Translating science into better health

T1 – Translation to first in humans
Findings from basic research are tested for clinical effect and/or applicability. T1 research yields knowledge about human physiology and the potential for intervention.

T2 – Translation to patients (refer page 14)
T3 – Translation to clinical practice (refer page 21)
T4 – Translation to population health (refer page 125)
Welcome to Princess Alexandra Hospital (PAH) Centres for Health Research Annual Research Report 2011. The 2011 Research Report highlights another year of fantastic achievements and significant progress in our mission to translate advances in research into real benefits for patients locally and around the world.

The PA Hospital is committed to a philosophy of supporting research endeavours in all areas of the health care continuum from the investigation into the causes of disease prevention to treatment and implementation of better health care practices. This research is integral in maintaining and improving the health status of all Australians.

In recent years, the strong link between laboratory and clinical practice at the Hospital has been rewarded by a number of ‘world firsts’ in the diagnosis and treatment of disease. Our successes are supported by close collaborations with our key university partners the University of Queensland Diamantina Institute, the QUT Institute of Health and Biomedical Innovation and Griffith University.

The diverse nature of our research results from the successful collaboration between our clinicians, our partnering universities, national and international academic centres and industries. PAH researchers had a productive year in 2011, with continued investigations in a large number of clinical areas of national importance including: cancer, diabetes, heart disease, respiratory, trauma and ageing. The high standard of research conducted on the campus was evidenced by NHMRC and ARC project grants being awarded funding in 2011 over $13 millions.

Hospital and Health Services
As part of the National Health Reforms, 17 new hospital and health services (HHSs) will be introduced by July 1, 2012. Metro South will become the statutory body responsible for providing public health services to the area incorporating Brisbane’s south side, Logan and Redland. Metro South will be overseen by a local Hospital and Health board that will be responsible for making its own operational decisions to meet the specific aims of our community. Mr Terry White AO was recently appointed as the Chair of the new Metro South Hospital and Health Board. The reforms are primarily concerned with hospital and health service management while the clinical services we provide will remain unchanged.

Launch of the Diamantina Health Partners
Diamantina Health Partners (DHP) launched in July 2011, is Queensland’s first academic health science centre that unites eight of the state’s leading hospitals and universities to improve care for patients in our community.

DHP aims to position itself to take advantage of future funding opportunities through the demonstration of innovative thinking and productive collaborative arrangements which deliver on the tripartite mission of excellence in patient care, training and research.

DHP’s vision is to be recognised internationally as a premier academic health science centre achieving innovative healthcare through academic leadership.
Translational Research Institute
The $350 million The Translational Research Institute (TRI) will house 650 researches from Queensland's leading medical research enterprises. It will be one of the few places in the world that treatments and biopharmaceuticals can be researched, clinically tested and manufactured in one facility. The TRI's construction is on schedule and we expect researchers to begin relocating in late 2012. The institute will enhance the translation of the next medical research breakthroughs into better patient care and will assist in promoting the PAH campus and a major medical research centre in Australia.

New appointments – building a strong and vibrant research culture
- Professor Professor Holtmann, Director of Gastroenterology and Hepatology
- Appointment of Associate Professor Maher Gandhi, Chair of the MSHSD
- Associate Professor Leigh Atkinson retires from PAH, Dr Franck Thomas appointed

‘PAH researchers had a productive 2011, with continued investigations in a large number of clinical areas of National importance including; cancer, diabetes, heart disease, respiratory, trauma and ageing.’

Awards:
- Professor Ian Frazer – Companion of the Order of Australia during the Queen’s Birthday Jubilee for eminent service to medical research
- Professor David Johnson received the Public Service Medal for outstanding public service, particularly research into the early detection and management of kidney disease
- Professor Len Gray was presented with Queensland Health Australia Day Achievement for his outstanding leadership and contribution to Telehealth and Telehealth aged care services
- SPARQ-ed received a Peter Doherty Award for Excellence in Science and Science Education in the Science Education Partnership and Community Science Awards category.

Professor David Theile
CEO, Metro South Health Service District
AO, HonDPhil(Qld), MBBS (Hons)(Qld), MS, FRACS, FRCS (Eng), FRCS (Ed)(Hon), FANZCA(Hon)

Dr Richard Ashby
Executive Director, Princess Alexandra Hospital
AM, MBBS (Ox), BHA (NSW), FRACGP, FRACMA, FACEM, FIFEM
Message from the Chair and the Director, Centres for Health Research

It gives me great pleasure to deliver this joint message since taking up the position of Chair in 2011.

