jeffreys, Ms Ellen Kinkel and Dr Stephen Hur, Collaborator: The Alfred Hospital

This study aims to evaluate the effect of nitrous oxide on the outcome of high risk patients having non cardiac surgery. This large multicentre trial aims to establish whether nitrous oxide increases the rate of cardiac morbidity and mortality in this group of patients. Complications from heart problems during or after major surgery represent a large health problem. It is important to know if an anaesthetic agent increases this risk.

Effect of electroacupuncture on opioid consumption by patients with chronic musculoskeletal pain: a randomised controlled trial

Dr Andrew Jeffreys, Dr Zamil Karim and Ms Ellen Kinkel, Collaborator: RMIT

This double-blind trial aims to evaluate whether active treatment provides greater assistance with opiate withdrawal compared to sham treatment. Acupuncture is a relatively simple and safe treatment that may assist with pain management but has not been assessed in this way before.

The Rapid Sequence Intubation: A time and motion study

Dr Trung Du, Dr David Bramley

This quality assurance study applies a novel methodology to the analysis of the rapid sequence intubation. Analysis of video footage will allow assessment of the variation in the manual handling of equipment amongst anaesthetic staff during the intubation process. This study aims to improve the efficiency of rapid sequence intubation.

OUR PUBLICATIONS

McGain F, Sussex G, O'Toole J, Story D. *What makes metalware single use? Anaes Intens Care*, Vol. 39, No. 5, September 2011.

Quilty S, Harris LM, Kewley J, Jones A, Pearce R, James R and McGain F. *A Pandora's box: sustainable pharmaceutical supply*. MJA 2011; 195 (9): 510-511.

OUR AWARD AND GRANT

Forbes McGain: College of Intensive Care Medicine of Australia and N.Z. "A life cycle assessment of reusable and single use central venous catheter kits." \$11,000

Cardiology

Cardiology has continued to be engaged in clinical research in the areas of CT angiography, echocardiography, infective endocarditis, atrial fibrillation and interventional cardiology. Dr Soon's research in CT angiography has supported the increased adoption of this technology in the clinical role of determining if chest pain is ischaemic in origin. Dr Marasovic and Dr Wong's research in endocarditis resulted in a review of the endocarditis guidelines for Western Health.

Cardiology actively recruits in several multi-centre trials and will expand this activity in 2012.

From Left: Dr Alex Adel, Dr Nick Cox, Dr Steve Marasovic, Associate Professor Chiew Wong

OUR RESEARCHERS

Dr Nicholas Cox: Director of Cardiology

Associate Professor Chiew Wong: Director of Non Interventional Cardiology

Dr Kean Soon: Cardiologist

Dr Steve Marasovic: Cardiology Registrar

Dr Alex Adel: Cardiology Registrar

Maria Jolic: Cardiac Research Nurse

OUR RESEARCH

Standard vs. Atrial Fibrillation-specific management Study: The SAFETY Study- A multi-centre, randomised controlled trial

Dr Chiew Wong, Collaborators: Baker IDI Heart and Diabetes Institute

The SAFETY Study is a Baker IDI Heart and Diabetes Institute initiative funded by a National Health and Medical Research Council of Australia Program Grant. Dr Chiew Wong, as a co-investigator received \$62000 per year to run the project.

SAFETY is a prospective multi-centre randomised controlled trial with blinded-endpoint adjudication. A target of 320 hospitalised patients with a chronic form of AF will be randomised (stratified by "rate" versus "rhythm" control) to usual post-discharge care or the SAFETY Intervention (SI). The SI involves home-based assessment, extensive clinical profiling and the application of gold-standard pharmacology which is individually tailored according to a "traffic light" framework based on clinical stability, risk profile and therapeutic management. The primary endpoint is



event-free survival from all-cause death or unplanned readmission during 18-36 months follow-up. Secondary endpoints include rate of recurrent hospital stay, treatment success (i.e. maintenance of rhythm or rate control and/or application of anti-thrombotic therapy without a bleeding event) and cost-efficacy.

OUR PUBLICATIONS

Chan W, Taylor AJ, Ellims AH, Lefkovits L, Wong C, et al. *Effect of Iron Chelation on Myocardial Infarct Size and Oxidative Stress in ST-Elevation Myocardial Infarction: Circulation: Cardiovascular Interventions (in press)*

Carrington MJ, Ball J, Horowitz JD, Marwick TH, Mahadevan G, Wong C, Abhayaratna WP, Haluska B, Thompson DR, Scuffham PA, Stewart S. *Navigating the Fine Line Between Benefit and Risk in Chronic Atrial Fibrillation: Rationale and Design of the Standard versus Atrial Fibrillation specific management 3 study (SAFETY)*. International Journal of Cardiology (in press)

Biswas S, Soon KH, Lim YL. *Adjunctive balloon postdilatation after stent deployment-beneficial or deleterious?* International Journal of Cardiology, 2011; July 5 (E-pub)

Chong FY, Soon KH, Brown F, Bell K, Lim YL. *Negative coronary CTA in chest pain assessment predicts low event rate in five years*. Journal of Medical Imaging and Radiation Oncology. 2012; 56 (1); Page 55-57

Biswas S, Soon KH, Wong C, Lim YL. *Effect of postdilatation during percutaneous coronary intervention (PCI) for ST-elevation myocardial infarction (STEMI) on patients' clinical outcomes*. Original paper submitted to Heart Lung Circulation.

Soon KH, Bell KW, Lim YL, Walton A. Book Section entitled "*Transcatheter Aortic Valve Implantation*". In Mauro MA, Murhpy K, Thompson K, Venbrux A, and Zollikofer (eds). Image Guided Interventions. Philadelphia, Elsevier, 2nd Edition. (In Review)

Soon KH, Wong C. *Coronary CTA-a new wave of cardiac imaging*. (Proceeding to be published in Internal Journal of Medicine May 2012)

Chong F, Cox N, Lim Y. *Thrombus Aspiration Alone: A Potential Strategy in ST Elevation Myocardial Infarction Intervention*. Heart, Lung & Circulation, 2011 Nov; Vol. 20 (11), pp. 724-5

PROCEEDINGS

V. Mutha, R. Rayoo, N. Anvekar, S. Marasovic, C.Wong, *Incremental Value of TOE over Improved TTE in Detection of IE and Influence Antibiotic Use*, in 2010 Heart, Lung and Circulation Vol. 20 Supplement 2

M. Asrar ul Haq, M. Carrington, T. Edwards, S.Stewart, C.Wong *eGFR, Can Predict Diastolic Dysfunction in Diabetic Patients; Experience from NIL-CHF Study*, Heart, Lung and Circulation Vol. 20 Supplement 2

K. Soon, N. Wan Salam, S. Klim, F. Brown, C.Wong, A. Kelly, Y. Lim, *Myocardial Bridging on Cardiac CT-Clinically Significant? CIMBOCA Study* Heart, Lung and Circulation Vol. 20 Supplement 2

S. Biswas, K. Soon, C.Wong, N. Cox, Y. Lim, *Stent Post-Dilatation in ST-Elevation Myocardial Infarction-Beneficial or Detrimental? PODAMAS study*, Heart, Lung and Circulation Vol. 20 Supplement 2

K. Soon, O. Tumor, A. Adel, S. Reeves, C. Wong, F. Brown, *New Scanning Technique Using Adaptive Statistical Iterative Reconstruction (ASIR) Significantly Reduced the Radiation Dose of Cardiac CT*, Heart, Lung and Circulation Vol. 20 Supplement 2

"*New scanning technique using Adaptive Statistical Iterative Reconstruction (ASIR) significantly reduced the radiation dose of cardiac CT*". Accepted for presentation at the 6th Annual Scientific Meeting of Society of Cardiac CT, Denver, USA and 59th Annual Scientific Meeting of CSANZ 2011, Perth, Western Australia

"*NSTEMI with occluded artery (NSTEMIOA)-prevalence and clinical significance*". Accepted for presentation at the 59th Annual Scientific Meeting of CSANZ 2011, Perth, Western Australia

"*Myocardial Bridging on Cardiac CT-Clinically Significant? CIMBOCA study*". Accepted for presentation at the 59th Annual Scientific Meeting of CSANZ 2011, Perth, Western Australia

"*Prospective Validation of GRACE Freedom-from-Event score*". Accepted for presentation at the 59th Annual Scientific Meeting of CSANZ 2011, Perth, Western Australia

"*Low positive troponin elevations: Prevalence and clinical outcome*". Accepted for presentation at the 59th Annual Scientific Meeting of CSANZ 2011, Perth, Western Australia

Drug and Alcohol Services

Drug and Alcohol Services comprise Addiction Medicine & Toxicology, Adolescent Medicine, ADR Clinic and a range of community-based programs (former DASWest). During 2011, Dr McDonough received a grant towards our development of a Chronic Disease Management program focused upon patients with multiple co-morbid conditions which are further complicated by addiction.

The first phase of this project was to review the relevant literature, develop a model and present it for peer review at the National APSAD Conference (November 2011, Hobart). Thereafter, the key elements of this model have been submitted for incorporation into a specific software-based program, due for completion in early 2012. Dr McDonough also reviewed and described two clinical case series, one comprising combination analgesic abusers (published as a letter in MJA) and another, comprising suspected cases of Cannabis Hyperemesis (Poster at APSAD Conference).

Dr McDonough joined a collaborative research project with Professor Jon Currie (St Vincent's) and Associate Professor S. Bowden (The University of Melbourne) which successfully achieved an NHMRC Grant to investigate Thiamine dosing in cases of suspected Wernicke's Encephalopathy. This project will commence in 2012 (HREC approved). Marcus Forsyth NP completed an Evaluation of Nurse Practitioner model in Addiction Medicine, focusing on outpatient care delivery.

Associate Professor Yvonne Bonomo and Jenny Schwarz also developed a "best practice" model for Assessing and Managing Adolescents with complex Substance Use Disorders and presented this at APSAD Conference.

Dr Helen Sweeting and Justine Ruolle set up a database to collect descriptive and treatment outcome information on patients with chronic pain and concurrent Opioid Use Disorders/Addiction.

Dr Wendy Schaffer undertook a clinical audit reviewing patients who had absconded during hospital inpatient treatment.

OUR RESEARCH

Is there a Cannabis Hyperemesis Syndrome?

Mike McDonough, Dr. Ian Kronborg

The aim of this study is to refute that such a syndrome has any evidence-based legitimacy. Increased recognition may not be justified: other possible causes.

Addiction and Chronic Disease Management

Mike McDonough, Collaborators: Dept. of Health (Funders) RACGP: Special Interest Group Regional GPs

The aim of this study is to develop a different approach to management of Addiction with medical and psychiatric comorbidity. This enables treating addiction in conjunction with other often related diseases.

Thiamine dosing in Wernicke's Encephalopathy

Mike McDonough, Collaborators: Prof J. Currie (Dept Addiction Medicine, St Vincent's Hospital), A/Prof S. Bowden (Dept Neuropsychology, The Melbourne University)

This is a trial to determine the appropriate and safe thiamine dose in treating Wernicke's encephalopathy. Many clinicians are already giving higher doses where the evidence is relatively poor. The results from trial will determine whether the currently recommended dose is less effective than a higher dose.

Applying NUCOG in patients with Addiction

Mike McDonough, Collaborators: Dr Wendy Schaffer; Dr M. Walterfing

Chronic Pain, Opioid Use Disorders and Outcomes

Helen Sweeting

HPA and cortisol responses in Adolescents with Substance Use Disorders

Yvonne Bonomo, Collaborators: J. Schwarz; Professor P. Ebeling Melbourne University

This study investigates brain "stress-responding" in Adolescents with Substance Use Disorders helps and determines how and why adolescent brains respond differently to some stressors.

Home-Based Withdrawal: A Program Evaluation

Dimce Kotevski, Collaborators: R. Tooley; M. Forsythe

Drug & Alcohol RN Practitioner: Outpatient Model Evaluation

Marcus Forsythe

Adolescents with Substance Use Disorders: Assessment Process Evaluation

Yvonne Bonomo, Collaborator: J. Schwarz

This study evaluates how Adolescent Substance Use Disorders are best assessed within our treatment system. This helps us identify problems in our treatment process and identifies particular needs of adolescents in contrast to other patients within our, predominantly adult, service system.

OUR RESEARCHERS

Dr Mike McDonough: Head of Western Health's Drug and Alcohol Services

Dr Helen Sweeting: Addiction Medicine Physician

Associate Professor Yvonne Bonomo: Physician in Adolescent & Addiction Medicine

Dr Wendy Schaffer: Senior Medical Psychologist

Dr Ian Kronborg: Head of Gastroenterology

Ms Jenny Schwarz: Research Nurse in Adolescent Medicine

Ms Justine Ruolle: Team Leader, Adult Services

OUR PUBLICATIONS

McDonough M. *Misuse of codeine-containing combination analgesics.* MJA 2 May 2011; Vol 194, Number 9 pp 486 (letter)

PROCEEDINGS

Maria Grazia Pricone, Michael McDonough, Olaf H, Drummer & Dimitri Gerostamoulos. *Review Of Deaths in Subjects Commencing A Methadone Maintenance Program:15 year follow-up.* TIAFT Annual Conference, San Francisco, 2011

McDonough, M. *Does a Cannabis Hyperemesis Syndrome Exist?*, APSAD National Conference, Hobart, Nov. 2011

McDonough, M. *Addiction & Chronic Disease Management.* APSAD National Conference, Hobart, Nov. 2011

Sweeting, H; Ruolle, J, McDonough, M, *Defining a Population of Chronic Pain Patients Attending a Drug & Alcohol Service.* APSAD National Conference, Hobart, Nov. 2011

Bonomo, Y; Schwarz, J. *An Evaluation of a Model for the Assessment of Adolescents with Substance Use Disorders.* APSAD National Conference, Hobart, Nov. 2011

Forsythe, M. *Drug & Alcohol RN Practitioner: Outpatient Model Evaluation.* APSAD National Conference, Hobart, Nov. 2011

Justine Ruolle (right) together with Drug and Alcohol Services colleagues Helen Gliwa (left) and Rebecca Tooley (centre)



Emergency Medicine

The Joseph Epstein Centre for Emergency Medicine Research's aim is to perform high quality clinical research in the areas of emergency medicine and prehospital care. Its research interests are broad with key themes of acute cardiology, blood gases in clinical care, clinical therapeutics and knowledge translation. The Centre works closely with the three emergency department campuses of Western Health (at Footscray, Sunshine and Williamstown) which together treat more than 125,000 patients annually.

In 2011, the Centre had 11 publications in scientific journals and conducted eight research projects, continuing to build the research theme of acute cardiology, particularly diagnosis of ACS and risk stratification of patients with chest pain. In 2012, it will commence a major study validating various biomarker strategies, clinical decision rules and risk scores for the safe rule out of acute coronary syndrome in patients with chest pain.

OUR RESEARCHERS

Professor Anne-Maree Kelly: Director, JECEMR

Dr David Krieser: Honorary Fellow, JECEMR

Sharon Klim: Research Coordinator

Kerrie Russell: Research Assistant

Wan Nurulfaiza Akmal Wan Salam: AMS Student

Hao Nan (John) Du: AMS Student

OUR RESEARCH

Biomarkers in chest pain validation study

Anne-Maree Kelly, Sharon Klim and Kean Soon

This study aims to test various approaches to ruling out acute coronary syndrome using biomarkers and a clinical decision rule. Results will inform development of future pathways to accurately identify and rule out heart attack resulting in less inconvenience for patients and better ED flow.

End Of Life Issues -Withdrawal of Treatment

Anne-Maree Kelly, Sharon Klim, Collaborator: Phillip Richardson (QLD)

Validation of High Risk Criteria for Subarachnoid Haemorrhage

Anne-Maree Kelly, Nicola Millar, Simon Edward and Sharon Klim

Western Health's three emergency departments together treat more than 125,000 patients each year



Factors affecting positive blood cultures in pneumonia (completed)

Mark Patterson, Anne-Maree Kelly and Sharon Klim

Comparison of False Positive Blood cultures taken in ED by site of collection (completed)

Anne-Maree Kelly, Sharon Klim

The Relationship Between Troponin Level and Outcome in COAD (completed)

Anne-Maree Kelly, Sharon Klim

Non -ST Elevation Myocardial infarction with Occluded Artery (NSTEMI-OA) (completed)

Kean Soon, John Du Anne-Maree Kelly Collaborator: CCVT

Clinical Implications of Myocardial bridging of Coronary Arteries (CIMBOCA) (completed)

Kean Soon Anne-Maree Kelly, Wan Nurulfaiza, Akmal Wan Salam, Sharon Klim Collaborator: CCVT

OUR PUBLICATIONS

Bernard SA, Smith K, Cameron P, Masci K, Taylor DM, Jamie Cooper D, Kelly AM, Silvester W. *for the Rapid Infusion of Cold Hartmanns (RICH) Investigators. Induction of pre-hospital therapeutic hypothermia following resuscitation from non-ventricular fibrillation cardiac arrest.* Crit Care Med 2011 epub ahead of print Oct 20

Kelly AM, Klim S. *How Common are Ventricular Arrhythmias in Patients Admitted to CCU with Chest Pain and a Non Ischaemic ECG?* Heart Asia 2011;48e50. doi:10.1136/ha.2010.002980

Kelly AM, Klim S. *Agreement Between Arterial and Transcutaneous pCO₂ in Patients Undergoing Non-Invasive Ventilation.* Respir Med 2011;105:226-9

Kelly AM. *Performance Of A Sensitive Troponin Assay In The Early Diagnosis Of Acute Myocardial Infarction in the Emergency Department.* Emerg Med Australas 2011 ;23:181-5

Kelly AM, Nguyen K, Krieser D. *Validation of the Luscombe Weight Formula for Estimating Children's Weight.* Emerg Med Australas 2011;23:59-62

Lim BL, Kelly AM. *Are Butyrophenones Effective for the Treatment of Primary Headache in the Emergency Department?* Can J Emerg Med 2011;13:96-104

Delaney B, Loy J, Kelly AM. *The Relative Efficacy of Adenosine versus Verapamil for Treatment of Stable Paroxysmal SVT in Adults: A Meta-analysis.* Eur J Emerg Med 2011; 18:148-52

Ong S, Kelly AM, Gunn B. *Failed Validation of the Quebec Shoulder Dislocation Rule for Young Adult Patients in an Australian Emergency Department.* CJEM 2011;13:150-4

Kelly AM. *What's New for Emergency Medicine in the Heart Foundation's 2011 Addendum to its Guidelines for the Management of Acute Coronary Syndromes?*, Emerg Med Australas 2011; 23:517-20

Kelly AM. *Nurse-Initiated Analgesia Improves Patients' Pain Experience: Time for Change?* Evid Based Nurs. 2011;14:115-6

Chew D, Aroney C, Aylward P, Kelly AM, White H, Tideman P et al, 2011. *Addendum to the National Heart Foundation of Australia/Cardiac Society of Australia and New Zealand Guidelines for the Management of Acute Coronary Syndromes (ACS) 2006.* Heart Lung Circ. 2011;20:487-502

Kelly AM. *Is the Australasian College for Emergency Medicine trainee research project bar now too high?* Emerg Med Australas. 2011 Dec;23(6):779-80

OUR PRESENTATIONS

Professor Anne-Maree Kelly

External Validation of GRACE Freedom-from-Event Score for Patients Admitted With Chest Pain, Society for Academic Emergency Medicine, Boston

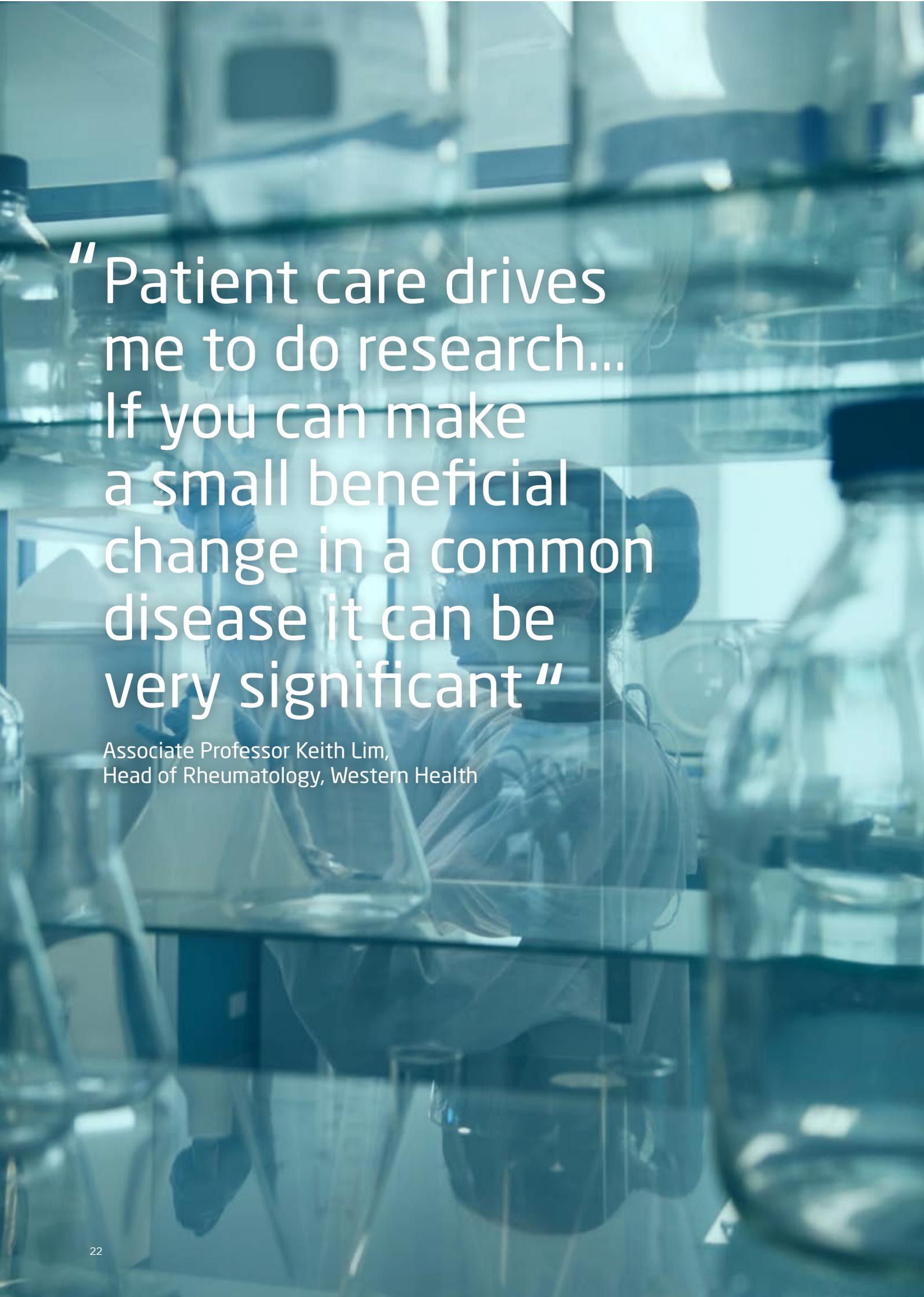
The Relationship Between Serum Troponin Level And Mortality In Acute Exacerbations Of Chronic Obstructive Pulmonary Disease, Society for Academic Emergency Medicine, Boston

Arterial and Venous Blood Gases in Emergency Medicine; What We Know and What We Don't, ACEM Winter Symposium, Queenstown

OUR AWARDS

Nurses Board Victoria Legacy Limited Grant.