2011 has been an outstanding and noteworthy year of building on and strengthening the record of achievements on the Princess Alexandra Hospital (PAH) campus. It is an exciting time of academic growth and health care development which will auger well for the PAH campus in its role of shaping the future of health care and aspiration to be at the forefront of Queensland, nationally and internationally. The new Translational Research Institute (TRI) building is scheduled for occupancy in late 2012. The TRI will bring together the Diamantina Institute (UQ), the Mater Medical Research Institute, the Institute of Health and Biomedical Innovation (QUT), Princess Alexandra Hospital and the University of Queensland School of Medicine in a partnership to accelerate and translate medical research into improved patient outcomes.

Diamantina Health Partners (DHP), launched in 2011, is positioned to deliver on the academic health sciences centre model of excellence in patient care, training and research. We are poised to leverage the opportunities that will flow from both the TRI and DHP.

The PAH campus has a long history of commitment to research that translates discoveries to improved clinical practice and policy implementation. Our research strengths are directly aligned with the key National Health priorities: arthritis, cancer, diabetes, heart disease, intensive care, liver and renal disease, mental health and trauma. This report highlights the commitment of the researchers on the PAH campus to investigate innovative solutions to real world clinical issues.

Research Performance and Support
The research groups at the hospital have had a solid record in obtaining competitive peer review grant funding as set out in the Group Reports section. There continues to be an increase in the number of publications on a background of strong productivity. Publications are vital for research to be translated into improved health outcomes for our community.

‘This report highlights the commitment of the researchers on the PAH campus to investigate innovative solutions to real world clinical issues.’
Postgraduate student numbers have also increased significantly with over 170 postgraduate students on campus from our affiliated and other collaborating universities. This has also been a successful year for competitive grants awarded to PAH-based researchers which will ensure that opportunities for quality research are maintained.

Funding was boosted by the formation of a new PA Research Support Scheme which allocated $1.4 Million of joint support from the PA Research Foundation and Private Practice Trust Fund. The Scheme awarded 17 grants across categories supporting projects, people and excellence. The latter initiation rewards research excellence by supporting the indirect cost of research of successful NHMRC grant recipients. We congratulate all our researchers and wish them every success with their research.

**Partnerships**

We have a growing list of industry sponsors and collaborative research groups who continue to work closely with our researchers by developing new treatment or prevention of disease pathways for our patients. We would like to thank all the sponsors for their support and encourage them to continue this partnership in 2012 and beyond.

**Facilitating Research**

We thank the Metro South Health Service District Human Research Ethics Committee (HREC) for their tireless efforts in reviewing many research applications. We congratulate Associate Professor Maher Gandhi on his appointment to the Chair of the HREC.

A new Research Committee was constituted and its terms of reference updated in 2011. We express our appreciation to all those who have helped to enhance the research performance on the campus but particularly the staff of the Centres for Health Research. The Centres for Health Research fosters an environment that facilitates research and will continue to add services to support our research community and we look forward to working with our academic, research and health care partners in 2012.

It gives us great pleasure to present this fourteenth Annual Research Report, which is a summary of what has been achieved in 2011 through a wealth of partnerships and collaborations.

**Ms Areti Gavrilidis**

MBA, Grad Dip Bus Admin, BSc, BAppSc, Churchill Fellow

**Professor Ken Ho**

Chair, Centres for Health Research, Princess Alexandra Hospital
FRACP, FRCP (UK), MD
In 2006, following many months of broad and exhaustive consultation, A Trauma Plan for Queensland was published translating combined expert knowledge of Trauma care into clinical management of severely injured patients in Queensland. Supported in its early stages by Gerry FitzGerald, Chief Health Officer at that time, and with the continuing support of Professor Andrew Wilson – Director for Planning and Resources in Queensland Health, and an imperative for change and fortuitous timing, this document was brought to fruition.

A Trauma Plan for Queensland brought together for the first time a wide-ranging collective of trauma care providers from across the State and transformed the treatment and management of trauma patients across Queensland, established three major trauma centres and initiated new retrieval and transfer protocols and secured ongoing funding.

It was essential early on to assemble a team that could begin bringing ideas to life, and to grow those ideas to fully functional realisation. These teams formed the early PAH Trauma Service and QUT’s Trauma Research Group; the same members of which have provided continuity across many years to ensure success.

The creation of a 4 bed Trauma High Dependency Unit lead the way to formally establishing the PAH Trauma Service in 2007. Today the management of severe trauma is truly multidisciplinary at Princess Alexandra Hospital Trauma Service with integration and support from medical, nursing and allied health staff from various fields.

The positive profile and strong collaborations at PAH has led to verification by the Royal Australasian College of Surgeons as the first level 1 Trauma Centre in Queensland.

Professor Schuetz is committed to stimulate a research culture in trauma ensuring changes in clinical management are thoroughly researched, validated and reinforced before new clinical practice or surgical interventions are implemented. The high clinical throughput of maximum complexity in trauma including: spinal trauma and severe soft tissue trauma; offers an ideal environment for hands-on clinicians to undertake basic and clinical research in this field.