Standardised Handover to Improve Nursing Care in the Emergency Department, [Kerr D, McCann T, Kelly AM, Klim S] \$19729



“Patient care drives me to do research... If you can make a small beneficial change in a common disease it can be very significant”

Associate Professor Keith Lim,
Head of Rheumatology, Western Health

Gastroenterology

The Department of Gastroenterology has undertaken a number of research activities in 2011 to improve the current standard of care provided to patients with gastrointestinal and liver disease. The Registrars attached to the Unit have conducted a number of quality audits to improve the current practices. In addition, the Department has collaborated in a number of multicentre trials which expose Western Health to the wider research community.

The Department has collaborated in six multicentre trials, with trainees conducting four projects in 2011. The participation in the multi-centre trials has given Western Health patients the opportunity to access newer and more effective treatment for chronic Hepatitis C and Hepatitis B. The Registrar projects have led to the refinement of the current clinical practice. An audit into the use of Terlipressin in Hepatorenal syndrome in Western Health has led to the development of protocol for use of Terlipressin and streamlining of the approval of Terlipressin through pharmaceutical utilisation committee. The future research objectives in 2012 are to explore whether current management of chronic liver diseases at Western Health is consistent with published guidelines, explore new endoscopic techniques, in particular use of laser in endoscopy and explore the management of nutrition in chronic liver disease and gastrointestinal diseases.

OUR RESEARCH

Comparative Study of Diagnostic Yield of 25G Vs. 22G Needle in Endoscopic Ultrasound (EUS) Guided Fine Needle Aspirate (FNA) of Solid Lesions

A. U Muruganathan, T Hong, R Chen

Longitudinal Surveillance Of Sub Mucosal Tumours By Endoscopic Ultrasound

T Hong, A Muruganathan, T Chen, Q. Arroyo (St Vincent's Hospital Melbourne)

Terlipressin Use And Outcomes In Hepatorenal Syndrome

Hong TP, Biehl N, Arachchi N, Kronborg I

EUS-FNA-A Useful Method In The Diagnosis Of Pancreatic Tuberculosis.

Muruganathan AU, Chen RY, Collaborators: Martinez QA, De Cruz P, Desmond P (SVH)

Malnutrition Screening in Hospital Inpatients

AU Muruganathan, J French, A Niap, N Vijaratnam, I Kronborg

Audit On Insertion Of Percutaneous Gastrostomy Tubes At Western Health

Maqbol N, Kronborg I, French J, Hong TP

OUR RESEARCHERS

Dr Ian Kronborg: Director of Gastroenterology

Dr Alan Moss: Director Endoscopic Services

Marian Croft: Research Nurse

OUR PUBLICATIONS

Martinez QA, De Cruz P, Muruganathan AU, Desmond P, Chen RY. *EUS-FNA-a useful method in the diagnosis of pancreatic tuberculosis*. ANZ Journal of Surgery- Accepted for publication

Philpott H, Boussioutas A, Kronborg I, Zanatti S, Dow C. *Gastrointestinal: Tuberculosis of the sigmoid colon-a cautionary tale*. Journal Of Gastroenterology and Hepatology, 2011 Nov; Vol. 26 (11), pp. 1692.

Kronborg I, Sasadeusz JJ, Dore G, Barton D, Yoshihara M, Weltman M. *Clinical experience with the treatment of hepatitis C infection in patients on opioid pharmacotherapy*. Addiction, 2011 May; Vol. 106 (5), pp. 977-984

OUR AWARDS AND GRANTS

2011 Neville Yeomans Research Prize: Nadia Maqbol, *Audit on Percutaneous gastrostomy tube insertions at Western Health Dept of Research \$1000*

General Medicine

The Department of General Medicine manages approximately 3400 inpatients annually, mainly elderly (40% aged over 80) with multiple co-morbidities and complex care needs.

Often inadequate evidence supports clinical decision making for this population, even for common clinical scenarios. Starting with community acquired pneumonia and congestive cardiac failure, we have designed clinical audits to better define these conditions, patient population characteristics, determinants of adverse outcomes and to critically evaluate our management compared to existing consensus guidelines. Analysis of management and outcomes before and after implementation of hospital guidelines for both conditions will also evaluate effectiveness of these interventions in terms of improving patient outcomes. A more ambitious 2012 program will investigate undifferentiated fever and sepsis, urinary tract infection, acute coronary syndromes, chronic obstructive airways disease exacerbations, musculoskeletal problems and bariatric surgery outcomes. Projects will be largely driven by General Medicine Advanced Trainees. Information gained will generate more specific research questions, future prospective studies and modified interventions to improve effectiveness and efficiency in patient management.

In a recently published multicentre trial on improving appropriate VTE prophylaxis rates, those at Western Health were now amongst Australia's best.

In an NHMRC Partnership Grant (Deakin, Flinders & Melbourne Universities, Victorian and South Australian Governments and Diabetes Australia) Professors Janus and Ebeling work on a gestational diabetes register to ensure long term follow up and an intervention (MAGDA) to decrease progression of GDM mothers to type 2 diabetes. Julie Nunn is RA for the Sunshine site

Professor Janus also works on MDPS (NHMRC Melbourne Diabetes Prevention Project) and Diabetes Australia's Life! Program for diabetes prevention in 25,000 Victorians. He collaborates on The Hong Kong Cardiovascular Risk Factor Study, which he set up in 1994 -1996. It has completed its 12 year follow up and resulted in many publications. Dr Karunajeewa continues international collaborative research on malaria.

OUR RESEARCHERS

Professor Edward Janus: Head of Unit

Professor Peter Ebeling: See under Medicine and Endocrinology

Dr Harin Karunajeewa Physician: Director of Research, Division of Medicine

Dr Mahesan Anpalahan: Physician

Dr Craig Nelson: Physician: see under Nephrology

Dr Kushma Nand: Physician: see under Nephrology

Associate Professor Vicki Levidiotis: Physician: see under Nephrology

Dr Adrian Tramontana: Physician: Infectious diseases

Associate Professor Keith Lim: Physician: see under Rheumatology

Ms Sofi Milenkovski: Research nurse, multicentre VTE project

Ms Julie Nunn: Research assistant NHMRC MAGDA Study (Mothers after gestational diabetes in Australia)

OUR RESEARCH

Melbourne Diabetes Prevention study MDPS

Edward Janus, Collaborators: JA Dunbar, RC Carter, E Vartianen

A major problem in our Western catchment area is the rapidly increasing prevalence of diabetes and associated cardiovascular disease. Numerous prevention strategies are in place and this study aims to evaluate the cost effectiveness of Type 2 diabetes prevention in Victoria.

Mothers after Gestational Diabetes in Australia MAGDA

Edward Janus, Peter Ebeling, Collaborators: JA Dunbar, JD Best, RC Carter, J Oats, P Reddy, J Carnie and P Phillips

The aim of this multi partners study is to ensure appropriate follow up (National register) and intervention for women with gestational diabetes to prevent progression to Type 2 diabetes which is a common problem in our Western catchment area especially in migrant women.

Audit of management of community acquired pneumonia (CAP) by the General Medical Service and the impact of defined management guidelines

Julia Girdwood, Eloise Williams, Harin Karunajeewa, Edward Janus

This audit aims to define the nature of CAP in our patient cohort, and determinants of adverse outcomes and to critically evaluate our management in reference to existing consensus guidelines.

Audit of the management of congestive cardiac failure by the General Medical Service and the impact of defined management guidelines

Prasana Rodrigo, Harin Karunajeewa, Edward Janus

Improving adherence to local guidelines for better patient outcomes in community acquired pneumonia

Mimi Chu (Pharmacy), Edward Janus, Harin Karunajeewa, Collaborators: Anne-Marie Southcott (Respiratory Medicine), Garry Lane (Infectious Diseases) David Fong (Centre for Medicine Use and Safety, Monash University)

Thromboprophylaxis use in medical and surgical inpatients and the impact of an electronic risk assessment tool as part of a multifactorial intervention

Edward Janus and Sofi Milenkovski Collaborators: A Bassi, D Jackson, H Nandurkar and M Yates

OUR PUBLICATIONS

Knox J, Lane G, Wong J, Trevan P, Karunajeewa H. *Diagnosis of Tuberculous Lymphadenitis Using Fine Needle Aspiration Biopsy*. Internal Medical Journal. 2012 (accepted for publication in 2011)

Manning L, Laman M, Law I, Bona C, Aipit S, Teine D, Warrell J, Rosanas-Urgell A, Lin E, Kiniboro B, Vince J, Hwaiwhanje I, Karunajeewa H, Michon P, Siba P, Mueller I, Davis TM. *Features and Prognosis of Severe Malaria Caused by Plasmodium falciparum, Plasmodium vivax and Mixed Plasmodium Species in Papua New Guinean Children*. PLoS One. 2011;6(12):e29203. Epub 2011 Dec 22

Manning L, Laman M, Page-Sharp M, Salman S, Hwaiwhanje I, Morep N, Siba P, Mueller I, Karunajeewa HA, Davis TM. *Meningeal Inflammation Increases Artemether Concentrations in Cerebrospinal Fluid in Papua New Guinean Children Treated with Intramuscular Artemether*. Antimicrob Agents Chemother. 2011 Nov;55(11):5027-33. Epub 2011 Aug 22

Barnadas C, Koepfli C, Karunajeewa HA, Siba PM, Davis TM, Mueller I. *Characterization of Treatment Failure in Efficacy Trials of Drugs Against Plasmodium Vivax by Genotyping Neutral and Drug Resistance-Associated Markers*. Antimicrob Agents Chemother. 2011 Sep;55(9):4479-81. Epub 2011 Jun 27

Davis WA, Clarke PM, Siba PM, Karunajeewa HA, Davy C, Mueller I, Davis TM. *Cost-Effectiveness of Artemisinin Combination Therapy for Uncomplicated Malaria in Children: Data from Papua New Guinea*. Bulletin of the World Health Organisation 2011; 81(3): 211-20

Wong RPM, Karunajeewa H, Mueller I, Siba P, Zimmerman PA, Davis TME. *Novel Molecular Assessment of Plasmodium Falciparum Resistance to Antimalarial Drugs in Papua New Guinea*. (Antimicrobial Agents and Chemotherapy) 2011; 55(2): 798-805

Manning L, Laman M, Edoni H, Mueller M, Karunajeewa HA, Smith D, Hwaiwhanje I, Siba PM, Davis TME. *Subacute Sclerosing Panencephalitis in Papua New Guinean Children: the Cost of Continuing Inadequate Measles Vaccine Coverage*. PLoS Neglected Tropical Diseases 2011; 5(1) e932

Ng BL, Anpalahan M. *Management of Chronic Kidney Disease in the Elderly*. Internal Medicine Journal 2011; 761-768. (VOL CHECK)

Dunbar JA, Davis-Lameloise N, Philpot B, Reddy P, Bunker S, Heistaro S, Laatikainen T, Janus ED, (2010). *Sustained Gains from a Diabetes Prevention Program and the Role of Telephone Support*. International Journal of Diabetes Mellitus 2:95-100

Anpalahan M, Janus ED, (2010). *Communication Between Primary and Secondary Care Centres. The Results of the Planning Phase of a Quality Improvement Study*, Australian Association for Quality in Health Care Journal 20:22-27

McNamara KP, Johnson G, O'Reilly SL, Jackson SL, Peterson GM, Howarth H, Bailey MJ, Duncan G, Trinder P, Morabito E, Finch J, Bunker S, Janus ED, Emery J, Dunbar JA, (2010). *Engaging Community Pharmacists in the Primary Prevention of Cardiovascular Disease: Protocol for the Pharmacist Assessment of Adherence, Risk and Treatment in Cardiovascular Disease (PAART CVD) Pilot Study (2010)*. BMC Health Services Research, (IF 1.72) 10:264 doi:10.1186/1472-6963-10-264

Vartiainen EA, Laatikainen T, Philpot B, Janus ED, Davis-Lameloise N, Dunbar JA, (2011). *The Projected Impact of Population and High Risk Strategies for Risk Factor Control on Coronary Heart Disease and Stroke Events*. Med J Aust (IF 2.89) 194:10-15

Janus ED, Bassi A, Jackson D, Nandurkar H, Yates M, (2011). *Thromboprophylaxis Use in Medical and Surgical Inpatients and the Impact of an Electronic Risk Assessment Tool as Part of a Multifactorial Intervention. A Report on Behalf of the Elvis Study Investigators, Journal of Thrombosis and Thrombolysis (IF 1.539 in 2010) 32:279-287 :(DOI) 10.1007/s11239-011-0602-9*

General Medicine

Chen C, Tso AWK, Cheung BMY, Law LSC, Ong KL, Wat NMS, Janus ED, Xu A, Lam KSL. *Plasma Concentration of Pigment Epithelium-Derived Factor is Closely Associated with Blood Pressure and Predicts Incident Hypertension in Chinese: a 10 Year Prospective Study*. Clinical Endocrinology (IF 9.191 in 2010) (accepted 13 July 2011) DOI:10.1111/j.1365-2265.2011.04178x

Yeung CYY, Tso AWK, Cheung BMY, Xu A, Fong CHY, Ong KL, Law LSC, Wat NMS, Janus ED, Sham PC, Lam KSL, (2011). *The KCNJ11 E23K Polymorphism and Progression of Glycaemia in Southern Chinese: a 12-Year Prospective Study*. PLoS ONE (IF 4.411 in 2010) (accepted 15 November 2011). 6(12):e28598. doi:10.1371/journal.pone.0028598

Hurt AC, Deng YM, Ernest J, Caldwell N, Leang L, Iannello P, Komadina N, Shaw R, Smith D, Dwyer DE, Tramontana AR, Lin RT, Freeman K, Kelso A, Barr IG. *Oseltamivir-Resistant Influenza Viruses Circulating During the First Year of the Influenza A(H1N1)2009 Pandemic in the Asia-Pacific Region, March 2009 to March 2010*. Euro Surveill. 2011;16(3):pii=19770

Leung S, Logiudice D, Schwarz J, Brand C. *Hospital Doctors' Attitudes Towards Older People*. Internal Medicine Journal, 2011 Apr; Vol. 41 (4), pp. 308-14

OUR PRESENTATIONS

McNamara KP, Janus ED, Philpot B, Dunbar JA. *Significant Challenges Remain to Achieve Risk Reduction Targets for Cardiovascular Secondary Prevention and Diabetes*. Heart Foundation Conference, Melbourne, Australia, 17-19 March, 2011

Philpot B, Janus ED, Davis-Lameloise N, McNamara KP, Dunbar JA. *The Implications of Diabetes Risk on Cardiovascular Disease Risk*. 6th International Symposium On Diabetes And Pregnancy, Salzburg, Austria, March 23-26, 2011

Abouzeid M, Philpot B, Davey M-A, Janus ED, Oats J, Dunbar JA. *Epidemiology of Gestational Diabetes in Victoria, Australia, 1999- 2008*. 6th International Symposium on Diabetes and Pregnancy, Salzburg, Austria, March 23-26, 2011

Lau R, Reddy P, Dunbar JA, Janus ED. *A Lifestyle Intervention to Prevent Gestational Diabetes from Progressing to Type 2 Diabetes*. 6th International Symposium on Diabetes and Pregnancy, Salzburg, Austria, March 23-26, 2011

Janus ED (by invitation). *Risk Stratification and Prognosis in PAD-is there A Difference Between Patients with PAD Alone and Patients with Combined*

PAD and CAD?, 1st Joint APSAVD-PLAS-PSVM Atherosclerotic Peripheral Arterial Disease (PAD) Forum, Manila, Philippines, 24 May, 2011

Guy SD, Tramontana AR, Lau E, Hicks RJ, Seymour JF, Thursky K, Worth LJ, Slavin MA. *18F Flourodeoxyglucose Positron Emission Tomography Computerised Tomography (FDG-PET CT) scanning in persistent febrile neutropenia; a pilot study*. 21st ECCMID/ 27th ICC Milan, Italy 7-10 May 2011

Davis-Lameloise N, Philpot B, Janus ED, Vartiainen E, Laatikainen T, Dunbar JA. *Are Farmers Especially at Risk of Cardiovascular Disease?* PHC Research Conference, Brisbane, Australia 13-15 July, 2011

Janus ED (by invitation). *NHMRC Partnership Grants-Finding and Working with Partners/CIs*. Deakin Developing Research Leaders Seminar, Melbourne 27 July, 2011

Janus ED (by invitation). *The MAGDA Project-Follow up After GDM*. J Oats Symposium, Royal Womens Hospital, Melbourne, 16 September 2011

Janus ED, Best JD, Davis- Lameloise N, Philpot B, Dunbar JA, on behalf of the MDPS Research Group. *Results from the preliminary Melbourne Diabetes Prevention Study*. 12th Hong Kong Diabetes and Cardiovascular Risk Factors-East meets West Symposium, Hong Kong, 1-2 October 2011

OUR GRANTS

NHMRC Project Grant 2009-11(extended to 2013): JA Dunbar, RC Carter, ED Janus, SK Lo, P Reddy, E Vartianen, *Life! vs Usual Care in Diabetes Prevention: a Critical Evaluation*. \$833,125

NHMRC Partnership Grant 2010-14: Dunbar JA, Best JD, Janus ED, Carter R, Oats J, Reddy P, Carnie J and Phillips P. With Als Ebeling P, Rando L, *Preventing Diabetes in Pregnancy from Progressing to Type 2 Diabetes: Macro-Level System Change in South Australia and Victoria*. \$1,292,000

Professor Edward Janus (left) with Dr Harin Karunajeewa (right)

A photograph of two men in business attire standing in a modern office hallway. The man on the left is wearing a light-colored shirt and tie, while the man on the right is wearing a dark suit. They are facing each other and appear to be in conversation. The hallway has large windows on the left and a white wall on the right. The lighting is bright and even.

“Rather than studying the patients, we are studying the system we have and what can make it work better for the patients”

Dr Harin Karunajeewa,
Director of Clinical Research, Western Health

Intensive Care

The crystalloid vs hydroxyethyl starch trial (C.H.E.S.T) is a large international multi-centre fluid study that was the main driver of ICU research for 2011.

All nursing and medical Intensive Care Unit staff were instrumental in recruiting 204 patients, and implementing the protocol for this trial. Fluid therapy is a fundamental component of haemodynamic management of critically ill patients, and we hope that this study will provide interesting result findings to help guide and update fluid therapy practice in the critically ill. The Intensive Care Unit would like to gratefully acknowledge the enormous contribution of all our staff as well as patients and their families to this very important study. The final stages of study completion are still occurring with patient follow-up and data analysis.

The Unit has also continued to work on local, national and international sponsored multi-centre studies. These have included a long-term outcomes study, data audits, and various sepsis trials. A major feature of many current research projects is the collaborative involvement with other departments. We are continuing to work closely with Emergency Medicine in a collaborative early sepsis trial in ED. We are also committed to many new projects for 2012 which will focus on further collaborative partnerships with the physiotherapy and blood bank departments of Western Health.

From left to right: Dr Forbes McGain, Associate Professor Craig French and Research Coordinators, Samantha Bates and Anna Tippett

OUR RESEARCHERS

Associate Professor Craig French: Director of Intensive Care

Dr John Mulder: Associate Director of Intensive Care

Dr Sathyajith Velandy Koottayi: Intensivist

Dr Forbes McGain: Intensivist/Anaesthetist

Dr Zia Ansari: Intensivist

Samantha Bates: Research Coordinator

Anna Tippett: Research Coordinator

Jenie Butler: (left WH in May 2011) Research Coordinator

OUR RESEARCH

Crystalloid versus Hydroxyethyl Starch Trial (C.H.E.S.T)
A multicentre randomised controlled trial of fluid resuscitation with starch (6% hydroxyethyl starch 130/0.4) compared to saline (0.9% sodium chloride) in intensive care patients on mortality

Associate Professor Craig French, Dr John Mulder, Dr Sathyajith Velandy Koottayi, Dr Forbes McGain, Collaborators: ANZICS CTG and the George Institute for International Health

Fluid resuscitation is a fundamental component of the haemodynamic management of critically ill patients and the choice of fluid is a longstanding issue of debate. Currently there is little high quality evidence available to clinicians in order to guide their clinical



decision-making. Worldwide, 6% hydroxyethyl starch 130/0.4 (Voluven®) has been administered to over 18 million patients and is currently one of the most widely used resuscitation fluids in the world. However, current evidence has left clinicians with uncertainty about its efficacy and safety. This study is randomising 7000 patients in over 30 Intensive Care Units around Australia and New Zealand to receive either normal saline 0.9% or 6% Hydroxyethyl Starch 130/0.4 for fluid resuscitation. This research is integral to guiding physician practice and management of resuscitation fluids in the critically ill.