Into the future it’s clear we must engage students and training doctors in a strong research culture. It is important in this respect that they are not only encouraged to be actively involved in research but that they demonstrate proactive behaviour in seeking research projects that will align ortho/trauma research to advance their careers.

The Queensland Health Office of Health and Medical Research Mentor Program has already provided a training Public Health Officer candidate undertaking a Masters with the Trauma Research Group. Two other PAH training doctors have commenced or are completing a Masters degree with the Trauma Research Group.

The QUT Trauma Research Group is now a well established team of researchers with international collaborations securing us a high impulsion for students to seek us out, and attractive to international researchers and students from areas such as North America and Europe. The Group has completed 5 PhD students to date and secured close to $4million in funding.

‘Success cannot be achieved single-handedly and is always dependent on others.’
<table>
<thead>
<tr>
<th>Year</th>
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<tr>
<td>2004</td>
<td>Commences as Chair in Trauma</td>
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<tr>
<td>2005</td>
<td>Trauma Research Group established with 1st Senior Research Fellow</td>
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<td>2006</td>
<td>A Trauma Plan for Queensland</td>
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<tr>
<td>2007</td>
<td>Commences as Director of Trauma</td>
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<td>2008</td>
<td>2nd Senior Research Fellow commences with Trauma Research</td>
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<td>2009</td>
<td>National Critical Care &amp; Trauma Response Centre established - PAH Primary Partner</td>
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<td>2010</td>
<td>Deputy Director Trauma Service</td>
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<tr>
<td>2011</td>
<td>Spinal Trauma Database established</td>
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<tr>
<td>2008</td>
<td>Translational Research Institute completes</td>
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<td>2008</td>
<td>PRINCESS ALEXANDRA HOSPITAL ACHIEVES TRAUMA VERIFICATION</td>
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<td>2008</td>
<td>Spinal Trauma Research Fellow commences</td>
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<td>2008</td>
<td>PAH Acute Surgical Unit is established with strong alliance to Trauma Service</td>
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Queensland initiatives such as the TRI are an enormous opportunity to broaden basic research and expand on strong clinical research for patient care and will fulfil the vision of the Trauma Research Group in translating research into clinical practice.

Success cannot be achieved single-handedly and is always dependent on others. In this respect it has been the unwavering support of senior surgeons, administration of the Princess Alexandra Hospital and QUT, as well as the Australian Orthopaedic Association and the Royal Australasian College of Surgeons that have ensured the success of this collaboration.

*Professor Michael Schuetz*
Chair Trauma
The University of Queensland

Faculty of Health Sciences, UQ

The UQ Faculty of Health Sciences consists of seven schools (Medicine, Dentistry, Nursing & Midwifery, Pharmacy, Health & Rehabilitation Sciences, Human Movement Studies, and Population Health) and a number of University- and Faculty-level research centres (including the UQ Centre for Clinical Research, the National Centre for Environmental Toxicology, the Queensland Children’s Medical Research Centre, the Centre for Military and Veteran’s Health and the Centre for Youth Substance Abuse Research). The major point of collaboration for the Faculty with the PAH is through the Southern Clinical School of the School of Medicine, based at PAH, and a separate report on its annual activities is provided to the right. In addition strong and valued collaborations also occur at PAH via the Schools of Pharmacy, Population Health and Health and Rehabilitation Sciences in particular.

The Faculty is an enthusiastic participant within the Diamantina Health Partners venture and is excited by the prospects a genuine academic health science centre presents for synergistic interaction between teaching, research and clinical service provision. The Faculty looks forward with great anticipation and expectation to the opening of the Translational Research Institute in 2012 and sees this as further opportunity to build on the existing strong University-Hospital linkages on the PAH campus.

Professor Nicholas Fisk
Executive Dean, Faculty of Health Sciences

School of Medicine

2011, the 75th anniversary of the establishment of The University of Queensland School of Medicine, saw us continue with far-reaching strategic reviews. Much thought was invested into the MBBS Program review, AMC accreditation and the septennial UQ School review, and in 2011 the many recommendations have been developed into a single strategic work plan, structured along UQ’s key themes of Learning, Discovery and Engagement, as well as Globalisation and Operational Excellence. This plan will guide our priorities as Australia’s global medical school.

Both an advantage and a challenge, our School operates over many sites to promote and support teaching and research, partnering with Queensland Health and private health service providers at ten Clinical Schools throughout Brisbane, in rural and remote facilities throughout Queensland, and internationally in Brunei and North America. Across the School, our research teams are embedded in hospital campuses and involve many of the 3000 clinicians who hold joint UQ-Hospital appointments or honorary academic titles with our School. This clinical expertise, across every clinical specialty, can identify clinical questions that need to be addressed, translate the findings of research as directly as possible into clinical practice, and engage our medical students in research thinking, current endeavours and outcomes.

The School of Medicine research activity at PAH has major focus in ten school research centres, which in 2011 include the Centre for Research in Geriatric Medicine, Dermatology Research Centre, Centre for Liver Disease Research, and a node of the Liver Research Centre based at the Greenslopes Private Hospital, the Cardiovascular Imaging Research Centre, Centre for Kidney Disease Research, Centre for Integrative Clinical and Molecular Medicine, Lung and Allergy Research Centre, Therapeutics Research Centre and the Endocrine Hypertension Research Centre.

The University of Queensland
Beyond these school centres, research is conducted by our academics integrated in the hospital’s clinical departments. Associate Professor Jenny Martin, as Head of the PA-Southside Clinical School, has actively encouraged collaboration between the School of Medicine and PAH clinical departments, supporting joint positions and academic titles with the School of Medicine and multiple partnerships with research groups, other universities and hospitals.

2011 saw new areas of research focus at PAH. Associate Professor Warrick Inder joined the School and the Department of Diabetes and Endocrinology, and joins Professor Ken Ho’s research group to continue world-class pituitary and adrenal disease research. Professor Ho won the inaugural Endocrinology Society of Australia’s Plenary Award for outstanding research in 2011. Professor Gerald Holtmann joined the PAH as Director of the Department of Gastroenterology and Hepatology, and will continue his internationally collaborative research in the field of neurogastroenterology. Another research recruit to the PA-Southside Clinical School is Associate Professor Tony Stanton, as the new Director of the Cardiovascular Imaging Research Centre, who is leading the imaging research and its integration with molecular biological techniques and new therapies. The Cardiovascular Imaging Research Centre continues its collaboration with our centres for Kidney Disease Research and Endocrine Hypertension Research and other groups, with ongoing significant projects into the complex association of CV disease with other diseases such as diabetes, hypertension, renal diseases as well as cardiac imaging techniques impact on patient outcomes and cost-effectiveness of patient care. Associate Professor Jenny Martin, together with the UQ Schools of Pharmacy and Population Health and the Mater Medical Research Institute, is developing a national clinical pharmacology research group with links to government and the pharmaceutical industry, with research encompassing clinical pharmacogenetics and clinical outcome variables.

Professor Peter Soyer, director of the Dermatology Research Centre, was awarded a prestigious NHMRC Clinical Practitioner Fellowship to commence in 2012. This centre has successful local, national and international collaborations to form the focus of dermatology research in Australia, for example, teledermatology links with the School of Medicine’s Centre for Online Health, collaborative squamous cell cancer research with the Diamantina Institute, nanodermatology and drug delivery models research with Tarl Prow, who now joins the centre, and collaborations with clinicians and clinical researchers at PAH, Mater, IMB and QIMR.

School of Medicine researchers based at PAH won over $9million in new research grants in 2011, with funding scheduled through to 2015, mostly as prestigious competitive grants and Fellowships from NHMRC. Our research centres have reported successful recruitment and progress of clinical trials and research projects underway in 2011, and a highlight of the conclusion of several long-term projects is the Centre for Research in Geriatric Medicine’s study of the prevalence of dementia and other geriatric syndromes and care dependence in older patients, identifying the need for careful hospital design, staff skills and functional maintenance programs for patients to prevent decline and support recovery. This is just one example of the real relevance of our research effort at the PA Hospital.

In 2011, our School published over 1,000 peer-reviewed research papers, supervised 365 research higher degree students and was awarded nearly $27million in new research grants. The research activity at PAH campus is a critical element in our success in medical research and education, and the laboratory and clinical research facilities being developed in and around the Translational Research Institute promise a continuation of high energy research and translation to clinical outcomes.

Professor David Wilkinson
Head School of Medicine
In 2011 preparations for the opening of TRI continued, including the recruitment of high-profile researcher Professor Selena Bartlett to complement IHBI’s existing members that will be moving to TRI. Professor Bartlett was awarded an ARC Future Fellowship to establish her translational research program in Australia. TRI’s facilities, including the adjacent biopharmaceutical production facility at BioPharmaceuticals Australia, will allow Professor Bartlett to continue her investigations into signalling pathways in the brains of individuals addicted to substances and corresponding pharmaceutical therapies that target these pathways.