A multicentre randomised controlled trial of early Goal Directed Therapy in Patients Presenting to the Emergency Department with Severe Sepsis in Australasia (The ARISE Trial)

A/Prof Craig French, Dr John Mulder, Dr Sathyajith Velandy Koottayi, Dr Forbes McGain, Dr Anne-Maree Kelly, Dr John Loy, Collaborator: ANZICS Clinical trials Group

A multicentre randomised double-blind placebo-controlled Phase IIb Study to Compare the Efficacy and Safety of Two Dosing Regimens of Intravenous Infusions of CytoFab (AZD9773) in Adult Patients With Severe Sepsis and/or Septic Shock

Dr Forbes McGain, A/Prof Craig French, Dr John Mulder, Dr Sathyajith Velandy Koottayi, Dr Zia Ansari Sponsored Drug Trial – Astra Zeneca

A multicentre randomised double-blind placebo-controlled trial of dexmedetomidine for patients with agitation and delirium in the intensive care unit (The Dahlia Study)

Dr John Mulder, A/Prof Craig French, Dr Sathyajith Velandy Koottayi, Dr Forbes McGain, Collaborator: Dr Michael Reade (Royal Brisbane & Womens Hospital)

Prolonged Outcome Study (POST)-RENAL

A/Prof Craig French, Dr John Mulder, Dr Sathyajith Velandy Koottayi, Dr Forbes McGain, Collaborator: ANZICS CTG

ANZICS Clinical Trials Group Point Prevalence Program (PPP)-2011

A/Prof Craig French, Collaborator: ANZIC Research Centre

BLISS Trial-A randomised double-blind placebo-controlled pilot trial of NGAL-directed sodium bicarbonate to protect renal function in patients with the systemic inflammatory response syndrome and oliguria

Dr Forbes McGain/A/Prof Craig French, Dr John Mulder, Dr Sathyajith Velandy Koottayi. Collaborators: Prof Rinaldo Bellomo (Austin Health)

A multicentre randomised double-blind placebo-controlled Phase 3 study of drotrecogin alfa (activated) administered as a continuous 96-hour infusion to adult patients with septic shock (PROWESS SHOCK)

A/Prof Craig French, Dr John Mulder, Dr Sathyajith Velandy Koottayi, Dr Forbes McGain, Sponsored Drug trial-Lilly

OUR PUBLICATIONS

Quilty S, Harris LM, Kewley J, Jones A, Pearce R, James R, McGain F. *A Pandora's Box: Sustainable Pharmaceutical Supply*. Med J Aust, 2011 195(9): 510-511.

Nichol A, Bailey M, Egi M, Pettila V, French C, Hart GK, Stachowski E, Reade MC, Cooper DJ, Bellomo R. *Dynamic Lactate Indices as Predictors of Outcome in Critically Ill Patients*. Critical Care, 10/2011, 15(5): R242

Pettila V, Westbrook AJ, Nichol AD, Bailey MJ, Wood EM, Syres G, Phillips LE, Street A, French C, Murray L, Orford N, Santamaria JD, Bellomo R, Cooper DJ. *Age of Red Blood Cells and Mortality in the Critically Ill*. Critical Care, 4/2011, 15(2): R116

McGain F, Sussex G, O'Toole JE, Story D. *What Makes Metalware Single-Use? Anaesthesia and Intensive Care*, Sept 2011, 39(5)

Finfer S, McEvoy S, Bellomo R, McArthur C, Myburgh J, Norton R, SAFE Study Investigators*. *Impact of Albumin Compared to Saline on Organ Function and Mortality of Patients with Severe Sepsis*. Intensive Care Medicine, 2011, Jan, 37(1), pp 86-96 (* = includes French, C. & Bates, S)

OUR PRESENTATIONS

Dr Forbes McGain. *How Sustainable is your Work?* 70th ASA National Scientific Congress 8-11 Sept 2011.

Medical Oncology and Haematology

Western Health Oncology and Haematology Unit is increasing its translational research capability, collaboration and trials participation in the Western Region through expanding the capacity of existing programs and promoting development of tumour streams. Western Health is the largest centre for bowel cancer treatment in Victoria.

Over the last year we have seen an improvement in cancer care outcomes through the translation of high quality laboratory and clinical research into the standard of care and routine settings. The clinicians at Western Hospital already have a very strong track record for data collection and have repeatedly demonstrated this through presentations and publications, and 23 trials opened in 2011. Most of these were industry supported trials but there has been a strong emphasis on cooperative group trials as well to improve our partnership with local bodies and national cancer initiatives. Clinical trials expand across all tumour groups and the portfolio at Western Health has grown significantly.

We now have a dedicated Medical Oncology Research Fellow and Haematology Research Fellow and have also employed a Clinical Trials Manager to the Unit as we acknowledge the growing need for expansion and improvement in patient care. Our Clinical Trials Nursing Unit has also expanded to support the growing demands.

We have been successful in obtaining a Victorian Cancer Agency grant in 2011 for clinical trials capacity and building. We have focused on a well established (colo-rectal) and a previously underserved (haematology) tumour stream, to build this capacity. We also have an established education program within the trials unit and are planning to support 2 nurses and two clinicians who will attend a Clinical trials masters program run by Melbourne University.

There have been many clinical initiatives implemented from research activities, especially in this era of biologics and molecular based treatments. As an

example, the CORRECT trial which ran at the Western Hospital randomised patients to regorafenib versus placebo. This was a positive trial recently presented. Regorafenib will now be supplied to patients via an access program with assistance from the industry until it is approved in Australia by regulatory authorities. Other clinical trials including PARP inhibitor trials give access to drugs that are not available in Australia.

We have participated in a range of Phase 1 to Phase 4 studies over the year through the administration of the Victorian Cancer Agency grant and support by Western Health, we aim to strengthen our role as a leading trial centre in Victoria. We expect to take a leading role in linking cancer research to clinical outcomes within Australia.

OUR RESEARCHERS

Professor Michael Green: Head of Department

Associate Professor Peter Gibbs: Principal Investigator

Dr Shirley Wong: Principal Investigator

Dr Dishan Gunawardana: Principal Investigator

Dr Sumi Ananda: Principal Investigator

Associate Professor Lara Lipton: Principal Investigator

Dr William Renwick: Principal Investigator

Dr Duncan Carradice: Principal Investigator

Dr Suzi Kosmider: Principal Investigator

Dr Jeanne Tie: Principal Investigator

Dr Richard DeBoer: Principal Investigator

Angela Baugh: Research Nurse

Catherine Morton: Research Nurse

Lisa Wilkinson: Study coordinator

Gina Akers: Research Nurse

Nathan Hope: Research Nurse

Jessica Mifsud: Research Nurse

Helen Brasier: Research Nurse

Thuy Nguyen: Research Nurse

Jessica Wakelin: Research Nurse

Siobhan Rainford: Research Nurse

OUR RESEARCH

Everilomus (RAD 001) in advanced Gastric cancer

A/Prof Lara Lipton

Everilomus is a targeted anti-cancer molecule with far fewer side effects than chemotherapy. It has shown great promise in a number of tumour types. This trial aims to improve survival of patients with advanced gastric cancer which is prevalent in the Western region of Melbourne due to the fact it is a common cancer amongst cultures that live in this area. It is a rapidly progressive cancer in which even a small improvement in outcome would make an enormous difference to these patients.

ALLG MDS4 Myelodysplasia

Dr Duncan Carradice ALLG

This trial compares azacitidine plus lenalidomide vs azacitidine alone in patients with myelodysplasia which was previously treated only symptomatically with best supportive care. Myelodysplasia is a significant disease in the elderly population and this trial enabled access for patients from Western Melbourne to a clinical trial locally, in which they otherwise would not be involved.

20060359 Denosumab in Adjuvant Breast Cancer

Dr Richard De Boer

Denosumab is a unique monoclonal antibody which improves bone density and decreases fractures in bones with metastases. It appears also to prevent progression of breast cancer in these bones. This trial will determine whether denosumab also improves survival in women with early breast cancer. Breast cancer is one of the most devastating diseases in women and any progress towards curing more women would be of great benefit.

STX0206 Colorectal with Liver Metastases

A/Prof Peter Gibbs

This study uses a novel radioactive isotope which is injected directly into the liver via the hepatic vessels. It has resulted in substantial long term remissions for patients with metastatic colon cancer involving the liver.

COUAA301 Metastatic Prostate

Dr Shirley Wong

This study explores the effectiveness and tolerability of Abiraterone for men with metastatic prostate cancer after treatment with standard chemotherapy. The options of treatment in these men are limited at this point of time, and Abiraterone provides an important

therapeutic option to them. It is important to our community because prostate cancer is one of the common cancers in our population.

ALTG BR.26

Dr Dishan Gunawardana

Abraxis-CA046 Gastro intestinal (Pancreatic)

A/Prof Lara Lipton, Dr Sumi Ananda

AGITG LAP 07 Pancreatic

A/Prof Lara Lipton AGITG

20080580 AMG 386 Hepatocellular carcinoma

A/Prof Lara Lipton

20080763 Panitumumab/Cetuximab Metastatic colorectal

A/Prof Peter Gibbs

AZA AML 001 Azacitidine for Acute Myeloid Leukemia

Dr William Renwick

ANZ Trial 18 Adjuvant Breast

Prof Michael Green, Collaborator: ANZ Breast cancer trials group

ANZ Trial 20 Adjuvant Breast

Prof Michael Green, Collaborator: ANZ Breast cancer trials group

ANZ LATER study Adjuvant Breast

Prof Michael Green, Collaborator: ANZ Breast cancer trials group

CC-5013 CLL study

Dr William Renwick

OTSUKA LAP-C Pancreatic

A/Prof Lara Lipton

IMCLONE CP12 0922 Metastatic Gastric Cancer

Dr Sumi Ananda

Ct DNA Stage II Colorectal Cancer

Dr Jeanne Tie, Collaborator: Ludwig Institute

Ct DNA Colorectal with Liver Metastases

Dr Jeanne Tie, Collaborator: Ludwig Institute

Medivation MDV3100 Prostate Cancer

Dr Shirley Wong

APEC CT348 Metastatic Colorectal

A/Prof Peter Gibbs

CTKI125 Metastatic Renal Cell

Dr Shirley Wong

Sirtex Pancreatic

A/Prof Lara Lipton

Wyeth 3144A2-3004 Adjuvant Breast

Dr Richard De Boer

Medical Oncology and Haematology

AFFIRM CRP C2 Prostate

Dr Shirley Wong

OUR PUBLICATIONS

Tomlinson IP, Carvajal-Carmona LG, Dobbins SE, Tenesa A, Jones AM, Howarth K, Palles C, Broderick P, Jaeger EE, Farrington S, Lewis A, Prendergast JG, Pittman AM, Theodoratou E, Olver B, Walker M, Penegar S, Barclay E, Whiffin N, Martin L, Ballereau S, Lloyd A, Gorman M, Lubbe S; COGENT Consortium; CORGI Collaborators; EPICOLON Consortium, Howie B, Marchini J, Ruiz-Ponte C, Fernandez-Rozadilla C, Castells A, Carracedo A, Castellvi-Bel S, Duggan D, Conti D, Cazier JB, Campbell H, Sieber O, Lipton L, Gibbs P, et al. *Multiple common susceptibility variants near BMP pathway loci GREM1, BMP4, and BMP2 explain part of the missing heritability of colorectal cancer.* PLoS Genet. 2011 Jun;7(6):e1002105. Epub 2011 Jun 2

Win AK, Dowty JG, English DR, Campbell PT, Young JP, Winship I, Macrae FA, Lipton L, et al. *Body mass index in early adulthood and colorectal cancer risk for carriers and non-carriers of germline mutations in DNA mismatch repair genes.* Br J Cancer. 2011 Jun 28;105(1):162-9. doi: 10.1038/bjc.2011.172. Epub 2011 May 10

Sakthianandeswaren A, Christie M, D'Andreti C, Tsui C, Jorissen RN, Li S, Fleming NI, Gibbs P, Lipton L, et al. *PHLDA1 expression marks the putative epithelial stem cells and contributes to intestinal tumorigenesis.* Cancer Res. 2011 May 15;71(10):3709-19. Epub 2011 May 10

Win AK, Dowty JG, Antill YC, English DR, Baron JA, Young JP, Giles GG, Southey MC, Winship I, Lipton L, et al. *Body mass index in early adulthood and endometrial cancer risk for mismatch repair gene mutation carriers.* Obstet Gynecol. 2011 Apr;117(4):899-905

Tie J, Lipton L, Desai J, Gibbs P, Jorissen RN, Christie M, Drummond KJ, Thomson BN, Usatoff V, Evans PM, Pick AW, Knight S, Carne PW, Berry R, Polglase A, McMurrick P, Zhao Q, Busam D, Strausberg RL, Domingo E, Tomlinson IP, Midgley R, Kerr D, Sieber OM. *KRAS mutation is associated with lung metastasis in patients with curatively resected colorectal cancer.* Clin Cancer Res. 2011 Mar 1;17(5):1122-30. Epub 2011 Jan 14

Gurrin LC, Church JM, Baron JA, Giles GG, Leggett BA, Winship I, Lipton L, Young GP, Young JP, Lodge CJ, Southey MC, Newcomb PA, Le Marchand L, Haile RW, Lindor NM, Gallinger S, Hopper JL, Jenkins MA. *Metachronous colorectal cancer risk for mismatch repair gene mutation carriers: the advantage of more*

extensive colon surgery. Parry S, Win AK, Parry B, Macrae FA. Gut. 2011 Jul;60(7):950-7. Epub 2010 Dec 30

McKay L, Frydenberg M, Lipton L, Norris F, Winship I. *Case report: renal cell carcinoma segregating with a t(2;3)(q37.3;q13.2) chromosomal translocation in an Ashkenazi Jewish family.* Fam Cancer. 2011 Jun;10(2):349-53

Tie J, Gibbs P. *Treatment With Unfunded Drugs In Oncology - The Impact Access Programs And Clinical Trials.* Internal Medicine Journal. Accepted Feb 2012

Tie J, Desai J. *Anti-angiogenic therapies targeting the VEGF signaling system.* Critical Reviews in Oncogenesis. Accepted Nov 2011

Bae S, Tie J, Desai J, Gibbs P., *Microsatellite Instability Status Is Critical to Analysis of Survival in Stage II Colon Cancer.* J Clin Oncol. 2012 Jan 9, (Epub ahead of print)

Tie J, Lipton L, Desai J, Gibbs P, Jorissen RN, Christie M, Drummond KJ, Thomson BNJ, Usatoff V, et al. *KRAS Mutation is Associated with Lung Metastasis in Patients with Curatively Resected Colorectal Cancer.* Clinical Cancer Research. 2011;17(5):1122-1130.

Tie J, Gibbs P, Lipton L, Christie M, Burgess T, Jorissen R, Langland R, Cheng S, Kosmider S, McKay D, Bollag G, Nolop K, Sieber O, Desai J. *Optimising targeted therapeutic development: Analysis of a colorectal cancer patient population with the BRAFV600E mutation.* Int J Cancer. 2011;128(9):2075-84

Tran B, Kopetz S, Tie J, Gibbs P, Jiang Z, Agarwal A, Maru D, Sieber O, Desai J. *Impact of BRAF Mutation and Microsatellite Instability on the Pattern of Metastatic Spread and Prognosis in Metastatic Colorectal Cancer.* Cancer. 2011 Mar 31. [Epub ahead of print]

Oakman C, Moretti E, Pestrin M, Di Leo A. *Treatment Strategies in Triple Negative Breast Cancer.* Treatment Strategies - Oncology. 2011 (in press)

Oakman C, Moretti E, Galardi F, Biagioni C, Santarpia L, Biganzoli L, Di Leo A. *Breast Adjuvant Systemic Treatment for Individual Patients with Triple Negative Breast Cancer.* 2011, in press

Oakman C, Santarpia L, et al. *Management of Aromatase Inhibitor-Resistant Disease with Estrogen, Selective Estrogen Receptor Down-Regulators, and Other Agents.* Current Breast Cancer Reports. 2011;3:24- 33

Oakman C, Moretti E, Santarpia L, Di Leo A. *Fulvestrant in the Management of Postmenopausal Women with Advanced, Endocrine-Responsive Breast Cancer.* Future Oncol. 2011;7:173-86



The Sunshine Hospital Radiation Therapy Centre opened in March 2011, and enables around 900 people a year from Melbourne's western suburbs to receive their cancer treatment closer to home

Oakman C, Tenori L, Claudino WM, Cappadona S, Nepi S, Battaglia A, et al. *Identification of a Serum-Detectable Metabolomic Fingerprint Potentially Correlated with the Presence of Micrometastatic Disease in Early Breast Cancer Patients at Varying Risks of Disease Relapse by Traditional Prognostic Methods.* *Ann Oncol.* 2011;22:1295-301

Kosmider S, Tan TT, Yip D, Dowling R, Lichtenstein M, Gibbs P. *Radioembolization in Combination with Systemic Chemotherapy as First-line Therapy for Liver Metastases from Colorectal Cancer.* *J Vasc Interv Radiol* 2011 Jun;22(6):780-6. Epub 2011 Apr 22

Tie J, Gibbs P, Lipton L, Christie M, Jorissen RN, Burgess1AW, Croxford5 M, Jones2 I, Langland R, Kosmider S, McKay D, Bollag G, Nolop K, Sieber OM, Desai J. *Optimizing Targeted Therapeutic Development: Analysis of a Colorectal Cancer Patient Population with the BRAFV600E Mutation.* *Int J Cancer.* 2011 May 1;128(9):2075-84

Field K, Platell C, Rieger N, Skinner I, Wattchow D, Jones I, Chen F, Kosmider S, Wohlers T, Hibbert M, Gibbs PA. *Lymph Node Yield Following Colorectal Cancer Surgery.* *NZ J Surg.* 2011 Apr;81(4):266-71. Epub 2010 Nov 17

Rischin D, Bibby DC, Chong G, Kremmidiotis G, Leske AF, Matthews CA, Wong SS, Rosen MA, Desai J. *Clinical, Pharmacodynamic, and Pharmacokinetic Evaluation of BNC105P: A Phase I Trial of a Novel Vascular Disrupting*

Agent and Inhibitor of Cancer Cell Proliferation. *Clinical Cancer Research: An Official Journal Of The American Association For Cancer Research,* 2011 Aug 1; Vol. 17 (15), pp. 5152-60

de Boer R, Arrieta R, Yang O, Gottfried CH, Chan M, et al. *Vandetanib Plus Pemetrexed for the Second-Line Treatment of Advanced Non-Small-Cell Lung Cancer: a Randomised, Double- Blind Phase III Trial.* *Journal of Clinical Oncology.* 29(8):1067-74, 2011 Mar 10

OUR BOOK CHAPTERS

Biganzoli L, Oakman C, Kunkler I and Audisio R. *Cancer and Aging: Research and Practice.* Chapter: Breast Cancer, Wiley Blackwell. 2011 (in press)

Oakman C, Moretti E, Pacini G, Santarpia L, Di Leo A. *Triple negative breast cancer: a heterogeneous subgroup defined by what it is not.* ECCO 16 Education Book 2011

OUR CONFERENCE

K Field , J Tie, J Desai, S Kosmider, J McKendrick, M Harold, P Gibbs. *Prescribing patterns for bevacizumab in first-line metastatic colorectal cancer: Exploring the introduction of a new drug into routine clinical practice.* American Society Clinical Oncology Gastrointestinal Cancers Symposium, 2012

Medical Oncology and Haematology

KM Field, J Desai, J Tie, S Kosmider, J McKendrick, M Harold, P Gibbs. *Chemotherapy for metastatic colorectal cancer: Patterns of treatment in routine Australian practice*. Australian Gastrointestinal Trials Group Meeting, 2011

KM Field, J Desai, J Tie, S Kosmider, Joe McKendrick, M Harold, P Gibbs. *Chemotherapy for metastatic colorectal cancer: Patterns of treatment in routine Australian practice*. Oncology Group of Australia Annual Scientific Meeting 2011

OUR GRANTS

NHMRC: Forbes, J. Mann, G. Boyle F. Green, M. Coates, A. Cuzik, J, *Prevention of Late Breast Cancer (BC) Events in Postmenopausal Women with Endocrine Responsive BC*. \$4,430,875 (2008-2012)

NHMRC: Forbes, J. Coates, A. Friedlander, M. McCarthy, N. Boyle F. Green, M. *A Clinical Trial Evaluating Neoadjuvant Chemotherapy for Women with Large Operable or Locally Advanced Breast Cancers*. \$259,500 (2008-2011)

NHMRC: Jeanne Tie, *Circulating Tumour DNA as a Marker of Complete Pathological Response and Long Term Outcome for Locally Advanced Rectal Cancer Treated with Pre-operative Chemoradiotherapy*. \$592,407(2011-2013)

Victorian Cancer Agency Grant: Green, M, Gibbs,P, Kosmider S, Tie J, Desai D, Carradice D, Renwick W, *Increasing Translational Research Capability, Collaboration and Trials Participation in the Western Region Through Expanding Capacity of Existing Programs and Promoting Developing Tumour Streams*. \$250,000 (2012-2014)

“Taking part in medical research is important... I look at it as a form of volunteering”

Carl Dittloff,
Oncology patient at Western Health



Medicine and Endocrinology

Research in the Departments of Medicine and Endocrinology is linked with the discipline of Endocrinology in its broadest sense, but focuses on the theme of chronic disease prevention in two main areas, namely osteoporosis and diabetes mellitus. This research stream is closely linked with our clinical services, which treats patients with these conditions, both within Western Health but also in outreach Endocrinology Clinics throughout the Western suburbs of Deer Park, Footscray and Melton.

We aim to be national leaders in these areas and also internationally competitive, as shown by the high numbers of our publications in prestigious high-ranking international Journals and by our competitive grant success. There have been at least 14 ongoing research projects during 2011; including several funded by NHMRC, Osteoporosis Australia, Diabetes Australia Research Trust and the Heart Foundation. There is a large number of postgraduate research students employed in performing this research.

One of the studies was completed in late 2011 and data is being analysed. It used a community-based dynamic, high resistance exercise program to prevent osteoporosis in older individuals with low bone density and was exclusively based in the western suburbs of Melbourne. If successful, it will be implemented by Osteoporosis Australia throughout Australia. Our future research objectives are to expand our research by joining forces with Western Health and Victoria University to form the Australian Institute of Musculoskeletal Science, and also to continue to perform collaborative research with the research team involved in the NHMRC Centre for Research Excellence in Sun and Health, with members being associated with QUT and QIMR in Queensland, ANU in Canberra and the University of Melbourne at Western Health.

OUR RESEARCHERS

Professor Peter Ebeling: Head of Endocrinology, Western Health and Chair, NorthWest Academic Centre, University of Melbourne

Associate Professor Kerrie Sanders: Principal Scientist

Associate Professor Robin Daly: Principal Scientist

Dr Sharon Brennan: Research Fellow

Dr Leo Rando: Endocrinologist Consultant

Dr Vivian Grill: Endocrinologist Consultant

Dr Claudia Gagnon: Research Fellow

Kleo Hondros: Research Coordinator

Charlotte Morgans: Unit Manager

Amanda Stuart: Research Assistant

Mary Coole: Diabetes Research Coordinator

Catherine Shore-Lorenti: Research Assistant

OUR RESEARCH STUDENTS

Jwu Jin Khong: PhD

Haslinda Gould: PhD

Tania Fernandes: PhD

John Sheedy: PhD

Jenny Gianoudis: PhD

Renee Otmar: PhD

Belal Khan: PhD

Yu Zhang: PhD

Catherine Shore-Lorenti: Honours

Khoa Dang Truong: Masters

OUR RESEARCH

A Randomised Open-Label Study to Evaluate the Safety and Efficacy of Denosumab and Monthly Actonel Therapies in Postmenopausal Women Transitioned from Weekly or Daily Alendronate Therapy

Principal Investigator: Prof. Peter Ebeling Sponsor initiated study – Amgen

An Open Label, Single Arm, Extension Study to Evaluate the Long Term Safety and Sustained Efficacy of Denosumab (AMG 162) in the Treatment of



Professor Peter Ebeling, Head of Endocrinology, Western Health and Chair, NorthWest Academic Centre, University of Melbourne

Postmenopausal Women

Principal Investigator: Prof. Peter Ebeling Sponsor initiated Study - Amgen

A randomised double-blind placebo-controlled Study to Evaluate the Efficacy and Safety of Cinacalcet for the Treatment of Hypercalcaemia in Subjects with Primary Hyperparathyroidism Unable to Undergo Parathyroidectomy

Principal Investigator: Prof. Peter Ebeling Sponsor initiated Study - Amgen

A multi-centere, double-blind, placebo-controlled Study to Determine the Efficacy, Safety and Tolerability of AMG 785 in Adults with a Fresh Unilateral Hip Fracture, Status Post Surgical Fixation

Principal Investigator: Prof. Peter Ebeling Sponsor initiated Study-Amgen

The Australian Study of Cost and Utilities Related to Osteoporotic Fractures

Principal Investigator - Prof. Peter Ebeling Investigator Initiated Study

Investigating the Psychosocial and Socioeconomic Predictors of Osteoporosis.

S.Brennan and G. Nicholso NHMRC Training Fellowship

Relationship Between Cartilage and Trabecular Bone Microstructure in Older Adults

C. Bailey, RM Daly and F Cicuttini The University of Melbourne Early Career Researcher Grant

The Australian Study of Cost and Utilities Related to Osteoporotic Fractures.

Sanders KM, Merck, Sharp & Dohme (Australia) Ltd.

Does Teriparatide Reverse Osteonecrosis of the Jaw in Patients with Cancer? A RCT

PR Ebeling, G.Borromeo and J.Seymour NHMRC Project Grant

Bisphosphonate Therapy with Zoledronate or Tenofovir Switching to Improve Low Bone Mineral Density in HIV Infected Adults: a Strategic, Randomised Trial

A.Carr, J.Hoy, PR Ebeling, N.Pocock, NHMRC Project Grant

OUR PUBLICATIONS

Sharon Brennan

Brennan SL, Henry MJ, Kotowicz M, Nicholson G, Zhang Y, Pasco J, 2011. *Incident hip fracture and social disadvantage in an Australian population aged 50 years or greater.* Bone, 48 (3): 607-610

Brennan SL, Pasco JA, Cicuttini F, Henry MJ, Kotowicz MA, Nicholson G, Wluka A, 2011. *Bone mineral density is cross sectionally associated with cartilage volume in healthy, asymptomatic adult females: Geelong osteoporosis study.* Bone, 49: 839-844

Brennan S, Pasco J, Urquhart D, Oldenburg B, Wang Y, Wluka A, 2011. *Association between socioeconomic status and bone mineral density in adults: a systematic review.* Osteoporosis International, 22 (2): 517-527

Medicine and Endocrinology

Pasco JA, Brennan SL, Henry MJ, Nicholson G, Sanders K, Zhang Y, Kotowicz MA, 2011. *Changes in hip fracture rates in Southeastern Australia spanning the period 1994-2007*. Journal of Bone and Mineral Research, 26: 7

Pasco JA, Jacka FN, Williams LJ, Brennan SL, Leslie E, Berk M, 2011. *Don't Worry, Be Active: Positive Effect and Habitual Physical Activity*. Australian and New Zealand Journal of Psychiatry, 45: 1047-1052

Pasco J, Brennan S, Henry M, Nicholson G, Sanders K, Zhang Y, Kotowicz M, 2011. *Changes in Hip Fracture Rates in South-Eastern Australia Spanning the Period 1994-2007*. Journal of Bone and Mineral Research 26

Robin Daly

Ducher G, Bass S, Saxon L, Daly R, 2011. *Effects of Repetitive Loading on the Growth-Induced Changes in Bone Mass and Cortical Bone Geometry: A 12-Month Study in Pre/Peri- and Postmenarcheal Tennis Players*. Journal of Bone and Mineral Research, 26 (6): 1321-1329

Gagnon C, Lu Z, Magliano D, Dunstan D, Shaw J, Zimmet P, Sikaris K, Grantham N, Ebeling PR, Daly RM, 2011. *Serum 25-Hydroxyvitamin D, Calcium Intake, and Risk of Type 2 Diabetes After 5 Years Results from a National, Population-Based Prospective Study (The Australian Diabetes, Obesity and Lifestyle Study)*. Diabetes Care, 34 (5): 1133-1138

Gagnon C, Lu Z, Magliano D, Dunstan D, Shaw J, Zimmet P, Sikaris K, Grantham N, Ebeling PR, Daly RM, 2011. *Serum 25-hydroxyvitamin D, calcium intake, and risk of type 2 diabetes after 5 years*. Diabetes Care, 34: 1133-1138

Kukuljan S, Nowson A, Sanders K, Nicholson GC, Seibel J, Salmon, Daly RMD, 2011. *Independent and combined effects of calcium-vitamin D3 and exercise on bone structure and strength in older men: An 18 month factorial design randomised controlled trial*. Journal of Clinical Endocrinology & Metabolism, 955-963

Nikander R, Gagnon C, Dunstan D, Magliano D, Ebeling PR, Lu Z, Zimmet P, Shaw J, Daly RM, 2011. *Frequent walking, but not total physical activity, is associated with increased fracture incidence: a 5-year follow-up of an Australian population-based prospective study (AusDiab)*. Journal of Bone and Mineral Research, 26 (7): 1638-1647

Rantalainen T, Nikander R, Daly R, Heinonen A, Sievanen H, 2011. *Exercise loading and cortical bone distribution at the tibial shaft*. Bone, 48 (4): 786-791

Peter Ebeling

Borromeo GLB, Tsao CET, Darby IBD, Ebeling PRE, 2011. *A review of the clinical implications of bisphosphonates in dentistry*. Australian Dental Journal, 56 (1): 2-9

Daly RM, Gagnon C, Lu ZX, Magliano DJ, Dunstan DW, Sikaris KA, Zimmet PZ, Ebeling PR, Shaw JE. *Prevalence of Vitamin D Deficiency and its Determinants in Australian Adults Aged 25 Years and Older: a National, Population-Based Study*. Clin Endocrinol (Oxf). 2011 Dec 15 (epub)

Ebeling PR. *New drugs for Osteoporosis*. Aust Prescr. 2011 34:176-81

Ebeling PR, 2011. *Routine Screening for Vitamin D Deficiency In Early Pregnancy: Past its Due Date?* Medical Journal of Australia, 194: 7

Gagnon C, Lu Z, Magliano D, Dunstan D, Shaw J, Zimmet P, Sikaris K, Grantham N, Ebeling PR, Daly RM, 2011. *Serum 25-hydroxyvitamin D, calcium intake, and risk of type 2 diabetes after 5 years*. Diabetes Care. 34: 1133-1138

Jamal S, Ljunggren O, Stehman-Breen C, Cummings S, Mcclung M, Goemaere S, Ebeling PR, Franek E, Yang Y, Egbuna O, Boonen S, Miller P, 2011. *Effects of Denosumab on Fracture and Bone Mineral Density by Level of Kidney Function*. Journal of Bone and Mineral Research, 1829-1835

Kukuljan S, Nowson A, Sanders K, Nicholson GC, Seibel J, Salmon J, Daly RMD, 2011. *Independent and Combined Effects of Calcium-Vitamin D3 and Exercise on Bone Structure and Strength in Older Men: an 18 Month Factorial Design Randomised Controlled Trial*. Journal of Clinical Endocrinology & Metabolism, 955-963

Nabipour I, Ebeling PR, Seibel MJ. *Osteoporosis in Older Men, Expert Rev Endocrinol Metab*. 2011 6(4): 629-645

Nikander R, Gagnon C, Dunstan D, Magliano D, Ebeling PR, Lu Z, Zimmet P, Shaw J, Daly RM, 2011. *Frequent Walking, but Not Total Physical Activity, is Associated with Increased Fracture Incidence: a 5-Year Follow-Up of an Australian Population-Based Prospective Study (AusDiab)*. Journal of Bone and Mineral Research, 26 (7): 1638-1647

Rantalainen T, Nikander R, Daly R, Heinonen A, Sievanen H, 2011. *Exercise loading and cortical bone distribution at the tibial shaft*. Bone, 48 (4): 786-791

Yates C, Bartlett M, Ebeling PR, 2011. *An Atypical Subtrochanteric Femoral Fracture from Pycnodysostosis: a Lesson from Nature*. Journal of Bone and Mineral Research, 26 (6): 1377-1379

Yates C, Mcauley S, Grodski S, Hamblin P, Ebeling PR, 2011. *An Elusive Phaeochromocytoma*. Medical Journal of Australia 194 (1): 44-45

Yeap B, Chubb S, Flicker L, Mccauley K, Ebeling PR, Hankey G, Beilby J & Norman P, 2011. *Associations of Total Osteocalcin with All-Cause and Cardiovascular Mortality in Older Men: The Health in Men Study*. Osteoporosis International (E-pub)

Kerrie Sanders

Moore E, Mander A, Ames D, Carne R, Sanders KM, Watters DAK., *Cognitive Impairment and Vitamin B12: A Review*. International Psychogeriatrics (accepted 10th Nov 2011)

Sanders KM, Stuart AL, Williamson EJ, Jacka FN, Dodd S, Nicholson GC, Berk M., *A Randomised Controlled Trial Investigating an Annual High Dose Vitamin D3 and Mental Well-Being: Vital D Study*. Brit J Psych 2011; 198, 357-364. doi: 10.1192/bjp.bp.110.087544

Peake J, Kukuljan S, Nowson C, Sanders K, Daly R. *Inflammatory Cytokine Responses to Progressive Resistance Training and Supplementation with Fortified Milk in Men Aged 50+ Years: An 18-Month Randomised Controlled Trial*. European Journal of Applied Physiology; Apr 1 (Epub ahead of print)

Williams LJ, Pasco JA, Henry MJ, Sanders KM, Nicholson GC, Kotowicz MA, et al. *Paracetamol (Acetaminophen) Use, Fracture and Bone Mineral Density*. Bone 2011;48: 1277-1281

Pasco JA, Brennan SL, Henry MJ, Nicholson GC, Sanders KM, Zhang Y, et al., *Changes in hip fracture rates in south-eastern Australia spanning the period 1994-2007*. J Bone Miner Res 2011 Mar 28. doi: 10.1002/jbmr.393. (E-pub ahead of print)

Kukuljan S, Nowson C, Sanders KM, Nicholson GC, Siebel M, Salmon J, Daly R. *Independent and combined effect of Calcium-Vitamin D3 Fortified Milk and Exercise on Bone Structure and Strength in Older Men: An 18-month Factorial Design RCT*. JECM 2010

Henry MJ, Pasco JA, Merriman E, Zhang Y, Sanders KM, Kotowicz MA, Nicholson GC. *Fracture risk (FRISK) score and absolute risk of fracture*. Radiology; May 2011; 259(2):495-501

Renee Otmar

Otmar R, Henry MJ, Kotowicz MA, Nicholson G, Korn S & Pasco J, 2011. *Patterns of treatment in Australian men following fracture*. Osteoporosis International, 249-254

Otmar R, Kotowicz MA, Nicholson GC, Pasco JA. *Methodological reflections on using pilot data from fracture patients to develop a qualitative study*. BMC Research Notes, 2011 Nov 23; Vol. 4 (1), pp. 508

BOOK CHAPTER

Ebeling PR, Eisman, JA. *Chapter 61. Vitamin D and Osteoporosis*. In: Vitamin D, Volume 2, 3rd Edition. Eds: D Feldman, J Wesley Pike, JS Adams. Academic Press, Oxford UK, 2011 pp. 1129-1144

OUR PRESENTATIONS

Peter Ebeling

ANZBMS/IOF JSBR annual scientific meeting (international); Two plenary lectures, September 4th-8th; Gold Coast, Queensland

ANZBMS Advanced Clinical Postgraduate Meeting, Two lectures 19th November, Melbourne

Asia-Pacific Forum on Vitamin D, *Vitamin D and non-musculoskeletal illnesses*, Jakarta, Indonesia, December 2011.

ANZBMS Advanced Clinical Postgraduate Meeting, *Vitamin D and Calcium supplementation*, 19th November Melbourne

Kerrie Sanders

ANZBMS Advanced Clinical Postgraduate Meeting *Vitamin D and Calcium supplementation* 19th November Melbourne

Invited oral presentation: Endocrine Society of Australia Annual meeting, *Vital D*, Perth September

Sydney Medical School-Nepean; Bone research meetings. *Vitamin D: Dr Jekyll or Mr Hyde?*, June 29, Nepean, Sydney

Neurology Seminar, Sanofi-Aventis. *Vitamin D Beyond MS*, August 7th Melbourne

Invited oral presentation EECEO/IOF conference, The European Congress of Osteoporosis and Osteoarthritis, *Vital D*, Valencia Spain 23-26th March

Oral; ANZBMS/IOF JSBR annual scientific meeting, *Annual high dose oral vitamin D3: Is the increased risk of falls attributable to changes in muscle strength?* Sep 4-8; Gold Coast, Queensland

OUR GRANTS

Sir Richard Stawell Prize for Research 2011, Ebeling PR, AMA Victorian Branch. Young Investigator Award.

Medicine and Endocrinology

Gianoudis J, Bailey C, Ebeling PR, Nowson C, Sanders K, Hill K, Daly R, *High velocity power training with weight-bearing and balance exercises improves bone density and function in high risk older adults: A 12-month RCT*, Australian Sports Medicine Association

OTHER

Ebeling PR: Councilor, American Society for Bone and Mineral Research

Ebeling PR: Board Member, International Osteoporosis Foundation, Geneva

McConell GK: Member of NHMRC Endocrinology and Diabetes Grant Review panel

Scientific Journal Editorial Boards:

Ebeling PR: Associate Editor, Journal of Bone and Mineral Research

Ebeling PR: Osteoporosis International

Sanders KM: Journal of Bone and Mineral Research

Daly RM: Journal of Bone and Mineral Research

THE AUSTRALIAN INSTITUTE FOR MUSCULOSKELETAL SCIENCE

The Australian Institute for Musculoskeletal Science (AIMSS) is a collaborative research institute formed between Western Health, The University of Melbourne and Victoria University. It aims to become a national reference centre for research into disorders of bone, muscle and joint. Through the establishment of community-based programs, the Institute will also promote disease prevention and evidence-based interventions including exercise and nutrition.

The success of the Institute will be measured by the translation of scientific research into direct health outcomes. Research partnerships between researchers and the healthcare system will be the key to this; providing a greater understanding of clinical need, and a mechanism for addressing problems more directly. The innovative and collaborative environment created within state-of-the-art facilities at the Western Centre for Health Research and Education (WCHRE) at Sunshine Hospital will be paramount in facilitating these partnerships.

Musculoskeletal conditions are extremely common, exert a substantial influence on health and quality of life, and inflict an enormous burden on health systems which increases as population age and life expectancy rises. As such, AIMSS has a particular interest in ageing-related conditions such as osteoporosis, osteoarthritis and sarcopaenia.

Our research spans all areas of bone and muscle health including fracture prevention; the effect of calcium, Vitamin D3 and exercise on bone structure; factors affecting muscle mass, function and metabolism; and the impact of diet, lifestyle and socioeconomic factors on musculoskeletal disease. AIMSS also has a growing interest in metabolic interactions between bone and muscle.

Some of the programs underway include:

Vitamin D Dose-Ranging Study

Vitamin D deficiency is emerging as a public health issue for Australians. Severe Vitamin D deficiency results in osteomalacia in adults (a softening of the bones) and rickets in children. Less well known is the impact of Vitamin D deficiency on depression, immunity and autoimmunity, obesity, and the progression of Type 2 diabetes. Many clinicians recommend high doses of Vitamin D to rapidly increase Vitamin D levels, however recent trials have linked this with increased falls and fractures in older women.

Associate Professor Kerrie Sanders from Western Health and the NorthWest Academic Centre at The University of Melbourne is leading a project addressing the effects of high annual doses of Vitamin D on muscle function, falls and bone metabolism.

Born Small

It is widely recognised that if a baby is born small for gestational age or born prematurely, there is an increased risk of adult diseases such as diabetes, heart disease and osteoporosis. Professor Glenn McConell from Victoria University and Professor Peter Ebeling from Western Health and the NorthWest Academic Centre at the University of Melbourne have come together with a common goal after a number of years of examining this medical condition from different angles. A post-doctoral Research Fellow, Dr. Gunveen Kaur, is working on this project.

Osteonecrosis of the jaw

Osteonecrosis (ONJ) is a debilitating association of some bisphosphonate therapy in cancer patients causing an area of exposed bone (not covered by gum) in the jaw region that does not heal after 8 weeks. Professor Peter Ebeling, from Western Health and the NorthWest Academic Centre at the University of Melbourne will conduct an NHMRC-funded randomised controlled trial of teriparatide injections to determine whether there is stimulation of bone remodelling and resolution of ONJ.

website: www.aimss.org.au



Nephrology

In 2011 the Department of Nephrology at Western Health continued to participate in national trials co-ordinated by the Australasian Kidney Trials Network assessing the effect of Medihoney on peritoneal catheter infections and fish oil on vascular access thrombosis in dialysis patients.

Recruitment commenced and was completed at the end of 2011 on the WH RCT eMAN Anaemia:CKD which aims to assess the effect of a synchronised process of administration of ESA agents on anaemia endpoints in CKD patients. A Steering Committee was established on eMAP CKD:VIC, a collaborative project between Western Health, Kidney Health Australia, General Practice Victoria, Macedon Ranges and North Western Melbourne Medicare Local and Department of Health Victoria, funded by the Department of Health in Victoria, Renal Health and Aboriginal Health Clinical Networks, aimed at assessing the effect of the implementation of the latest KHA primary care guidelines with the aid of decision support software in Western Health's primary catchment area.

OUR RESEARCHERS

Dr Craig Nelson: Director, Department of Nephrology

Associate Professor Vicki Levidiotis: Principal Investigator

Associate Professor Nigel Toussaint: Principal Investigator

Dr Rosemary Masterson: Investigator

Dr Solomon Cohny: Investigator

Dr Sandra Crikis: Investigator

Dr John Katsoulis: Investigator

Dr Edmund Wong: Investigator

Dr Hui Liew: Investigator

Debra Broomfield: Renal Research Nurse

Connie Karschimkus: EMAN Anaemia CKD Project Manager

Western Health Renal Staff Specialist and General Physician, Associate Professor Vicki Levidiotis is Principal Investigator in a number of national trials co-ordinated by the Australasian Kidney Trials Network

OUR RESEARCH

A randomised, controlled trial of exit site application of Medihoney™ Antibacterial Wound Gel for the prevention of catheter-associated infections in peritoneal dialysis patients

Principal Investigator: Vicki Levidiotis,
Collaborator: AKTN

The FAVOURED Trial: Fish oil and Aspirin in Vascular access OUTcomes in RENal Disease

Principal Investigator: Vicki Levidiotis,
Collaborator: AKTN

CERA in CKD; Meta-analysis

Kushma Nand, Collaborator: Cochrane Renal Group

EMAN-Anaemia Pilot Project: An Open Labelled Randomised Control trial of the synchronized Electronic MANagement of Anaemia in Chronic Kidney Disease (CKD) compared to Usual Care Anaemia Management

Principal Investigator: Craig Nelson,
Collaborator: Roche

This project aims to improve CKD Anaemia targets by a synchronised electronic process to enable people to be cared for in their community rather than hospital outpatients. This project aims to prove that better care can be delivered and be more cost-effective if we monitor our patients by efficient processes in the community



Nephrology

Health Benefits of Long Term Strength Training in patients with CKD

Principal Investigator: Craig Nelson, Collaborator: Victoria University

Effects of type and dose of phosphate binders on metabolic acidosis in patients with End Stage Kidney Disease on maintenance haemodialysis: A retrospective observational study

Principal Investigator: Craig Nelson, Collaborator: RMH Department of Nephrology

EMAP-CKD VIC: Electronic Management and Assistance to Primary Care in CKD Detection and Management in Victoria – A Pilot project

Principal Investigator: Craig Nelson, Collaborators: Department of Health Victoria/KHA and GPV

Western Health has a large burden of Chronic Disease in its catchment. This project aims at establishing processes to reduce the burden and late presentation of kidney disease to our health service, and to establish a Western Health catchment CKD data repository.

This project also aims to detect unrecognised CKD in the community and provide management strategies via outreach from the health service to primary care using electronic processes, to improve CKD care in Primary Care.

Changes in QTc intervals and QTc dispersion with dialysis between long break (LB) (72-hour interdialytic period) versus short break (SB) (48-hour interdialytic period)

Principal Investigator: Craig Nelson, Collaborators: Department of Cardiology, Western Health

OUR PUBLICATIONS

Toussaint ND. *Extracellular matrix calcification in chronic kidney disease*. Current Opinion in Nephrology and Hypertension 2011; 20: 360-368

Damasiewicz MJ, Toussaint ND, Polkinghorne KR. *Fibroblast growth factor 23 in chronic kidney disease: New insights and clinical implications*. Nephrology (Carlton). 2011 Mar;16(3):261-8.

Toussaint ND, Lau KK, Polkinghorne KR, Kerr PG. *Attenuation of aortic calcification with lanthanum carbonate versus calcium-based phosphate binders in haemodialysis: A pilot randomised controlled trial*. Nephrology (Carlton). 2011 Mar;16(3):290-8.

Meijers B, Toussaint ND, Meyer T, Bammens B, Verbeke K, Vanrenterghem Y, Kerr PG, Evenepoel P. *Reduction in protein-bound solutes unacceptable as marker of dialysis efficacy during alternate-night nocturnal hemodialysis*. Am J Nephrol. 2011;34(3):226-32.

Cohney SJ. *Steroid withdrawal in patients transplanted for IgA nephropathy—a disease-specific consideration?* Am J Transplant. 2011 Aug;11(8):1553-5.

Hughes PD, Cohney SJ. *Modifiers of complement activation for prevention of antibody-mediated injury to allografts*. Curr Opin Organ Transplant. 2011 Aug;16(4):425-33. Review.