Addiction
Professor Ross Young, Professor David Kavanagh, Associate Professor Karen Sullivan and Dr Fred Thorberg at IHBI collaborated with Dr Gerald Feeney and Associate Professor Jason Connor at the PAH Alcohol and Drug Assessment Unit in:
- Developing more effective cognitive behavioural treatment for alcohol dependence
- Improving clinical assessment of craving in alcohol dependence
- Monitoring neuropsychological outcomes for patients with alcohol-related liver disease, post-transplantation
- Understanding the role of emotion recognition and processing deficits in patients with problem drinking

The outcomes of the PAH Alcohol and Drug Assessment Unit are more fully covered separately in this report.

Trauma
The QUT Trauma Research Group headed by Professor Michael Schuetz, orthopaedic and trauma surgeon, includes engineers and computer scientists, working with surgeons, and emergency specialists at the PAH. The Trauma Research Group improves community capacity to respond to trauma and creates more effective clinical services for severely injured patients. It focuses on bone fracture healing through computer modelling, developing bone substitutes and infection resistant implant coatings.

In 2011 Dr Joost van Middendorp joined the Trauma Research Group to develop the group’s clinical research in traumatic spinal cord injury.

The Trauma Research Group received four grants in 2011 to work on:
- Trauma recovery
- Improving outcomes for pre-hospital spinal trauma management in Australia
- Accelerating bone healing
- The potential use of stem cells in bone tissue engineering

‘We combine high quality health research with a commitment to social justice. This means that we do more than develop innovative solutions to health issues.’
Nursing Practice

QUT is conducting multiple nursing-specific research projects in collaboration with PAH. Led by Professor Patsy Yates, the QUT School of Nursing’s Director of Research, Professor Helen Edwards, Head of School, and Dr Alexandra McCarthy, Senior Lecturer, the collaboration incorporates a variety of projects examining key health issues including:

- Implementing a behavioural intervention for managing women’s wellness after breast cancer
- Developing a tool to measure nurse sensitive indicators in oncology
- Examining the prevalence and determinants of cardio-toxicities after cancer treatment
- Developing a self-management program to assist with fatigue in patients with advanced cancer
- Evaluating novel methods for delivering non-pharmacological intervention for cancer patients who have difficulty breathing (dyspnoea)
- Evaluating the statewide Cancer Care Coordination Program

In 2011, the group received an Australian Government Department of Health and Ageing grant to investigate self management strategies for cancer patients. The PAH Foundation also funded the continuation of the project to evaluate a cryotherapy intervention for docetaxel-induced hand and nail toxicities. Professor Edwards was recognised for her service to nursing education and research with a Medal of the Order of Australia. The team worked with colleagues at the University of California San Francisco (UCSF) on symptom management for older persons with cancer.

Prostate Cancer

The QUT Prostate Cancer Program, directed by Professor Colleen Nelson and Professor Judith Clements at the Australian Prostate Cancer Research Centre – Queensland (APCRC-Q), examines therapeutic and biomarker development for prostate cancer and involves geneticists, protein chemists, urologists, oncologists and clinical pharmacologists. It employs high throughput bioprofiling of prostate cancer tissues to characterize the molecular mechanisms underlying disease progression. The research validates the relevance of potential targets through the expression of candidate genes on tissue microarrays elucidating pathways associated with poor response to treatment.
Postgraduate Research

It is wonderful to see record numbers of post-graduate students supervised at the Princess Alexandra Hospital. In 2011, approximately 32 students have been enrolled in PhD and Master’s Program.

Geetpal Sandhu

Geeta has been the Ambulatory Care Cancer Pharmacist at the Princess Alexandra Hospital since 2006 and during that time has been involved in several cancer pharmacy led research projects. The most notable was her research in 2009 in complementary medication interactions with anticancer therapy resulting in presentations at various local, national and international multidisciplinary cancer conferences including receiving an award for ‘best abstract’ at the International Society of Oncology Pharmacy Practitioners Australasian Symposium. During 2009 to 2010, through Medication Services Queensland, Geeta was involved in a state-wide assessment of anticancer medication safety within Queensland Health hospitals, with the outcomes presented nationally.

Geeta is currently working towards completing her Doctor of Philosophy at the University of Queensland. The project is a collaboration between the Pharmacometrics Group (UQ School of Pharmacy) and both the Haematology and Pharmacy departments at the PAH. The overall project aim is to analyse the impact of obesity on the dosing of high-dose methotrexate chemotherapy in non-Hodgkin lymphoma patients through pharmacokinetic/pharmacodynamics markers and survival outcomes.

Linda Schnitker

Linda Schnitker’s PhD “A quality framework for the care of older persons with cognitive impairment presenting to emergency departments” is focused on improving the care for the older cognitively impaired ED population.

The ageing of the general population and the global increase in the prevalence of dementia are expected to result in an increase in older patients with cognitive impairment presenting to emergency departments. Older ED patients with cognitive impairment have specific care needs and have poorer outcomes when compared with both younger patients and older patients without cognitive issues. However, health outcomes have been shown to improve with high quality care. This PhD program will measure levels of ED performance to develop a framework for quality care of older persons with cognitive impairment in ED. The framework will provide a structured approach to identifying opportunities for improving care.