Flint SM, Walker RG, Hogan C, Haeusler MN, Robertson A, Francis DM, Millar R, Finlay M, Landgren A, Cohney SJ. *Successful ABO-incompatible kidney transplantation with antibody removal and standard immunosuppression*. Am J Transplant. 2011 May;11(5):1016-24.

Lim WH, Chadban S, Campbell S, Cohney S, Russ G, McDonald S. *A review of utility-based allocation strategies to maximize graft years of deceased donor kidneys*. Nephrology (Carlton). 2011 May;16(4):368-76.

Toussaint ND, Tan MB, Nicholls K, Walker RG, Cohney SJ. *Low-dose valaciclovir and cytomegalovirus immunoglobulin to prevent cytomegalovirus disease in high-risk renal transplant recipients*. Nephrology (Carlton). 2011 Jan;16(1):113-7.

Baweja S, Kent A, Masterson R, Roberts S, McMahon LP. *Prediction of pre-eclampsia in early pregnancy by estimating the spot urinary albumin: creatinine ratio using high-performance liquid chromatography*. BJOG. 2011 Aug;118(9):1126-32.

Brown MA, Masterson R. *Renal palliative care in Australia: time to engage*. Nephrology (Carlton). 2011 Jan;16(1):2-3.

PROCEEDINGS

Shahir AK, Briggs N, Livingston B, Katsoulis J, Levidiotis V. *An observational outcomes study of pregnancy events and outcomes in dialysed women using data from the anzdata registry (1966–2008)*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 15, 2011

Nelson C, Fassett RG, Boudville N, Pedagogos E, Healy H, Mangos G, et al., *Patterns of Progression in Chronic Kidney Disease (POPE) Study: Baseline Data*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 61, 2011

Boudville N, Nelson C, Fassett RG, Pedagogos E, Healy H, et al., *Factors Associated with the progression of CKD in Nephrology Practices in Australia: A Retrospective Analysis using Management Software Audit 4*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 37, 2011

Nelson C, Sharma S, Hidayati L, Nand K. *Chronic Kidney Disease Hospitalisation in a single Health Service*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 36, 2011

Thet Z, Win AK, Pedagogos E, Beavis J, Crikis S, Nelson C. *Long Term Effects of Phosphate Binders on Pre-Dialysis Serum Bicarbonate in ESKD patients on Maintenance Haemodialysis*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 27, 2011

McDonald S, Polkinghorne K, Marshall M, Toussaint N. *Do indicators of dialysis 'quality' agree?*, 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 20, 2011

Toussaint N, McDonald S, Walker R, Lee V, Polkinghorne K. *Serum phosphate in the Australian and New Zealand dialysis population: associations with patient demographics, co-morbidities and dialysis modality*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 9, 2011

Toussaint N, McDonald S, Walker R, Lee V, Polkinghorne K. *Serum phosphate in the Australian and New Zealand dialysis population: patient variability and recent improvement in phosphate control*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 9, 2011

Toussaint N, McDonald S, Walker R, Lee V, Polkinghorne K. *Hypophosphatemia and hyperphosphatemia associated with increased mortality in incident Australian and New Zealand dialysis patients*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 9, 2011

Blair S, Masterson R, Toussaint N, Lau K, Lian M, Polkinghorne K, Kerr P. *Low versus high dialysate calcium concentration in alternate night nocturnal haemodialysis patients: a pilot randomised controlled trial*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 12, 2011

Toussaint N, Blair S, Masterson R, Lau K, Polkinghorne K, Kerr P. *Comparison of aortic and superficial femoral artery calcifications when measured at different sites in nocturnal haemodialysis patients*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 9, 2011

Talbot A, Toussaint N, Hewitson T, Wigg B, Pedagogos E. *25-Hydroxyvitamin D deficiency and inflammation in haemodialysis patients: an observational study*. 47th Annual ANZSN Meeting, Adelaide, 2011 Nephrology Vol 16, (Suppl 1), 9, 2011

OUR GRANTS

NHMRC Project Grant: CIA: Prof. Barbara Fazekas de St Groth CIB: Dr Stephen Alexander CIC: Dr Vicki Levidiotis: *The role of primed T cells in graft rejection* \$560,000 (2009-2011)

Roche Research Grant: Craig Nelson, *EMAN-Anaemia Pilot Project: An Open Labelled Randomised Control trial of the synchronized Electronic Management of Anaemia in Chronic Kidney Disease compared to Usual Care Anaemia Management* \$350,000 (2010-2012).

NHMRC NICS (National Institute of Clinical Studies) Fellowship: Nigel Toussaint, *Reducing cardiovascular risk in CKD by better management of mineral and bone disorder* (2009-2011)

Shire Pharmaceuticals Research Grant: Nigel Toussaint, *Investigator initiated multi-centre randomised controlled trial of lanthanum carbonate in chronic kidney disease patients* \$1,500,000 (2010 - 2013)

Department of Health - RHCN and Aboriginal Health Project Grant: Craig Nelson, EMAP-CKD VIC: *Electronic Management and Assistance to Primary Care in CKD Detection and Management in Victoria - A Pilot project* \$560,000 (2011 - 2013)



Neurology

The Western Health Neuroscience Research Unit participates in clinical research in stroke, multiple sclerosis, movement disorders and epilepsy. Many patients have been recruited to international, randomised, double blind trials, including five acute stroke clinical trials and three clinical trials in multiple sclerosis.

The Unit collaborates with neurology centres in the Asia Pacific region, Sri Lanka and India in particular, and has been visited by distinguished scientists from the Harvard Medical School Stroke Unit, Yale University, USA, Victoria University, University of Melbourne, University of Colombo, Sri Lanka, and Professors of Neurology from India. These visits have led to several collaborative projects which will be undertaken in the future.

We plan to embark on several research projects in the Western region in 2012: Stroke Trigger factor study, Post Stroke Sexual Dysfunction Survey, University of Melbourne-University of Colombo Stop Stroke Study, a study on TIA and minor strokes and the feasibility of a shared management in the primary care setting, Western young stroke survey, and studies central neuropathic pain, peripheral neuropathic pain, seizures in the elderly, and neurologic deterioration after stroke.

We will continue to foster collaborations with the leading local academic institutions to facilitate state of the art clinical research in neurosciences in the western region. These include University of Melbourne, Victoria University, and Monash University.

OUR RESEARCHERS

Dr Zelko Matkovic: Director, Department of Neurology

Dr Tissa Wijeratne: Director & Principal Investigator, Neuroscience Research Unit

Dr Grant Scott: Neurologist

Dr Sandra Petty: Neurologist

Dr Simon Li: Neurologist

Dr Victor Chong: Neurologist

Dr Wesley Thevathasan: Neurologist and Research Fellow, Melbourne Brain Centre, University of Melbourne

Dr Simon Sung: Neurologist and Research Fellow, Melbourne Brain Centre, University of Melbourne

Dr Mahi Jaasingarachchi: Advanced Trainee in Neurology & Associate Researcher

Dr Manoji Pathirage: Visiting academic from Sri Lanka 2011, Stroke Rehabilitation Fellow and Associate Researcher

Dr Hemal Horadagoda: Neurology Fellow and Associated Researcher

Dr D. S. Jayaratne Neurology: Fellow and Associated Researcher

Ms Lyndy Pascoe: Research Coordinator

Ms Sherisse Celestino: Research Coordinator

Ms Natalie Teasdale: Research Coordinator

Dr Channa Senadheera: Research Assistant

Piyumi Wijesundera: AMS Research Student

OUR RESEARCH

WESTSAS (Western Stroke Symptoms and Awareness Survey)

Dr Tissa Wijeratne, Piyumi Wijesundera, Leena Van Raay, Sherisse Celestino, Lyndy Pascoe, Natalie Teasdale, Collaborator: Prof. Amanda Thrift, Head, Stroke epidemiology, Monash University

The goal of the study is to understand the awareness of stroke symptoms, risk factors and treatment among patient population at Western Health.

Insulin Resistance Intervention after Stroke (IRIS) Trial

Dr Tissa Wijeratne, Dr. Victor Chong, Dr. Zelko Matkovic, Dr. Grant Scott, Collaborators: Yale University, USA, Harvard Medical School Stroke Centre, Neuroscience Trials Australia



Dr Zelko Matkovic is Director of Western Health's Neurology Department, and Head of the new Epilepsy Clinic at Sunshine Hospital

Treating insulin resistance with a view to prevent stroke and other vascular events. Insulin resistance is common among our patients. This study will provide valuable insight which will help us to prevent strokes further.

AVERT: A phase 3, multi centre, randomised controlled trial of very early rehabilitation after stroke (AVERT)

Dr Tissa Wijeratne, Elizabeth Mackey, Justine Mizen, Collaborators: National Stroke Research Institute, Florey Institute, Melbourne

Stroke is a leading cause of adult disability in Australia and early rehabilitation is probably the key towards recovery. This study tests the hypothesis of acute, very early rehabilitation after a stroke.

START- EXTEND

Tissa Wijeratne, Zelko Matkovic, Grant Scott, Victor Chong, Sandra Petty, Collaborators: NST, Australia Florey Institute, Melbourne; National Stroke Research Institute, Australia

This study tests the hypothesis that ischaemic stroke patients selected with significant penumbral mismatch at 3-9 hours post onset of stroke will have improved clinical outcomes when given intravenous TPA compared to placebo. MRI based selection of ischemic penumbra with a view to extend the time window from 4.5 hours to 9 hours in clot buster therapy in acute ischemic stroke. Only 15.6% of our stroke patients present to the emergency department after an acute ischemic stroke (lowest published figure in the developed world). START-EXTEND allow us to treat more patients while we test this landmark hypothesis on MRI based penumbra selection

UOM-UOC SSS (University of Melbourne- University of Colombo Stop Stroke Study)

Dr Tissa Wijeratne, A/Prof. Stephen Lew, Prof. Saroj Jayasinghe University of Melbourne, University of Colombo, Sri Lanka, Asia Pacific Association of Young Neurologists and Trainees, Asia Pacific Stroke Association, Stroke Society of Australasia, National Stroke Association of Sri Lanka

This study tests the hypothesis that clinical teaching of stroke medicine improves stroke care in two regional centres in Sri Lanka. Stroke is the leading cause of death and disability in the developing world and clinical education in stroke medicine is the key to change this.

Clinical Epidemiology and neurophysiological characteristics of Central Post Stroke Pain

Tissa Wijeratne, Ashwini Chandra, Collaborator: Prof. Robert D Helme, University of Melbourne

We have established the prevalence of CPSP in the Western Health stroke population and are currently studying the potential neurophysiological methods which may predict CPSP among stroke patients. Western Health admits 700-900 strokes per year. CPSP is a debilitating adverse outcome of 6-8% of stroke patients. There are only a limited number of studies available on the subject. Early detection may help us to commence pain modulating therapy earlier on. This may prevent some patients developing the CPSP in the future.

ROCKET- AF: A Prospective, Randomised, Double-Blind, Double-Dummy, Parallel-Group Multicenter, Event-Driven, Non-inferiority Study Comparing the Efficacy and Safety of Once-Daily Oral Rivaroxaban (BAY 59-7939) with Adjusted-Dose Oral Warfarin for the Prevention of Stroke and Non-Central Nervous

Neurology

Systemic Systemic Embolism in Subjects with Non-Valvular Atrial Fibrillation

Dr Tissa Wijeratne, Dr. Zelko Matkovic, Prof. Robert D Helme, Dr Grant Scott, Collaborator: Neuroscience Trials Australia

PERFROM study: a prospective randomised trial on a new anti platelet drug comparing with aspirin in acute ischemic stroke and TIA

Dr Tissa Wijeratne, Dr Zelko Matkovic, Prof. Robert D Helme, Dr Grant Scott, Collaborator: NST, Australia

COPERNICUS; A Prospective, Parallel Group, Non-Randomised Open-Label Observational Study Comparing Copaxone® With Interferons In Patients With Confirmed Multiple Sclerosis

Dr Tissa Wijeratne, Dr Victor Chong, Dr Zelko Matkovic, Dr Grant Scott

ReNew Post marketing surveillance study to evaluate the tolerability of Rebif® New Formulation in patients with Relapsing Multiple Sclerosis in an Australian clinical setting

Dr Tissa Wijeratne, Dr Victor Chong, Dr Zelko Matkovic, Dr Grant Scott

Clinical Epidemiology and neurophysiological characteristics of Central Post Stroke Pain

Tissa Wijeratne, Ashwini Chandra Collaborator: Prof. Robert D Helme (University of Melbourne)

Post-doctoral research—Anti-epileptic Medications and Bone Cell Electrophysiology

Dr Sandra Petty, Collaborator: Department of Medicine, Royal Melbourne Hospital

AED Bone Health Studies (Twin studies and Konquest Bone Study)

Dr Sandra Petty, Collaborator: Department of Medicine, Royal Melbourne Hospital

Alteration of deep brain stimulation parameters for dystonia; a multicentre double blind RCT

Wesley Thevathasan

Rostral Vs Caudal stimulation of the pedunculopontine nucleus for Parkinson's disease

Wesley Thevathasan, Collaborators: Melbourne Brain Centre, University of Melbourne

Does Pedunculopontine nucleus stimulation improve postural instability? A study employing a neurophysiological version of the 'pull test'

Wesley Thevathasan, Collaborators: Melbourne Brain Centre, University of Melbourne

Local field potential activity during subthalamic nucleus stimulation for Parkinson's disease

Wesley Thevathasan, Collaborators: Melbourne Brain Centre, University of Melbourne

Aclasta in AED induced bone loss: A randomised, double blind, one year controlled trial comparing Aclasta (zoledronic acid 5 mg i/v) against placebo infusion in patients with AED induced bone loss

Professors John Wark, Terry O'Brien, Sam Berkovic, Mark Cook, Drs Sandra Petty, Zelko Matkovic and Ms Alicia Seymour, Collaborator: Department of Medicine, The University of Melbourne

OUR PUBLICATIONS

Wijeratne T. *Cure for Neurophobia*. MJA 2011; 194 (4): 193

Mehndiratta MM, Wasay M, Finkel M, Bergen D, Wijeratne T. *Palatucci fellows pass on Leadership, Advocacy message*. World Neurology 2010;6:14

Ma H, Parsons MW, Christensen S, Campbell BC, Churilov L, Connelly A, Yan B, Bladin C, Phan T, Barber AP, Read S, Hankey GJ, Markus R, Wijeratne T, et al., *The EXTEND investigators. Multicentre, randomised, double-blinded, placebo-controlled Phase III study to investigate EXTending the time for Thrombolysis in Emergency Neurological Deficits (EXTEND)*. Int J Stroke. 2012 Jan;7(1):74-80. doi: 10.1111/j.1747-4949.2011.00730.x

Wijeratne T. *Neurorehabilitation in Sri Lanka: an emerging sub-specialty for neurology trainees*. Int J Stroke. 2011 Oct 4. doi: 10.1111/j.1747-4949.2011.00625.x

Wijeratne T. *Demystifying Neurology for students and teachers*. World Neurology June 2011

Wijeratne T, Gunaratne P, Gamage R, Pathirana G, et al., *Stroke care development in Sri Lanka: The urgent need for Neurorehabilitation services*. Neurology Asia 2011; 16(2) : 149 – 151

Patel MR, Mahaffey KW, Garg J, Pan G, Singer DE, Hacke W, Breithardt G, Halperin JL, Hankey GJ, Piccini JP, Becker RC, Nessel CC, Paolini JF, Berkowitz SD, Fox KA, Califf RM. *ROCKET AF Investigators (Wijeratne T) Rivaroxaban versus warfarin in nonvalvular atrial fibrillation*. N Engl J Med. 2011 Sep 8;365(10):883-91

Wijeratne T, Holler A. *Advocacy training in Neurology, Palatucci Advocacy Leadership Forum*. Neurology 2012 (in press)

Petty S. *Epilepsy and Bone Health*. Neurology Asia 2011; 16 (Supplement 1): 63 – 64

Miller SE, Todaro M, Hill EL, Wark JD, O'Brien TJ, French CR, Mackie EJ, Petty SJ. *Carbamazepine Decreases Outward K⁺ Currents in Calvarial Osteoblasts: A novel potential mechanism for anti-epileptic medication-associated bone disease*. Epilepsy Society of Australia, Brisbane 2011

Hakami T, O'Brien TJ, Petty S, Sakellarides M, Christie J, Kantor S, Todaro M, Wark JD. *A comparative randomised trial of levetiracetam and older antiepileptic drugs: bone health and related outcomes*. ASBMR, San Diego, USA 2011

Hakami T, O'Brien TJ, Petty S, Sakellarides M, Christie J, Todaro M, Wark JD. *Levetiracetam versus older antiepileptic drugs: a randomised prospective bone health study*. 4th Endocrine Society Meeting. Boston, USA 2011

Hill K, Wark JD, O'Brien TJ, Sheik Ahmad B, Petty SJ, Berkovic S, Habib N. *Balance impairment is an unrecognised contributor to fall and fracture risk in anti-epileptic medication users: survey findings and a twin-sibling study*. World Physical Therapy, Amsterdam 2011

Wark JD, Ahmad BS, Hill K, Petty S, O'Brien T. *Balance impairment is an unrecognised contributor to fall and fracture risk in antiepileptic medication users*. ECTS and IBMS Combined Meeting. Athens Greece 2011

Miller SE, Todaro M, Hill EL, Wark JD, O'Brien TJ, Mackie EJ, French CR, Petty SJ. *Carbamazepine Decreases Outward K⁺ Currents in Calvarial Osteoblasts*. The Royal Melbourne Hospital Research Week 2011

Hakami T, O'Brien TJ, Petty S, Sakellarides M, Christie J, Todaro M, Wark JD. *Effects of levetiracetam versus valproate or carbamazepine on bone health: a randomised trial*. Australian and New Zealand Association of Neurologists, Hobart 2011

Li S, Yan B, Kaye A, Mitchell P, Dowling R, Collins M, Davis S. *Prognosis of intracranial dissection relates to site and presenting features*. Journal Of Clinical Neuroscience 2011 Jun; Vol. 18 (6), pp. 789-93

Thevathasan W, Pogosyan A, Hyam JA, Jenkinson N, Foltynie T, Limousin P, Bogdanovic M, Zrinzo L, Green AL, Aziz TZ, Brown P. *Alpha oscillations in the pedunculopontine nucleus correlate with gait performance in Parkinsonism*. Brain, In Press (accepted 22/9/2011)

Thevathasan W, Coyne TJ, Hyam JA, Kerr G, Jenkinson N, Aziz TZ, Silburn PA. *Pedunculopontine nucleus stimulation improves gait freezing in Parkinson's disease*. Neurosurgery, 2011 Dec;69(6):1248-53

Dr Tissa Wijeratne, Director and Principal Investigator, Neuroscience Research Unit. The Unit has established strong collaborations in the Asia Pacific region, Sri Lanka and India



Neurology

Thevathasan W, Pogosyan A, Hyam J, Jenkinson N, Bogdanovic M, Coyne TJ, Silburn PA, Aziz TZ. *Brown P, A block to pre-prepared movement in gait freezing, relieved by pedunculopontine nucleus stimulation.* Brain. 2011 Jul;134(Pt 7):2085-95

Eusebio A, Thevathasan W, Pogosyan A, Hariz M, Aziz T, Brown P. *Deep Brain Stimulation can suppress pathological synchronization in parkinsonian patients.* Journal of Neurology, Neurosurgery & Psychiatry, 2011 May;82(5):569-73. Epub 2010 Oct 9

Thevathasan W, Schweder P, Joint C, Ray N, Pretorius P, Gregory R, Aziz T. *Permanent tremor reduction during thalamic stimulation in Multiple Sclerosis.* Journal of Neurology, Neurosurgery & Psychiatry, 2011 Apr;82(4):419-22

Thevathasan W, Squier W, MacIver DH, Hilton DA, Fathers E, Hilton-Jones D. *Oculopharyngodistal myopathy—a possible association with cardiomyopathy.* Neuromuscular Disorders. 2011 Feb;21(2):121-5

OUR CHAPTERS

Wijeratne T, Helme RD. *Neuropathic pain, a review ; Current concepts in Pain Management.* First edition, SLASP (IASP Chapter, Sri Lanka) Dr. R. Pallegama and Dr.T. Jayalath, Kandy 2010 Pages 21-33

Wijeratne T, Wijeratne D, Pallegama R, Helme RD. *Measurement of Pain: Current Concepts in Pain management -Part two.* First Edition, SLASP (IASP Chapter , Sri Lanka) Pallegama R and Jayalath T, Kandy 2011, Pages 27-36

Petty SJ, Pack AM. – *Obesity in Epilepsy; In press 2011.* The Interictal State – Co-morbidities and Quality of Life in Epilepsy, Wiley-Blackwell, United Kingdom

Petty SJ, Wark JD. – *Bone Health in Epilepsy; In press 2011.* The Interictal State – Co-morbidities and Quality of Life in Epilepsy, Wiley-Blackwell, United Kingdom

Petty SJ, Hill KD, Wark JD. – *Balance Disorders and Falls in Epilepsy; In press 2011.* The Interictal state – Co-morbidities and Quality of Life in Epilepsy, Wiley-Blackwell, United Kingdom

OUR PRESENTATIONS

Wijeratne T. *Setting up stroke services with limited resources?* Asia Pacific Stroke Conference 2011

Wijeratne T. *Management of TIA.* Asia Pacific Stroke Conference 2011

Wijeratne T. *Leading in a complex world- How to be the best advocate for your stroke patient?* Stroke Society Australia annual scientific meeting 2011

Wijeratne T. *An update on Antiplatelet therapy in stroke.* 5th annual scientific conference, Association of Sri Lankan Neurologists, 2011

Wijeratne T. *Stroke Unit Care- an Update.* 35th annual scientific meeting, Ceylon College of Physicians, 2011

Wijeratne T. *Leading in a complex world- How to be the best advocate for your patients.* RACP annual scientific meeting, Darwin 2011

Wijeratne T. *Working with legislature- How can we get the best for our neurology patients?* World Congress of Neurology, Morocco,2011

Wijeratne T. *Physician Readiness to Expert Practice (PREP) program:Australian Experience.* World Congress of Neurology, Morocco,2011

Wijeratne T. *Workshop in Implementation of best stroke care with the available resources.* 2011

Thevathasan W. *Pedunculopontine nucleus stimulation for Parkinsonian gait.* 8th Annual Australian DBS User Group Meeting, Queensland (National) 2011

Thevathasan W. *Targeting the pedunculopontine nucleus as a treatment of gait disorders.* Oxbridge Neuroscience meeting, University of Cambridge 2011

Thevathasan W. *European Continuing Medical Training DBS Nurses Training Program in Movement Disorders (Advanced).* Oxford (International) Patient selection-Making sense of the assessment of movement disorders 2011

OUR GRANTS

Allergan Movement Disorders Fellowship: Dr Tissa Wijeratne. *To establish a stroke rehabilitation fellowship to study and manage post stroke spasticity in the Western Region* \$ 45,000 December 2010

Dr Sandra Petty: *Postdoctoral Fellowship*, Melbourne Brain Centre

Barry Young Fellowship in Neuroscience: Dr Sandra Petty RACP Servier \$50000

Dr Sandra Petty Thwaites Gutch Fellowship in Physiology

DW Keir Fellowship in Medical Research: Dr Sandra Petty \$200,000

Postdoctoral research fellowship: Dr Wes Thevathasan (Melbourne Brain Centre) \$50,000-100,000



“Medical research is about exploring the “why” to create innovative solutions. It is this sense of discovery combined with a tangible outcome that makes medical research enticing and exciting”

Professor Peter Ebeling,
Head of Endocrinology, Western Health
and Chair, NorthWest Academic Centre,
University of Melbourne

Nursing

Receipt of a Nurses Board of Victoria Legacy Limited Grant has enabled the development and implementation of a tailored model of Emergency Department (ED) nursing handover, 'Move to the Cube'.

The aim of the project is to evaluate its implementation on improving nursing care and documentation, and reducing adverse patient outcomes. This has been a collaborative effort involving ED nursing staff (Nurse Unit Manager, Sallie Wood, Nurse Educator, Samantha Boswell), Julie Shelton, JECMR staff (Sharon Klim, Anne-Maree Kelly), VU Researchers (Terence McCann and Debra Kerr) and an HR Consultant (Colin Yates). Data from focus groups, a pre-post observational study, a nursing survey and a qualitative study of patient opinions regarding the new model of handover will be analysed and disseminated in 2012.

Three wards across Western Health introduced Bedside Handover in 2010. This observational longitudinal study involved data extraction from patient records and direct observations in the wards (medical, surgical, maternity). Information regarding handover duration, and items of nursing care (e.g. allergy alert band) and documentation (e.g. admission form) was collected by consecutive sampling in three study periods. Handover duration declined by 9 minutes for one ward. Data analysis from 1121 patient records (pre: n=381, 3-Month: n=367, 12-Month: n=373) showed sustained improvements in nursing care and documentation.

Women may experience severe pain during childbirth. Opioid (pethidine, fentanyl) analgesia is often administered to birthing women by injection or epidural infusion during childbirth. Intranasal fentanyl (INF) is an alternative, non-invasive route of opioid administration that is effective in relieving both acute and chronic pain. This pilot study assessed the practicality and tolerability of patient-controlled INF for relieving pain in birthing women. Overall, women received adequate pain relief from the INF device. The majority reported they would like to use this analgesic technique in future births.

OUR RESEARCHERS

Dr Debra Kerr: Senior Lecturer – Victoria University

Dr Sai Lu: Senior Lecturer – Victoria University

Ms Kate McKay: Bachelor of Nursing (Graduate) – Victoria University

OUR RESEARCH

Move to the Cube – A Tailored Model of Nursing Handover in the ED

Dr Debra Kerr, Ms Sharon Klim, Professor Anne-Maree Kelly, Professor Terence McCann, Ms Sallie Wood, Collaborators: Samantha Boswell, Julie Shelton, Kate McKay, Colin Yates

Improving the quality of handover

Dr Debra Kerr; Ms Louise McKinlay; Dr Sai Lu, Collaborators: Carla McCartney, Jenny Tenne, Justine Mizen; Leanne Rhodes, Verity Maybin

Patient controlled intranasal fentanyl

Dr Debra Kerr, Christine Kerr, Ms Davina Taylor, Ngaire McLean, Dr Bronwen Evans, Patrice Hickey

OUR PUBLICATIONS

Kerr D, Lu S, McKinlay L, Fuller C, (2011). *Examination of current handover practice: Evidence to support changing the ritual*. International Journal of Nursing Practice. 17:342–350

PROCEEDINGS

Kerr D, Lu S, McKinlay L, Fuller C. *Examination of current handover practice: evidence to support changing the ritual*. ANF Professional Issues in Practice Conference: Our Profession in Practice. June 2011

Freemantle R, Kerr D, Martin-McDonald C. *Understanding the unfolding phenomenon of Enrolled Nurse medication administration in aged care nursing*. ANF Professional Issues in Practice Conference: Our Profession in Practice. June 2011

Kerr D, Lu S, Mill D, McKinlay L. *Nurses' attitudes toward the introduction of medication administration by enrolled nurses: an Australian study*. Fifth Pan-Pacific Nursing Conference and Seventh Nursing Symposium on Cancer Care 22nd-24th September 2011

OUR GRANTS

Nurses Board of Victoria Legacy Limited Grant: Dr Debra Kerr, Ms Sharon Klim, Professor Terence McCann, Professor Anne-Maree Kelly, *Standardised handover to improve nursing care in the Emergency Department*. Royal College of Nursing Australia \$19,729 (2011)

Early Career Research Development Grant Scheme: Dr Debra Kerr, *Acceptability of a new form of shift-to-shift bedside nursing handover for patients and nurses*. Victoria University \$25,000 (2011)

Western Health Emergency
Department Nurse



Paediatric Emergency Department

The Urinary Tract Infection audit undertaken by University of Notre Dame student, Phillip King, as part of a final year Honours project confirmed a clinical suspicion that antimicrobial resistance patterns had changed since a similar audit done over ten years ago. Our prescribing must reflect this finding and local guidelines are currently being altered.

Dr Amanda Gwee, seconded from the Royal Children's Hospital undertook a demanding audit looking at children under three presenting to the Sunshine Hospital Paediatric Emergency Department with injuries. The documentation of these clinical presentations was assessed for consideration of Non-accidental injury by the treating clinicians. This study led directly to additional notification of potential children at risk and referral to the Victorian Forensic Paediatric Medical Service. The data is currently being cleaned and analysed with a proforma to be developed and follow up auditing to be undertaken as part of a quality assurance cycle. This study was supported by the Windermere Foundation grant listed below.

The Comparative Study in Bronchiolitis (CSIB) completed the randomised trial phase in September 2011. Recruitment of 775 patients across Australia and New Zealand as planned was a huge achievement. Sunshine met its expected numbers of recruited patients. A retrospective sub-study identifying geographical variation in virology, admission rates and intensive care requirements is currently under way.

A collaborative study between the University Department of Optometry and Sunshine Hospital ED completed recruitment in 2011. The data on children with minor head injury is undergoing analysis by the PI, Dr Larry Abel and should be published this year. A follow up study is planned but not yet detailed.

The Paediatric Research in Emergency Departments International Collaborative (PREDICT) has submitted an application to the NHMRC to develop a Centre for

Research Excellence. This would provide infrastructure funding for ongoing studies with an emphasis on Knowledge Translation.

New projects from the PREDICT network include the Australian Paediatric Head Injury Research Study (APHIRST) which aims to establish a local decision rule for obtaining a CT brain scan following minor head injury in children.

OUR RESEARCHERS

Dr David Krieser: Paediatric Emergency Physician

Samantha Law: RN Research Assistant (Part time) - completed CRIB study September 2011

RESEARCH STUDENTS

Dr Amanda Gwee: Paediatric Registrar

Mr Phillip King: Honours Medical Student - University of Notre Dame

Dr Trusha Brys: Paediatric Registrar

OUR RESEARCH

Comparative Rehydration in Bronchiolitis (CRIB)

David Krieser Collaborators: Ed Oakley (Monash Medical Centre), Franz Babl (The Royal Children's Hospital), Meredith Borland (Princess Margaret Hospital for Children, Western Australia), Jason Acworth (The Royal Children's Hospital), Jocelyn Neutze (Kidzfirst NZ), Stuart Dalziel (Starship NZ)

An Audit of injuries in children under 3 presenting to Sunshine Hospital Emergency Department

Amanda Gwee, David Krieser Collaborator: Anne Smith (The Victorian Forensic Paediatric Medical Service, The Royal Children's Hospital)

Antimicrobial Resistance in children with UTI presenting to Sunshine Hospital Emergency Department

Philip King, David Krieser

Can eye movement abnormalities predict cognition following minor head injury in children?

David Krieser Collaborator: Larry Abel (University of Melbourne)



Paediatric Emergency Physician
Dr David Krieser with a patient
at Sunshine Hospital Emergency
Department

OUR PUBLICATIONS

Kelly A-M, Nguyen K, Krieser D. *Validation of the Luscombe weight formula for estimating children's weight*. *Emergency Medicine Australasia*. 2011; 23(1): 59-62

CHAPTER

Krieser D. *Hepatic Failure*. In *Textbook of Paediatric Emergency Medicine (Second Edition)*, Cameron P; Jelinek G; Everitt I; Browne GJ Churchill Livingstone, Melbourne, 2011

PROCEEDINGS

Dr David Krieser Mongolian Society of Anaesthetists
Paediatric Life Support

Dr David Krieser Mongolian Society of Anaesthetists
Infection Control in Neonatal Care

OUR GRANT

Windermere Foundation Special Grant: Dr Amanda Gwee, *An audit of documentation for injuries in children under 3 in a suburban ED* \$11344

Respiratory and Sleep Disorders Medicine

Respiratory and Sleep Disorders Medicine offers inpatient and outpatient investigation and management of patients with respiratory and sleep disorders.

The most common respiratory conditions dealt with are Chronic Obstructive Pulmonary Disease (COPD), Asthma, Lung Cancer, Pulmonary venous thrombo-embolic disease and pneumonia. The most common sleep disorders are obstructive sleep apnea syndrome and insomnia. The Respiratory Function Laboratory is accredited by the Thoracic Society of Australia and New Zealand as a category 4 (complex test) laboratory. The Sleep Disorders Laboratory is accredited by the Australasian Sleep Association to perform complex sleep studies. The Migrant Screening Clinic coordinates tuberculosis health undertakings for new arrivals and visa applicants for all adults in Victoria.

OUR RESEARCHERS

Dr Anne Marie Southcott: Head of Unit, Respiratory and Sleep Disorders Medicine

Ms Sue Casanella: Respiratory outreach nurse/research coordinator

Lynnette Reid-Price: Sleep Scientist in Charge

Dr Melvin Lim: Registrar (2010-11)

Dr Mark Kubicki: Registrar (2010)

Dr Laina Sheers: Registrar (2010-11)

Dr Michael Flynn: Senior respiratory physician, in charge of Migrant Screening Clinic

Dr Ayesha Saqib: Respiratory Fellow (2010)

Dr Andrew Gillman: Consultant, Respiratory physician

Dr Shalini Bastiampillai: Registrar (2011)

OUR RESEARCH

Modifiable risk factors in an acute exacerbation of COPD

Melvin Lim, Anne Marie Southcott, Andrew Gillman

In this study patients admitted under Respiratory Medicine with an acute exacerbation are interviewed to find out if there are factors which could be modified in the future to help reduce exacerbations and prevent

admissions. COPD is a common condition in our community. Acute exacerbations are a common cause of admission to hospital. Repeated exacerbations reduce quality of life and are associated with increased mortality in COPD. Interview questions revolve around Australasian management guidelines for COPD.

Comparison of tiotropium dry powder inhaler vs pressurised metered dose inhaler in COPD (TioSpir)

Anne Marie Southcott

Long acting bronchodilators are the mainstay of treatment in moderate to severe COPD. This pharmaceutical company sponsored project is comparing 2 formulations of the same agent: tiotropium- Spiriva vs repsimat. Pharmaceutical trials may aid the registration and availability of improved medication for the treatment of COPD which is common in our patient group.

Audit of IVC filter in DVT/PE

Mark Kubicki, Anne Marie Southcott

IVC filters are frequently inserted in patients with significant pulmonary embolism to reduce future PE events. This audit will provide a better understanding of the risks and benefits of IVC filters and may help to improve or refine our practice.

Prospective audit of intermediate respiratory care unit

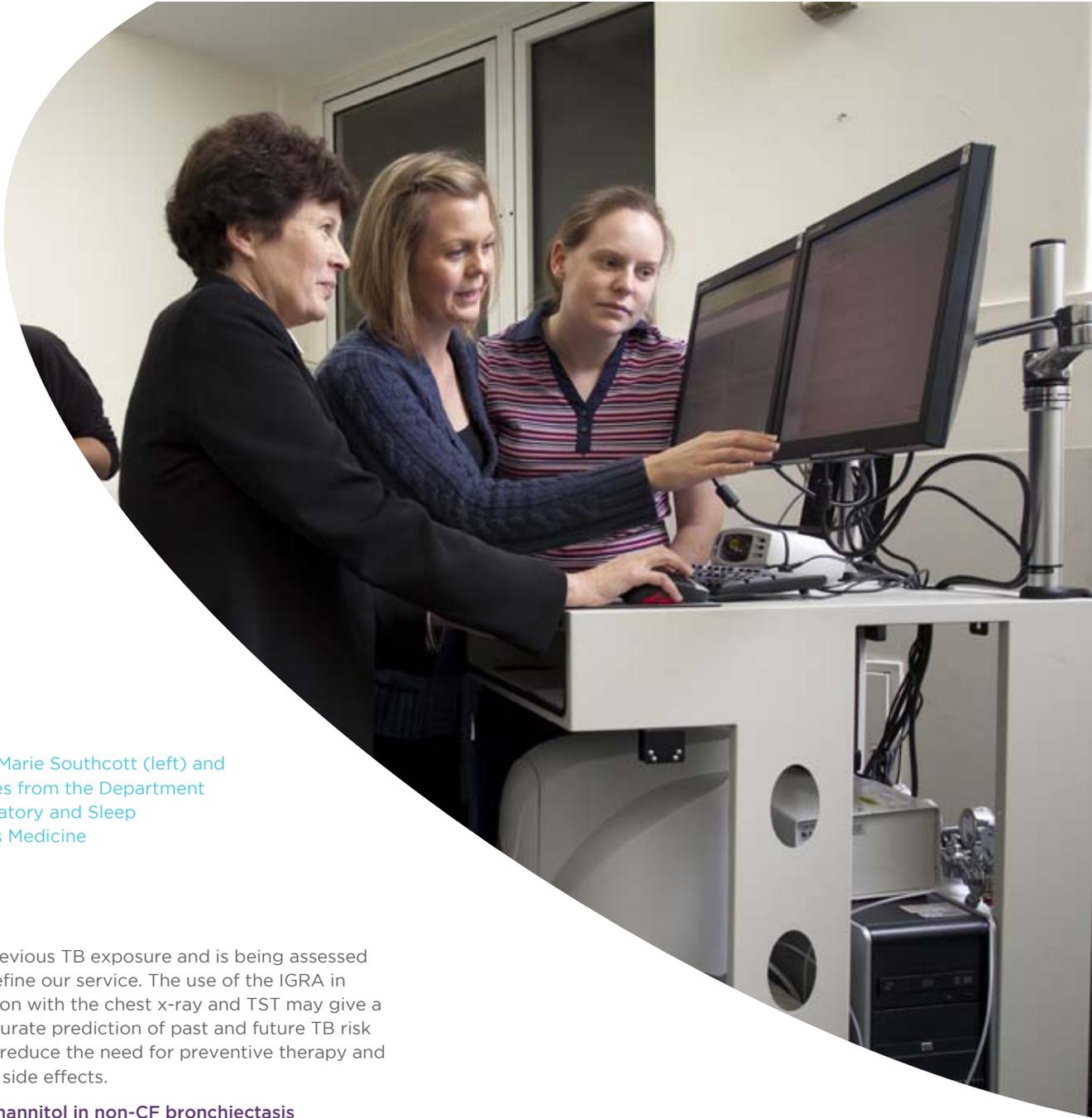
Laina Sheers, Anne Marie Southcott

The intermediate respiratory care unit provides noninvasive ventilatory support on the respiratory ward to patients at WH Footscray. This audit provides a better understanding of current outcomes and patient mix compared with original data from establishment of IRCU in 1999.

Does the chest radiograph improve agreement between the tuberculin skin test and an interferon gamma release assay in a migrant screening program for tuberculosis?

Michael Flynn. Collaborator: Ayesha Saqib

People applying for visas who have an abnormal chest x-ray are given a TB Health Undertaking and in Victoria are referred to WH for further assessment as to the nature of the x-ray abnormality and present and future risk of active tuberculosis. Traditional methods to assess this have been the characteristics of the x-ray changes and the Tuberculin Skin test (TST) (also known as a Mantoux test). A new blood test (Interferon gamma release assay) (IGRA) is increasingly used to



Dr Anne Marie Southcott (left) and colleagues from the Department of Respiratory and Sleep Disorders Medicine

assess previous TB exposure and is being assessed to help refine our service. The use of the IGRA in conjunction with the chest x-ray and TST may give a more accurate prediction of past and future TB risk and may reduce the need for preventive therapy and potential side effects.

Inhaled mannitol in non-CF bronchiectasis

Anne Marie Southcott

Perioperative evaluation of obstructive sleep apnea

Laina Sheers, Anne Marie Southcott, Collaborator: David Bramley

OUR PUBLICATIONS

Flynn M, Brown L, Tesfai A, Lauer T. *Post-migration screening for active tuberculosis in Victoria, Australia.* Int J Tuberc Lung Dis 16(1):50-54 2012 (e print in 2011)

PROCEEDINGS

Bastiampillai S. *Bone density in lung transplant patients. A 10 year review.* Thoracic Society of Australia and New Zealand Annual Scientific Meeting

Bastiampillai S. *High dose corticosteroid use in acute onset narcolepsy.* Australasian Sleep Association Annual Scientific Meeting

Rheumatology

The main thrust of activity for the Rheumatology Department is in clinical research on Osteoarthritis (OA) cohorts. These are prospective and retrospective observational studies looking at the best ways of managing OA of the hips and knees conservatively, to analyse outcomes of surgery, and identify who would benefit most from interventions.

From this work, the Department has developed a clinical form that aims to standardise its usage within the unit. It may be possible to collaborate with the department of physiotherapy and orthopaedics to use the same forms, so that this can facilitate further research and enhance clinical management. We are also collaborating with two other services, Eastern Health and St Vincent's Health to pool data in investigating OA of the hips and knees.

Other research is on pain and the perception of pain in its impact on knee OA. This is in collaboration with Professor Paul Dieppe's group in the UK. We have recruited 16 subjects and should complete our planned cohort of 20 soon. This work was presented at the Asian OA conference in Singapore in October last year. From this study, we have fine tuned our protocols and technique for Qualitative Sensory Testing (QST), and we can use this technique to study patients who have been listed for joint arthroplasty. We can test the hypothesis that subjects who have predominantly neuropathic as opposed to nociceptive pain do not have as good an outcome following knee joint arthroplasty.

OUR RESEARCHERS

Associate Professor Keith Lim: Head of Department

Dr Jessica Luong: Fellow

Dr Albert Leung :Research Registrar

Carolyn Page: Senior Physiotherapist (SVH)

Phuong Tran: Rheumatology Nurse and Research Coordinator

Dr Veronique Boukris-Sayag: Clinical Fellow

OUR RESEARCH

OA Hip and Knee

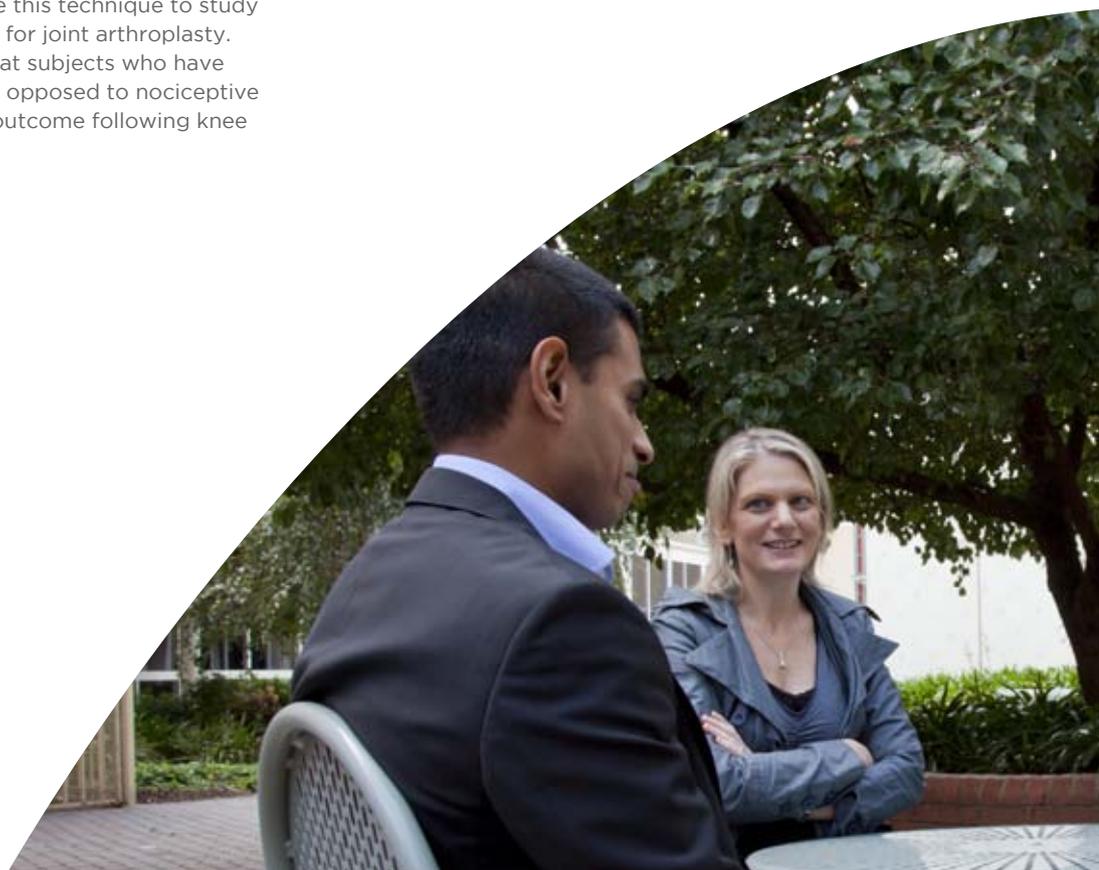
Carolyn Page, Albert Leung, Phuong Tran, Keith Lim, Collaborators: Prof Peter Choong, Prof Paul Dieppe, Prof Danny Liew

This is an observational study on a large OA cohort in terms of modes of presentation, optimum therapy, predictors of surgical outcomes. Few researchers in the world have a large OA cohort under prospective follow up like this study.