This project will develop a set of quality indicators by testing a suite of expert panel derived potential QIs in 8 emergency departments across three Australian States. Each QI will be assessed for measurability, cost, and ability to correctly identify quality of care.

The work from this study has significant potential to optimize opportunities to focus resources for improving emergency care for older ED patients with cognitive impairment. Linda Schnitker is supervised by Professor Len Gray, Doctor Melinda Martin-Khan (both Centre for Research in Geriatric Medicine, School of Medicine, UQ) and Professor Elizabeth Beattie (School of Nursing and Midwifery, Faculty of Health, Queensland University of Technology).
Australia and New Zealand have the world’s highest incidences of both non-melanoma skin cancer and melanoma. One of the biggest health system challenges in the western world, particularly Australia and New Zealand, is to reduce the incidences of skin cancer. Early detection begins from self-examination and opportunistic screening by physicians and dermatologists. The challenge is making best clinical practice when patients present 20-30 moles or lesions. Traditional skin biopsies are employed to diagnose questionable lesions and to provide accurate prognosis of the disease occurrence and progression. However, these techniques are painful, may require suture, and render the lesion unsuitably damaged for further study. Furthermore, histopathological samples require formalin fixing, hindering downstream molecular analysis. Molecular fingerprinting of skin disease has the potential to dramatically improve diagnostic sensitivity and open the door for personalised medicine.

The emphasis of this device is not to replace the current standard of care but provide a complementary method for differential diagnosis (i.e. facilitate the molecular detection of early signs of skin diseases) and to take multiple samples where conventional biopsies are not feasible. This is a multidisciplinary project involving both national and international collaborators, and the novelty of this project leading to PCT filing.

Diwakar Ram Pattabiraman

Diwakar completed his Bachelor of Science in India at The University of Madras, majoring in microbiology. He then moved to Brisbane to pursue a Masters in Research at University of Queensland Diamantina Institute (UQDI). Diwakar was attracted by the location of the Institute within the PA Hospital campus and working on cancer research with easier interactions with the clinical side. During his six years at UQDI undertaking his PhD, Diwakar worked on the Mb protein and his project entailed studying the biochemistry of Myc and its interacting partners, defining their role in the transformation of haematopoietic cells that ultimately results in leukaemia. Diwakar achieved a multitude of awards during his time at UQDI, including scholarships from the Cancer Council and Leukaemia Foundation, as well as multiple international travel awards. These awards have enabled him to travel overseas to attend research conferences.

Li Lin

Li Lin developed her passion for skin research when she worked for Procter and Gamble. Her strong interest in skin drug delivery has led Li Lin to pursue a higher research degree with the Dermatology Research Centre under the supervision of Professor H. Peter Soyer and Dr. Tarl Prow. The core aspect of her project is to design and develop a novel micro-medical device for minimally invasive skin biopsies.

Jana McCaskill

PhD student Jana McCaskill commenced her PhD at UQDI after completing her Honours at The University of Queensland. She is working on gene-silencing technologies to suppress respiratory viral infections, using a bi-functional approach by boosting the efficiency of this gene-silencing through recruitment of the of the immune system to fight infection. Jana says this is an innovative method for treating viral infections, by combining novel therapeutic agents with our natural immune defence against viruses.

Jana recently returned from the CSIRO Australian Animal Health Laboratory in Geelong, Victoria, where she used the PC4 facilities to test her gene silencing molecules against live Hendra virus. In 2011, Jana was successful in winning the QLD GSK AusBiotech student excellence award and was a Finalist in the Women in Technology PhD Career Start Award, amongst many other achievements.

Li Lin developed her passion for skin research when she worked for Procter and Gamble. Her strong interest in skin drug delivery has led Li Lin to pursue a higher research degree with the Dermatology Research Centre under the supervision of Professor H. Peter Soyer and Dr. Tarl Prow. The core aspect of her project is to design and develop a novel micro-medical device for minimally invasive skin biopsies.
Committee Reports

T2 – Translation to patients

Knowledge from T1 studies is translated to patients. Testing new interventions under controlled environments to form the basis for clinical application and evidence-based guidelines. Moving new medical discoveries into clinical practice. T2 research yields knowledge about the efficacy of the interventions in optimal settings.
The Human Research Ethics Committee reviews the ethical and scientific validity of proposed research protocols within the Metro South Health Service District. This area encompasses Queen Elizabeth II Jubilee Hospital, Logan and Beaudesert Hospitals, Redland and Wynnnum Hospital and Princess Alexandra Hospital, as well as a variety of Community, Oral and Mental Health Facilities.