Knee OA pain and QST

Jessica Luong, Phuong Tran, Keith Lim, Collaborator: Prof Paul Dieppe

This study aims to differentiate nociceptive and neuropathic pain in knee OA using QST tool which may be able to explain why 25% of patients are still in pain after arthroplasty.



OA Hip and Knee cohort (multisite SVH and WH)

Carolyn Page, Albert Leung, A/Prof Keith Lim, Phuong Tran, Collaborators: Prof Peter Choong (SVH), Michele Dowsey (SVH), Prof Paul Dieppe (UK), Danny Liew (RMH), Narelle Watson (WH)

Pain study with QST

Jessica Luong, A/Prof Keith Lim, Phuong Tran, Veronique Boukris-Sayag, Collaborator: Prof Paul Dieppe (UK)

Conservative management of Hip OA

Carolyn Page, A/Prof Keith Lim, Albert Leung, Collaborators: Eastern Health, StOA hip and knee cohortV Health

Hip OA cohort

Carolyn Page, Keith Lim, Eastern Health

OUR PUBLICATIONS

Gossec L, Paternotte S, Maillefert JF, Combesure C, Conaghan PG, Davis AM, Gunther KP, Hawker G, Hochberg M, Katz JN, Kloppenburg M, Lim K, Lohmander LS, Mahomed NN, March L, Pavelka K, Punzi L, Roos EM, Sanchez-Riera L, Singh JA, Suarez-Almazor ME, Dougados M. *The role of pain and functional impairment in the decision to recommend total joint replacement in hip and knee osteoarthritis:*

an international cross-sectional study of 1909 patients. Report of the OARSI-OMERACT Task Force on total joint replacement. for the OARSI-OMERACT Task Force "total articular replacement as outcome measure in OA". *Osteoarthritis Cartilage.* 2011 Feb;19(2):147-154. Epub 2010 Oct 31

Lim K et al., (*An OMERACT 10 Special Interest Group*) *OARSI/OMERACT Initiative to Define States of Severity and Indication for Joint Replacement in Hip and Knee Osteoarthritis.* <http://www.jrheum.org/content/38/8/1765.abstract-corresp-1>; For the OARSI-OMERACT Task Force Total Articular Replacement as Outcome Measure in OA. *The Journal of Rheumatology* vol. 38 no. 8 1765-1769

Leung A, Liew D, Lim J, Page C, Boukris-Sayag V, Mundae M, Wong M, Choong P, Michelle Dowsey M, Clemens L, Lim K. *The effect of joint aspiration and corticosteroid injections in osteoarthritis of the knee.* *Int J Rheum Dis.* 2011 Oct ;14 (4):384-9

Lim K. *Series Editor for the Issue on Osteoarthritis.* *International Journal of Rheumatic Diseases* Vol14;Issue 2, 2011

Lim K, Lau CS. *EDITORIAL: Perception is everything: OA is exciting.* Article first published online: 25 APR 2011 *International Journal of Rheumatic Diseases*

Dieppe P, Lim K, Lohmander S. *Who should have knee joint replacement surgery for osteoarthritis?* *International journal of rheumatic diseases* (2011) Volume: 14, Issue: 2, Pages: 175-180

PROCEEDINGS

A/Prof Keith Lim. Lourdes Managhan Lecture, Manila, Philippines College of Rheumatology: A clinical model of care of Osteoarthritis

A/Prof Keith Lim, *The Melbourne OA cohort*, Philippines Rheumatology Association OA special interest group workshop

A/Prof Keith Lim: Scientific Chair and Organisor: 1st Asia OA conference, Singapore

Dr Jessica Luong, *Pain and QST in knee OA.* 1st Asia OA conference, Singapore

Associate Professor Lim (second from right) and his Rheumatology colleagues



Surgery

Surgical treatment of colorectal cancer is a major focus of the Department of Surgery, which has a research project aimed at elucidating one of the mechanisms by which colon cancer cells are able to locally invade and to metastasise to distant sites. This focuses on the Eph/Ephrin family of receptor tyrosine kinases.

We will continue to pursue this area and have entered into collaboration with Dr Kulmira Nurgali of Victoria University to continue this work. We will also assist in her studies of the role of the enteric nervous system in IBD and colon cancer.

OUR RESEARCH

Role of the Eph/Ephrin family of receptor tyrosine kinases in the invasion and metastasis of colon cancer
Prof Steven Chan, Dr Paul Senior, Dr Kulmira Nurgali

Changes in the expression of several of the Eph receptors and Ephrins have significant prognostic implications in colon cancer. We are investigating the mechanisms underpinning this with the ultimate aim of improving the therapy of patients with metastatic disease. We have demonstrated that the loss of EphB2, one member of this family, significantly increases the growth of tumours and the cancers ability to invade and migrate.

Air vs carbon dioxide insufflations in colonoscopy – a randomised control trial

Dr Manny Cao

Conventional bowel preparation vs Dulcolax in colonoscopy – a randomised control trial

Dr Paul Simpson, Dr Jennifer Ryan

Top investigate the yield from colonoscopy following an admission for acute diverticulitis

Dr Mohammad Khaleel, The University of Melbourne
AMS student, Lawrence Lam – 2010-11

Project Title: Visual macroscopic hematuria scale – Can it reduce delay in catheter removal and increase nursing confidence?

WH Surgical Registrars Research Prize 2011 (Kendall Francis Prize)

SM Hoh, G Guest, D Watters: *Diverticular disease: the management of acute presentations and its outcomes*

Y Kah: *Incidence and severity of nausea and vomiting in post-anaesthetic recovery in a tertiary teaching hospital*

R de Freitas, R Berkowitz: *Bilateral choanal atresia repair in neonates – a single surgeon experience*

M Williams, T Pham, M Pitcher, STF Chan: *Comparative evaluation of Sunshine Hospital acute surgical unit model: is the new better than the old?*

TL Yong, K Vanyai, V Usatoff, M Smith, PM Evans: *Laparoscopic liver resection of malignant tumors: a Melbourne experience*

R Thomson, A Sidhu, J North, STF Chan, D Travis, J Ooi: *Comparison of transperitoneal and retroperitoneal approaches in laparoscopic radical nephrectomy for renal cell carcinoma: a single centre experience of 61 cases*

T Vo, D Bramley: *Incidence of perioperative hypothermia in colorectal surgical Patients at Western Health*

R Li, MK Ng, B Fleming: *Post operative hypocalcaemia in total thyroidectomy patients with incidental parathyroidectomy*

T Lam, S McLaughlin, STF Chan, I Faragher: *Determinants of complete pathological response to chemoradiation for rectal cancer*

O Onasanya, M Pitcher, I Skinner, J Choi, STC Chan: *Relevance of routine microbiology at drainage of perianal abscess as a predictor of fistula formation*

R Thomson, D Travis: *Trans Rectal Ultrasound (TRUS) Guided Biopsy of Prostate: Pathological analysis of cores and its clinical significance*

S Toshniwal, D Lloyd, H Nguyen: *Oncological and surgical outcome of abdominoperineal resection (APR) for low rectal cancer*

T Du, D Bramley: *The rapid sequence intubation: a time and motion study*

OUR RESEARCHERS

Professor Steven Chan: Head of Department and Professor of Surgery

Associate Professor Trevor Jones: Surgeon

Associate Professor Graeme Thompson: Surgeon

Dr Paul Senior: Senior Research Fellow

Dr Joseph Kong: Master of Surgery by Research candidate

Matthew Chapman: Tissue Bank Manager



Dr Ray Tam, Anaesthetist, in one of Western Hospital's theatres

Lawrence Lam: AMS (Advanced Medical Science) Student,

Associate Professor Stephen McLaughlin: Colorectal Surgeon

Mr Ian Faragher: Colorectal Surgeon

Mr Iain Skinner: Colorectal Surgeon

Mr Matthew Croxford: Colorectal Surgeon

Mr Miklos Pohl: Plastic Surgeon

Mr Felix Behan: Plastic Surgeon

Mr Andrew Sizeland: Head & Neck Surgeon

Mr Arun Chandu: Oral and Maxillofacial Surgeon

OUR PUBLICATIONS

Boccola MA, Sharma A, Taylor C, Wong L, Travis D, Chan ST. *The infusion method trial of void vs standard catheter removal in the outpatient setting: a prospective randomised trial.* BJU Int. 2011 Apr;107 Suppl 3:43-6.

Tourani S, Chan ST. *Undescended testis and right iliac fossa pain.* ANZ J Surg. 2011 Apr;81(4):301-2

McLaughlin SJ, Rogers-Wilson S. *An inexpensive and useful anal speculum.* Ann R Coll Surg Engl. 2011 Sep;93(6):492

Tran B, Keating CL, Ananda SS, Kosmider S, Jones I, Croxford M, Field KM, Carter RC, Gibbs P. *A preliminary analysis of the cost-effectiveness of the National Bowel Cancer Screening Program—Demonstrating the potential*

value of comprehensive real world data Intern Med J. 2011 Sep 1. doi: 10.1111/j.1445-5994.2011.02585.x. [Epub ahead of print]

Boccola MA, Rozen WM, Ek EW, Grinsell D, Croxford MA. *Reconstruction of the irradiated extended abdominoperineal excision (APE) defect for locally advanced colorectal cancer.* J Gastrointest Cancer. 2011 Mar;42(1):26-33

Atalla MA, Rozen WM, Niewiadomski OD, Croxford MA, Cheung W, Ho YH. *Risk factors for colonic perforation after screening computed tomographic colonography: a multicentre analysis and review of the literature.* J Med Screen. 2010;17(2):99-102. Review

Tie J, Gibbs P, Lipton L, Christie M, Jorissen RN, Burgess AW, Croxford M, Jones I, Langland R, Kosmider S, McKay D, Bollag G, Nolop K, Sieber OM, Desai J. *Optimizing targeted therapeutic development: analysis of a colorectal cancer patient population with the BRAF(V600E) mutation.* Int J Cancer. 2011 May 1;128(9):2075-84. doi: 10.1002/ijc.25555

Ooi K, Gibbs P, Faragher I. *Surgical oncology issues in locally advanced rectal cancer.* ANZ J Surg. 2011 Nov;81(11):790-6

Ooi K, Frizelle F, Ong E, Faragher I. *Current practice in preoperative therapy and surgical management of locally advanced rectal cancer: A bi-national survey.* Colorectal Dis. 2011 Sep 7. doi: 10.1111/j.1463-1318.2011.02813.x. [Epub ahead of print]

Surgery

Field K, Faragher I, Gibbs P. *Bending the cost curve in cancer care*. N Engl J Med. 2011 Aug 18;365(7):675; author reply 675-6

Ooi K, Skinner I, Croxford M, Faragher I, McLaughlin S. *Managing fistula-in-ano with ligation of the intersphincteric fistula tract (LIFT) procedure: The Western Hospital experience*. Colorectal Dis. 2011 Aug 11. doi: 10.1111/j.1463-1318.2011.02723.x. [Epub ahead of print]

Tran, P. Morrison, SG. Lade, JA. Haw, CS. *An integrated approach to surgical audit*. ANZ Journal of Surgery. 81(5):313-4, 2011 May

Usatoff V. *Acute care surgical model is one way to manage acute cholecystitis (Re:ANZ J. Surg. 2010; 80: 438-42)*. ANZ Journal Of Surgery, 2011 May; Vol. 81 (5), pp. 398

Plastic and Reconstructive Surgery

Behan FC, Rozen WM, Tan S. *Yin-Yang flaps: the mathematics of two keystone island flaps for reconstructing increasingly large defects*. ANZ J Surg. 2011 Jul-Aug;81(7-8):574-5

Behan FC, Rozen WM, Lo CH, Findlay M. *The omega-ff-variant designs (types A and B) of the keystone perforator island flap*. ANZ J Surg. 2011 Sep;81(9):650-2

Behan FC, Ye X, Rozen WM. *'La Fenetre': the Australian origins of the fenestrated skin graft*. ANZ J Surg. 2011 Oct;81(10):755.

Behan FC, Rozen WM, Kapila S, Ng SK. *Two for the price of one: a keystone design equals two conjoined V-Y flaps*. ANZ J Surg. 2011 Jun;81(6):405-6. doi: 10.1111/j.1445-2197.2011.05772.x. N

Kapila S, Rozen WM, Behan FC. *Management of seroma drainage in the community: a further technique for complicated cases*. Plast Reconstr Surg. 2011 Aug;128(2):104e-105e. No abstract available

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Gavriel H, McArthur G, Sizeland A, Henderson M. *Review: mucosal melanoma of the head and neck*. Melanoma Res. 2011 Aug;21(4):257-66

Corry J, Rischin D, Cotton S, D'Costa I, Chua M, Vallance N, Lyons B, Kleid S, Sizeland A, Peters LJ. *Larynx preservation with primary non-surgical treatment for loco-regionally advanced larynx cancer*. J Med Imaging Radiat Oncol. 2011 Apr;55(2):229-35. doi: 10.1111/j.1754-9485.2011.02256.x

Ek EW, Rozen WM, Ek ET, Rudiger, HA. *Surgical options for reconstruction of the extensor mechanism of the knee after limb-sparing sarcoma surgery: an evidence-based review*. Archives of Orthopaedic & Trauma Surgery. 131(4):487-95, 2011 Apr.

Atalla MA, Rozen WM, Grinsell D, Hyett A, Prakash S, Cham A. *Recurrent phyllodes tumor of the breast: defining the role for skin-sparing mastectomy and autologous reconstruction*. Journal of Reconstructive Microsurgery. 27(4):267-72, 2011 May.

Oral and Maxillofacial Surgery

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Kaing L, Grubor D, Chandu A. *Assessment of bone grafts placed within an oral and maxillofacial training programme for implant rehabilitation*. Aust Dent J. 2011 Dec;56(4):406-11.

DeAngelis AF, Tsui A. *Wiesenfeld D, Chandu A, Outcomes of patients with adenoid cystic carcinoma of the minor salivary glands*. Int J Oral Maxillofac Surg. 2011 Jul;40(7):710-4. Epub 2011 Mar 10

Amailuk P, Badcock M, Chandu A. *Unexpected temporary mental nerve deficit after extraction of mandibular first molar: case report*. Dent Update. 2011 May;38(4):261-2, 265-6

Chandu A. *Communication and dentistry—an important part of the dentist-patient relationship*. Aust Dent J. 2011 Jun;56(2):240-1.

Dastaran M, Chandu A. *Bilateral submandibular gland oncocytoma in a patient with multiple endocrine neoplasia 2B syndrome and neurofibromatosis type 1: an unusual case*. Int J Oral Maxillofac Surg. 2011 Jul;40(7):764-7. Epub 2011 Mar 17

Parthasarathi K, Smith A, Chandu A. *Factors affecting incidence of dry socket: a prospective community-based study*. J Oral Maxillofac Surg. 2011 Jul;69(7):1880-4. Epub 2011 Mar 21

Deangelis AF, Spinou C, Tsui A, Iseli T, Desai J, Wiesenfeld D, Chandu A. *Outcomes of patients with maxillofacial osteosarcoma: a review of 15 cases*. J Oral Maxillofac Surg. 2012 Mar;70(3):734-9. Epub 2011 Jul 20

Otolaryngology, Head and Neck Surgery

Teh, BM, Hall C, Kleid, S. *Infected tracheocele (acquired tracheal diverticulum): case report and literature review*. Journal of Laryngology & Otology. 125(5):540-5, 2011 May

Hobbs CGL, Darr A, Carlin, WV. *Management of intra-operative cerebrospinal fluid leak following endoscopic trans-sphenoidal pituitary surgery.* Journal of Laryngology & Otology. 125(3):311-3, 2011 Mar.

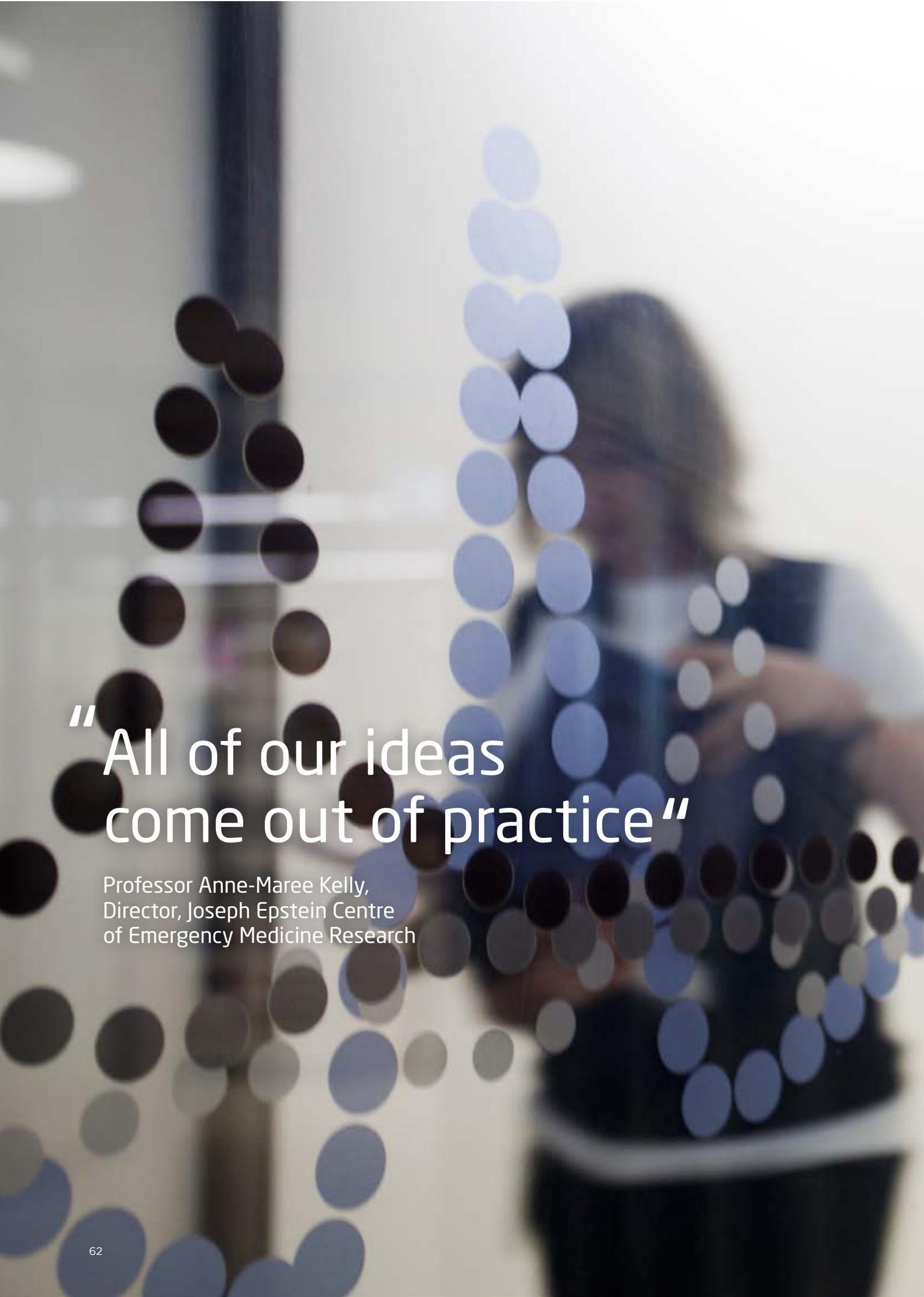
PROCEEDINGS

The infusion method trial of void vs standard catheter removal in the outpatient setting; a prospective randomised trial. The Urological Society of Australia and New Zealand 64th Annual Scientific Meeting 21-24 February 2011 Christchurch, New Zealand

The presentation of this paper by AMS student Anant Sharmat at the conference had to be postponed due to the earthquake in Christchurch.



Nurse Brigitte Polis preparing theatre for surgery



“All of our ideas
come out of practice”

Professor Anne-Maree Kelly,
Director, Joseph Epstein Centre
of Emergency Medicine Research

Melbourne Neuropsychiatry Centre

Melbourne Neuropsychiatry Centre is a clinical research centre of The University of Melbourne and Melbourne Health and is based in three sites: (1) National Neuroscience Facility (NNF), Alan Gilbert Building, Parkville; (2) Neuropsychiatry Unit, Royal Melbourne Hospital, Parkville; (3) Western Centre for Health Research & Education (Western CHRE), Sunshine Hospital.

The Centre was established in 2004 and focuses on understanding the neurobiology of mental disorders from childhood to adulthood. The Centre consists of over 80 people, including research staff, students and professional staff. The Centre receives support from major grants from NHMRC and ARC (including, Program, Project, Enabling and collaborative grants with the EU, as well as Fellowships), as well as other national and international funding agencies. Since 2004, the Centre has received \$9.3M in direct grant funding and over \$30M in collaborative grants and has produced over 470 publications. Details of the Centre can be found at <http://www.psychiatry.unimelb.edu.au/centres-units/mnc/>. The Centre consists of four interdigitating streams, as follows:

Psychosis and Developmental Neuropsychiatry seeks to understand the neurobiology of disorders emerging in childhood and adolescence, including psychotic disorders, particularly schizophrenia. Our studies investigate these disorders longitudinally, and within the context of brain maturation. We seek to identify neurobiological and genetic markers of these illnesses related to onset of the illness or its progression.

The Affective Neuropsychiatry group is interested in how the brain supports complex human emotional experiences and behaviours. This research is primarily focused towards how alterations in normal function may contribute to common mood and anxiety disorders. They use fMRI in combination with experimental psychological approaches to study changes in the activity of brain networks.

Addiction Neuropsychiatry investigates the neurobiological and psychological factors involved in addictive behaviour and associated conditions. The group is also concerned with understanding the long-term effects of chronic drug use on brain and behaviour (including mental health). The addiction group uses detailed psychological assessments and neurobiological and genetic measures.

Systems Neuropsychiatry is focused on the application of new methods to map the human connectome. This work focuses on brain connectivity organisation and maturation, how brain connectivity is disrupted by mental illness and whether brain connectivity can be used as a diagnostic marker in people with mental illness. Their studies principally involve the application of graph theoretic methods to human neuroimaging data.

The Clinical Neuropsychiatry team investigates the link between psychiatric and neurological disorders. A focus has been the relationship of schizophrenia to frontal-temporal dementia (FTD). They also carry out studies on rare neurological disorders such as Neimann Pick Type C disease.

OUR RESEARCHERS

Professor Christos Pantelis: Scientific Director

Dr Vanessa Cropley: Post-doctoral Fellow

Dr Chris Davey: Post-doctoral Fellow

Dr Ben Harrison: Post-doctoral Fellow

Dr Christina Phassouliotis: Post-Doctoral Fellow

Tony Dann: Professional Staff

Chester Kang: Professional Staff

Stephanie Leota: Professional Staff

Barbara Stachlewski: Professional Staff

Renee Testa: Professional Staff

Hannah Cross: Research Officer

Sarah Gale: Research Officer

Antonia Stuart: Research Officer

Melbourne Neuropsychiatry Centre

OUR RESEARCH

Australian Schizophrenia Research Bank Study

Carr V, Schall U, Scott R, Jablensky A, Mowry B, Michie P, Catts S, Henskens F, Pantelis C

The OPTiMiSE study

Prof Christos Pantelis; Prof Patrick McGorry, Dr. Marc Seal, Dr Chad Bousman, Dr Aswin Ratheesh, Dr Sashin Kumar.

The CRC Psychosis study

Christos Pantelis, Ian Everall, Brian Dean, Chad Bousman, Suresh Sundram.

An investigation into the cognitive skills underpinning single word decoding in children with reading disorders

Dr Renee Testa, Associate Researchers: Mrs Amy Lee; Ms Nola Ross; Professor Jennie Ponsford

What is the overall demographic profile and pattern of cognitive functioning (including intellectual functioning, language, and phonological skills) in a group of children referred to a learning difficulties clinic, with a specific focus on a sample of children with a reading disorder?

Given inconsistencies in definitions have contributed to difficulty defining tasks that appropriately measure the relevant constructs of interest, are the tasks we use to measure cognitive constructs of interest tapping into the domains that they are theoretically thought to measure?

What are the inter-relationships between constructs previously demonstrated to be important in the development of academic abilities: short-term memory, phonological memory, working memory, phonological awareness and phonological processing?

This research contributes towards understanding the development of learning disorders, which has a high prevalence rate in the community, and also assist to better develop intervention techniques for children with learning difficulties.

An investigation of pervasive, social and interpersonal difficulties in childhood: cognitive, motor, language and neurological functioning

Dr. Renee Testa, Associate Researchers: Mr. Harvey Jones; Ms. Nola Ross; Dr. Marc Seal; Prof. Bruce Tonge; Prof. Christos Pantelis

The first aim of this study is to characterise the clinical phenotype of children with pervasive, social and interpersonal difficulties in childhood (and who are considered to have a schizotypal condition). This analysis will focus on clinical, behavioural and cognitive features of presenting children.

The second aim of this study is to assess the clinical utility of an assessment tool that has been developed to identify and characterise children with SPD features (The Melbourne Assessment of Schizotypy in Kids (MASK)).

Thirdly, we aim to examine the default mode network in children demonstrating a pre-occupation with an imaginative and fantasy world, comprising of magical thinking and odd and unusual ideas and themes.

A cluster analysis exploration of the characteristics of high-functioning subgroups within the autism spectrum in children aged 8-12 years

Dr. Renee Testa. Associate Researchers: Felicity Klopfer; Prof. Chris Pantelis; Prof. Bruce Tonge; Prof. Stan Skafidus

The primary objective of this study is to employ the statistical technique of cluster analysis to explore whether children with high-functioning ASD can be differentiated into clinically meaningful subgroups on the basis of cognitive, behavioural, developmental, and medical variables. These variables will be identified as important from preliminary analysis of AGRE data (www.agre.org; Melbourne University Human Research Ethics Committee Approval Number 0932503.1), and also additional relevant and more detailed variables identified via literature review.

It is hypothesised that cluster analysis of cognitive, behavioural, developmental, and medical variables for individuals with ASD without cognitive impairment will produce at least two clusters that are different in a clinically meaningful way. Furthermore, it is predicted that the clusters will differ in their receptive language and pragmatic communication ability, their pattern of restricted and repetitive behaviours and interests, and also in the ratio of affected males to females.

OUR PUBLICATIONS

Bartholomeusz C F, Proffitt T M, Savage G, Simpson L, Markulev C, Kerr M, McConchie M, McGorry P D, Pantelis C, Berger G E, & Wood S J (2011). *Relational memory in first episode psychosis: implications for progressive hippocampal dysfunction after illness onset*. The Australian and New Zealand journal of psychiatry, 45(3), 206-213.

Blessing E, Kader L, Arpandy R, Ootsuka Y, Blessing W W, & Pantelis C (2011). *Atypical antipsychotics cause an acute increase in cutaneous hand blood flow in patients with schizophrenia and schizoaffective disorder*. The Australian and New Zealand journal of psychiatry, 45(8), 646-653.



Dr Christina Phassoulotis (left) and Hannah Cross (right) from the Melbourne Neuropsychiatry Centre, based in the Western Centre for Health Research and Education at Sunshine Hospital

Bora E, Fornito A, Radua J, Walterfang M, Seal M, Wood S J, Yücel M, Velakoulis D, & Pantelis C (2011). *Neuroanatomical abnormalities in schizophrenia: a multimodal voxelwise meta-analysis and meta-regression analysis*. *Schizophrenia research*, 127(1-3), 46-57.

Bora E, Harrison B J, Fornito A, Cocchi L, Pujol J, Fontenelle L F, Velakoulis D, Pantelis C, & Yücel M (2011). *White matter microstructure in patients with obsessive-compulsive disorder*. *Journal of psychiatry & neuroscience: JPN*, 36(1), 42-46.

Bora E, & Pantelis C (2011). *Domains of cognitive impairment in bipolar disorder: commentary on "The International Society for Bipolar Disorders-Battery for Assessment of Neurocognition (ISBD-BANC)"*. *Bipolar disorders*, 13(2), 217-218.

Bora E, & Pantelis C (2011). *Structural trait markers of bipolar disorder: disruption of white matter integrity and localized gray matter abnormalities in anterior fronto-limbic regions*. *Biological psychiatry*, 69(4), 299-300.

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Burnett A C, Anderson P J, Cheong J, Doyle L W, Davey C G, & Wood S J (2011). *Prevalence of psychiatric diagnoses in preterm and full-term children, adolescents and young adults: a meta-analysis*. *Psychological medicine*, 41(12), 2463-2474.

Cardoner N, Harrison B J, Pujol J, Soriano-Mas C, Hernandez-Ribas R, Lopez-Sola M, Real E, Deus J, Ortiz H, Alonso P, & Menchon J M (2011). *Enhanced brain responsiveness during active emotional face processing in obsessive compulsive disorder*. *The world journal of biological psychiatry*, 12(5), 349-363.

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Fontenelle L F, Oostermeijer S, Harrison B J, Pantelis C, & Yücel M (2011). *Obsessive-compulsive disorder, impulse control disorders and drug addiction: common features and potential treatments*. *Drugs*, 71(7), 827-840.

Fornito A, Zalesky A, Bassett D S, Meunier D, Ellison-Wright I, Yücel M, Wood S J, Shaw K, O'Connor J, Nertney D, Mowry B J, Pantelis C, & Bullmore E T (2011).

Melbourne Neuropsychiatry Centre

Genetic influences on cost-efficient organization of human cortical functional networks. The Journal of neuroscience, 31(9), 3261-3270.

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Harrison B J, Pujol J, Contreras-Rodriguez O, Soriano-Mas C, Lopez-Sola M, Deus J, Ortiz H, Blanco-Hinojo L, Alonso P, Hernandez-Ribas R, Cardoner N, & Menchon J M (2011). *Task-Induced Deactivation from Rest Extends beyond the Default Mode Brain Network.* PLoS one, 6(7), e22964

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Mechelli A, Riecher-Rossler A, Meisenzahl E M, Tognin S, Wood S J, Borgwardt S J, Koutsouleris N, Yung A R, Stone J M, Phillips L J, McGorry P D, Valli I, Velakoulis D, Woolley J, Pantelis C, & McGuire P (2011). *Neuroanatomical abnormalities that predate the onset of psychosis: a multicenter study.* Archives of general psychiatry, 68(5), 489-495

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Solowij N, Yücel M, Respondek C, Whittle S, Lindsay E, Pantelis C, & Lubman D I (2011). *Cerebellar white-matter changes in cannabis users with and without schizophrenia.* Psychological medicine, 41(11), 2349-2359.

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sectional and longitudinal assessment of structural brain alterations in melancholic depression. Biological psychiatry, 69(4), 318-325.

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Whittle S, Yap M B, Sheeber L, Dudgeon P, Yücel M, Pantelis C, Simmons J G, & Allen N B (2011). *Hippocampal volume and sensitivity to maternal aggressive behavior: a prospective study of adolescent depressive symptoms.* Development and psychopathology, 23(1), 115-129.

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Bora E, Fornito A, Yücel M, & Pantelis C (2011). *The effects of gender on grey matter abnormalities in major psychoses: a comparative voxelwise meta-analysis of schizophrenia and bipolar disorder.* Psychological medicine, (epub 13th Aug 2011).

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Cropley VL, Croft RJ, Silber BY, Neale C, Scholey A, Stough C, Schmitt JAJ (2012). *Does coffee enriched with chlorogenic acids improve mood and cognition after acute administration in healthy elderly? A pilot study* Psychopharmacology; 219(3):737-49.

Dazzan P, Soulsby B, Mechelli A, Wood S J, Velakoulis D, Phillips L J, Yung A R, Chitnis X, Lin A, Murray R M, McGorry P D, McGuire P K, & Pantelis C (2011). *Volumetric Abnormalities Predating the Onset of Schizophrenia and Affective Psychoses: An MRI Study in Subjects at Ultrahigh Risk of Psychosis*. Schizophrenia bulletin, (epub 27th April 2011).

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Pujol J, Batalla I, Contreras-Rodriguez O, Harrison B J, Pera V, Hernandez-Ribas R, Real E, Bosa L, Soriano-Mas C, Deus J, Lopez-Sola M, Pifarre J, Menchon J M, & Cardoner N (2011). *Breakdown in the brain network subserving moral judgment in criminal psychopathy*. Social cognitive and affective neuroscience, (epub 1st Nov 2011).

Whitford T J, Wood S J, Yung A R, Cocchi L, Berger G, Shenton M E, Kubicki M, Phillips L J, Velakoulis D, Yolken R H, Pantelis C, McGorry P D, & Amminger G P (2011). *Structural abnormalities in the cuneus associated with Herpes Simplex Virus (type 1) infection in people at ultra high risk of developing psychosis*. Schizophrenia research, in press (accepted 8th Nov 2011).

Whittle S, Yücel M, Forbes E E, Davey C G, Harding I H, Sheeber L, & Allen N B (2011). *Adolescents' depressive symptoms moderate neural responses to their mothers' positive behaviour*. Social cognitive and affective neuroscience, (epub 16th Sep 2011)

Whittle S, Yücel M, Lorenzetti V, Byrne M L, Simmons J G, Wood S J, Pantelis C, & Allen, N B (2011). *Pituitary volume mediates the relationship between pubertal timing and depressive symptoms during adolescence*. Psychoneuroendocrinology, in press (accepted October 2011).

Wood S J, Yung A R, McGorry P D, & Pantelis C (2011). *Neuroimaging and Treatment Evidence for Clinical Staging in Psychotic Disorders: From the At-Risk Mental State to Chronic Schizophrenia*. Biological psychiatry, (epub 19th July 2011).

Yücel M, Fornito A, Youssef G, Dwyer D, Whittle S, Wood S J, Lubman D I, Simmons J, Pantelis C, & Allen N B (2011). *Inhibitory control in young adolescents: the role of sex, intelligence, and temperament*. Neuropsychology, in press (accepted 5th Aug 2011).

Zalesky A, Fornito A, Egan G F, Pantelis C, & Bullmore E T (2011). *The relationship between regional and inter-regional functional connectivity deficits in schizophrenia*. Human brain mapping, (epub 17th Sep 2011).

CHAPTER

Bora E, & Pantelis C (2011). *Neurobiology of Bipolar II Disorder*. In G J Parker (Ed), Bipolar II Disorder (pp in press) Cambridge: Cambridge University Press.

Lawrie S, & Pantelis C (2011). *Structural brain imaging in schizophrenia*. In D R Weinberger & H P J (Eds), Schizophrenia (3rd ed, pp 334-352) Oxford, UK: Wiley-Blackwell.

Wood S J, & Pantelis C (2011). *Adolescent brain development and implications for mental health*. In A R Yung & P D McGorry (Eds), Youth Mental Health - A preventive approach to mental disorders in young people.

OUR GRANTS

NHMRC Senior Principal Research Fellowship: *Understanding Brain Changes in Adolescence and Neuropsychiatric Disorders*. Prof. Christos Pantelis. \$841,250 (2010-2014)

NHMRC Training Fellowship: *SPECT imaging of cortical muscarinic acetylcholine receptors in schizophrenia: Is it a useful biomarker?* Dr Vanessa Cropley \$290,032 (2011- 2014)

NHMRC Clinical Career Development Award: *Cortico-Striatal Network Alterations in Obsessive-Compulsive Disorder*. Dr Ben Harrison. \$377,000 (2010-2013)

The Brain & Behaviour Foundation: Dr Ben Harrison, \$40,000 (2011).

NARSAD Distinguished Investigator Grant: *Neuroimaging Biomarkers of Psychosis Onset"-PET study examining inflammatory markers (microglial activity) in the CNS of patients developing acute*

psychosis Prof Christos Pantelis. The Brain & Behavior Research Foundation in the US \$100,000 (USD) (2011-2012)

NHMRC-EU Grant Prof Christos Pantelis; Prof Patrick McGorry, Dr. Marc Seal, Dr Chad Bousman, Dr Aswin Ratheesh, Dr Sashin Kumar. *Optimising current therapeutic approaches to schizophrenia: The OPTiMiSE consortium*. \$979,375 (2010-2014)

NHMRC-EU Grant: Prof Patrick McGorry; Prof Christos Pantelis *Gene – environment interactions as predictors of clinical outcome in the At Risk Mental State*. \$997,875:2010-2014

NHMRC Enabling Grant (extended funding): Carr V, Schall U, Scott R, Jablensky A, Mowry B, Michie P, Catts S, Henskens F, Pantelis C, Australian Schizophrenia Research Bank (ASRB) \$440,650 (2011-2012)

NHMRC Enabling Grant (extended funding): Carr V, Schall U, Scott R, Jablensky A, Mowry B, Michie P, Catts S, Henskens F, Pantelis C. *Australian Schizophrenia Research Bank (ASRB)* \$175,000 (2011)

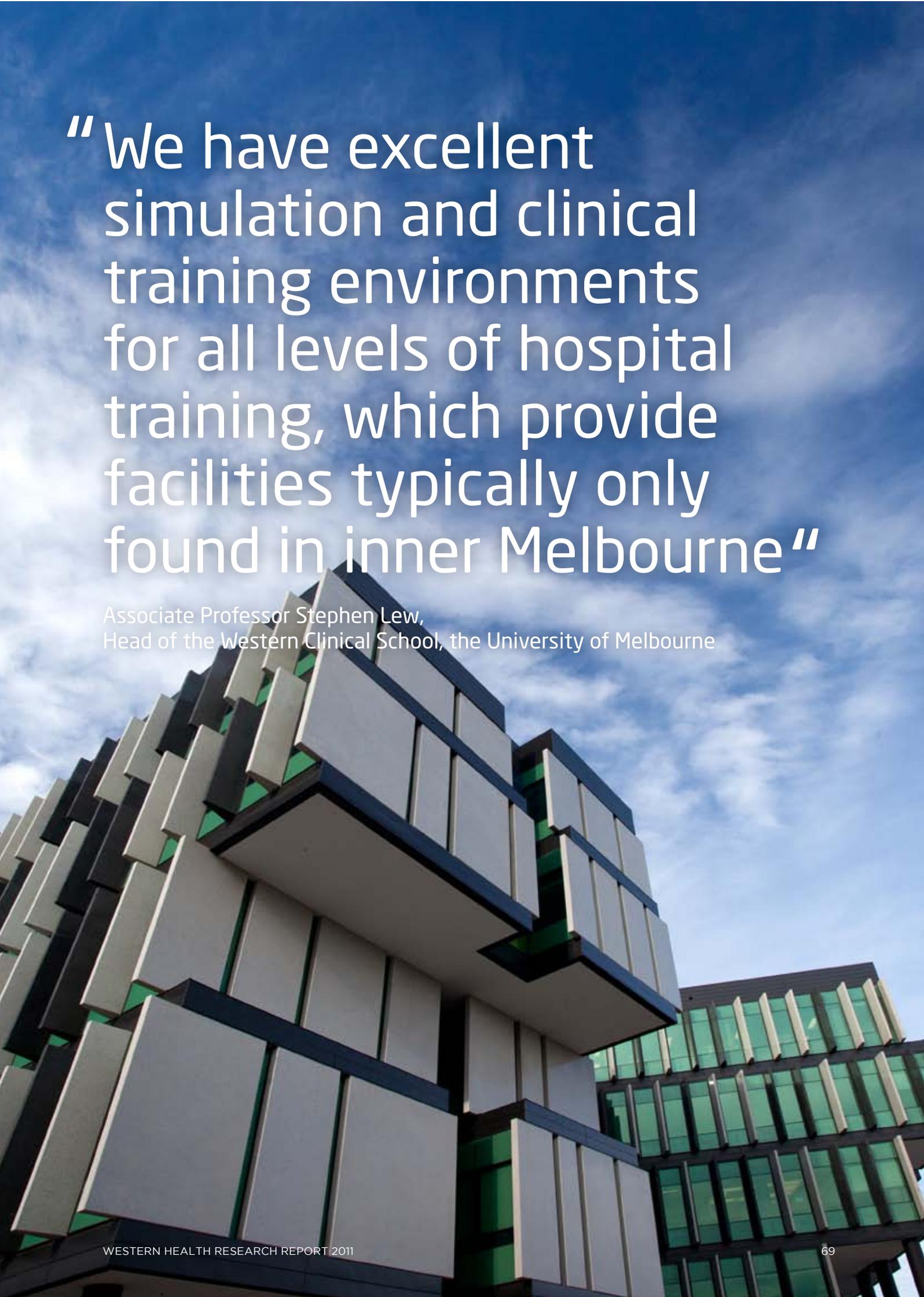
ARC Discovery Project: A/Prof NB Allen, Dr S Whittle, Dr MB Yap, Dr LB Sheeber, Dr DL Foley, Dr P Dudgeon, Dr AM Chanen, Prof Christos Pantelis, *Genes, Neuroanatomy & Family Process: Predicting Adolescent Anxiety & Depression*. \$379,000(2010 – 2011)

AVEC. Abbott Virology External Collaborations Project Grant: Everall, I., Bousman, C., Chana, G., Wright, E., Brew, B., Cysique, L., Pantelis, C., Letendre, S., Atkinson, H., Cherner, M. & Grant, I. *Efficacy of Lithium as an adjunctive therapy to antiretroviral regimens in treating HIV associated Mild Neurocognitive Disorder (MND)*. \$286,497 (2009-2011)

Melbourne Neuroscience Institute Grant: Dennis Velakoulis, Christos Pantelis, Mark Walterfang, Brian Dean, Elizabeth Scarr, Ian Everall, Gursharan Chana. *Is schizophrenia a variant of Frontal-temporal dementia?* \$20,000 (2011)

CRC for Mental Health: Christos Pantelis, Ian Everall, Brian Dean, Chad Bousman, Suresh Sundram. *Identification of biomarkers of treatment-resistant schizophrenia and other psychotic disorders: Can we predict clozapine response?* \$330,000 (2011-2012)

Instituto de Salud Carlos III. Ministry of Science and Innovation Fondo de Investigación Sanitaria (FIS)-Spain: Carles Soriano-Mas, Jesus Pujol, Benjamin Harrison, Prof Christos Pantelis *Functional connectivity in fronto-striatal networks in the obsessive-compulsive disorder subtypes*. (€)86,515 (2010-2012)



“We have excellent simulation and clinical training environments for all levels of hospital training, which provide facilities typically only found in inner Melbourne”

Associate Professor Stephen Lew,
Head of the Western Clinical School, the University of Melbourne

Our Partners

We gratefully acknowledge our partners for their collaboration and support of our research.

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- › Alfred Health
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- › Amgen Australia Pty Ltd
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- › ANZ Intensive Care Society Clinical Trials Group (ANZICS CTG)
- › ANZ Intensive Care Research Centre (ANZICRC)
- › Asia Pacific Association of Young Neurologists and Trainees
- › Asia Pacific Stroke Association,
- › Austin Health
- › Australasian Leukemia & Lymphoma Group
- › Australian Medical Association, Victorian Branch (AMA)
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- › Ludwig Institute of Cancer Research
- › Macedon Ranges and North Western Melbourne Medicare Local
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- › Melbourne Neuroscience Institute
- › Melbourne Brain Centre
- › MonashHeart, Southern Health
- › Monash Medical Centre (MMC)
- › Monash University
- › National Health and Medical Research Council (NHMRC)
- › National Stroke Association of Sri Lanka
- › National Stroke Research Institute
- › Neuroscience Trials Australia (NTA)
- › Novartis Oncology Australia
- › Nurses Board of Victoria
- › Ormond College

- › Osteoporosis Australia
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- › Pfizer Oncology
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- › St Vincent Hospital (SVH)
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- › The Brain & Behavior Research Foundation, USA
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- › The George Institute for Global Health
- › The Heart Foundation
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- › The Royal Children's Hospital (RCH)
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- › The University of Queensland
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- › The Victorian Forensic Paediatric Medical Service (VFPMS)
- › University of California, San Francisco
- › University of Colombo, Sri Lanka
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- › Victoria University
- › Victorian Cancer Agency (VCA)
- › Victorian Comprehensive Cancer Centre (VCCC)
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- › Wangaratta Hospital
- › Windermere Foundation
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- › Yale University



Western Health locations

WESTERN HOSPITAL

Gordon Street
Footscray VIC 3011
Locked Bag 2, Footscray VIC 3011
(03) 8345 6666

SUNSHINE HOSPITAL

Furlong Road
St Albans VIC 3021
PO Box 294, St Albans VIC 3021
(03) 8345 1333

WESTERN CENTRE FOR HEALTH RESEARCH AND EDUCATION

Sunshine Hospital
Furlong Road
St Albans VIC 3021
(03) 8345 1333

SUNBURY DAY HOSPITAL

7 Macedon St
Sunbury VIC 3429
(03) 9732 8600

WILLIAMSTOWN HOSPITAL

Railway Crescent
Williamstown VIC 3016
(03) 9393 0100

DRUG AND ALCOHOL SERVICES

3-7 Eleanor Street
Footscray VIC 3011
(03) 8345 6682

HAZELDEAN TRANSITION CARE

211-215 Osborne Street
Williamstown VIC 3016
(03) 9397 3167

REG GEARY HOUSE

54 Pinnacle Crescent
Melton South VIC 3338
(03) 9747 0533

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