The committee saw an increase in research applications in 2011, with 308 applications reviewed, representing an increase of 17% from last year. There were 67 Clinical Trials of which around 60% are commercially sponsored (an 8% increase in commercial studies).

Groundwork was laid by the HREC for the Memorandum of Understanding (implemented in 2012) between NSW, Queensland and Victorian Departments of Health. This introduces a mutual acceptance of ethical and scientific review of multi-centre interstate clinical trials undertaken by Public Health Organisations (PHO), but the MOU will not apply to retrospective approvals. The aim is to reduce duplication of ethical review and to inform the development of a national system of single ethical review. The initiative is expected to enable the subsequent introduction of the Harmonization of Multi Centre Ethical Review (HoMER) scheme, for which the MSHSD HREC has successfully obtained certification. It is certified in the following categories: Clinical trials I-IV, clinical interventional studies other than clinical trials, population and/or public health; qualitative, mental and paediatric research.

HREC membership

Dr Eleanor Milligan officially stepped down as Acting Chair in early 2011 and her duties were filled by Deputy Chairs, Associate Professor Scott Campbell and Associate Professor Richard Roylance, whilst recruitment was under way for a new Chairperson. The institution expresses its sincere appreciation to Scott, Richard and Eleanor for their role as Acting Chairperson during this interim period. Subsequently, Eleanor was appointed Associate Professor for Ethics and Professional Practice in Griffith University School of Medicine. We congratulate her on this achievement.

The institution officially appointed Associate Professor Maher Gandhi as the Chairperson of the HREC in July 2011. Dr Gandhi has been a member of the HREC since 2009. Dr Gandhi is also a well accomplished researcher and clinician in the Princess Alexandra Hospital Haematology Department.

2011 also saw a few long term members of the HREC leaving. Reverend Father Bernard Thomas officially retired and left the HREC and was replaced by Reverend Dr Mervyn Thomas. Dr John North has also departed from active HREC service to take up a new appointment as Clinical Director of Queensland Audit of Surgical Mortality (QASM). Dr North continues to provide specialist review when required. Both the Reverend Bernard Thomas and Dr John North have volunteered their service to the HREC and research committee for many years. Dr Dan Siskind left the HREC after 2 years of service; he was replaced by Associate Professor Amanda Wheeler. The last person to depart the HREC in 2011 was also the longest serving member Dr Robert Zubeshaw, who was a member since 1996. He looks forward to more family time with his young family. Three new nursing representatives also joined the HREC in 2011: Dr Lyndall Spencer, Dr Mary Boyde and Ms Meg Harward. The institution sincerely appreciates all former members for their contributions, warmly welcomes the new members, and thanks all current members for their hard work and dedication, without which research could not be conducted on the MSHSD campus.

The committee is always keen to hear of potential new recruits, and welcome enquiries, which should initially be directed to the Ethics secretariat.
Training and development

Several members of the Committee and the Ethics Secretariat attended a number of professional development meetings including the following training and education forums: Queensland Clinical Trial Network; this provided training in the implementation of legal and ethical requirements; Intensive Bioethics Course (IBC), organized by Monash University Centres for Bioethics, was attended by 2 members in December 2010.

In July 2011 members attended the Association of Bioethics and Health Law (AABHL) conference at the Gold Coast. Members of the HREC hosted a workshop – “Ethics Café” where vignettes of mock up research applications were used to show case the functions and the decision making process of a HREC. This workshop was chaired by Associate Professor Richard Roylance, considered how such potential cross purposes can be balanced to ensure that research proposals meet the standards set out in the NHMRC guidelines.

Ways to support the shared desire to further clinical understanding, while minimising risks to participant’s and preserving informed choice in the research process were also considered Queensland Chairs, Governance and Ethics Secretariat forums, facilitated by the Office of Health and Medical Research.

A substantial component of the HREC Secretariat and the Chairs time is spent in the informal and formal education of research ethics. In this regard, several changes in the Centres for Health research website (www.health.qld.gov.au/pahospital/research/gov/default.asp) were initiated, and the “lunch and learn” seminar series for researchers, research nurses, data managers and allied health workers on the PA Campus continued to prove popular.
The Health Practitioner Research Collaborative (HPRC) includes researchers and health practitioners providing diagnostic, rehabilitative and clinical support to hospitals and the community through specialised services. The purpose of the HPRC is to lead, develop and support relevant multi-disciplinary translational research and its application into practice across the continuum of care which is recognised at state, national and international levels. During the year, the Princess Alexandra Hospital Clinical Support Services Evidence Based Practice Network merged with the HPRC strengthening the members resolve to keep the translational aspect of research high on the agenda.

Dr Jennifer Lethlean
Chair
Ms Sue Pager
Research Workforce Development Officer

Achievements

Early in the year, a Metro South Health Practitioner Research Networking Afternoon: from Evidence to Practice to Evidence was convened. There were presentations from Professor Ken Ho (Chair, Centres for Health Research), Dr Tina Souvlis (Manager, Research Capacity Building Team, Allied Health Clinical Education and Training Unit), Sue Pager (Metro South Workforce Development Officer – Research) and Dr Katrina Campbell (Research Fellow, Nutrition and Dietetics). The state-wide framework for Research Capacity and Culture Building was then used to stimulate discussion around planning and prioritising strategies to support and promote health practitioner research. The top research priorities identified by the participants were in the areas of:

- Research leadership, collaboration and advocacy,
- Supporting researchers,
- Action on Clinical Reasoning and Evidence (ACE), and
- Communication

Activities

The HPRC continued to:

- Facilitate, encourage and support high quality research conducted by health practitioners and research students.
- Facilitate, coordinate and advocate for the dedicated allocation of resources and training to increase research and research translation/Evidence Based Practice (EBP) capacity in allied health.
- Provide the support to increase the number of postgraduate students, research proposals, publications, presentations and successful grant applications in allied health.
- Foster multidisciplinary collaborations to maximise relevance, scope and impact of findings on service delivery.
- Increase the profile of health practitioner involvement in Metro South Health Service District research and EBP endeavours.
- Ensure health practitioner research and EBP needs are represented and considered in strategic planning at facility, district and state levels.
- Encourage networking and collaborations with nursing and medical researchers and universities.
- Encourage the uptake of research findings into clinical practice and facilitate clinically relevant research.
- Liaise with the Centres for Health Research, Office of Health and Medical Research and ClinEdQ Allied Health regarding research and EBP resources and processes.
The HPRC continued throughout the year to work on actions to address the research priorities. A communication strategy was developed to centralise information clinicians and researchers may need to develop a research project or their research skills. The established Centre for Functioning and Health Research provided the opportunity for a “one stop shop” website as the source for the most up to date research resources and links for allied health professionals. New professional development workshops and resources were developed and offered including topics such as Ethics Writing, Reviewing the Evidence Systematically and Writing for Publication.

The Centre for Functioning and Health Research (CFaHR) celebrated its first full year of operation in the Metro South Health Service District achieving well above annual targets. Dr Anna Hatton joined CFaHR late in the year when she was appointed to the conjoint research fellow in Physiotherapy. Collaborations with the University of Queensland, University of Technology and Griffith University have continued to be strengthened and the research capacity of clinicians has grown significantly with the establishment of the centre. For details of the CFaHR’s success refer to their report.

Health practitioners across the Metro South Health Service District have been awarded more than three million dollars of research funding in diverse areas such as acquired brain injury, cancer services, spinal cord injury, aged care services, telehealth, indigenous health services, health outcome measurement, falls prevention, nutrition, multi-disciplinary interventions, chronic disease management, research capacity building and knowledge translation. Publications in peer-reviewed journals and book chapters have significantly increased this year to more than 100. There continues to be a strong post-graduate presence on campus with more than 30 full-time and part-time higher degree students enrolled. Details of funding attained, post-graduate students and publications can be found in the relevant departmental, service or research centre reports.

Active involvement in the Queensland Health state-wide research agenda has continued throughout the year via representation on the ClinEdQ Health Practitioner Research Advisory Group and the newly formed Evidence Based Practice Strategic Network and Special Interest Group. It is hoped that participation in these groups will contribute to increasing the engagement of clinical staff in research and its translation into practice.

Translational research endeavours will continue to flourish with Queensland Health’s ongoing investment in dedicated health practitioner research positions and fellowships, research capacity building of clinicians through sharing of resources and effective communication and training strategies, and fostering of partnerships with other healthcare researchers.
The Research Committee provides strategic advice and guidance to promote a strong culture of research collaboration and excellence among the PAH research community for improving health care. A new Research Committee was constituted and its terms of reference updated in 2011 with appointment of the new chair. The Committee draws representation from medical surgical, nursing, allied health, ethics and laboratory support divisions and from the UQ School of Medicine and The Diamantina Institute. In its first year, the Committee provided advice on a range of research activities including funding, communication and on the annual PAH Health Symposium.

A Grants Working Sub Group of the Research Committee was established to review funding program, develop standard operating policies and procedures for review and allocation. Funding from the PA Research Foundation and the PPTF were pooled to establish a single funding entity, the PA Research Support Scheme, which provided up to $1.4 million towards project, people and infrastructural support. The establishment of a dedicated grants officer position enhanced the efficiency and rigour of the grant review process.

A Research Forum Group of the Research Committee developed strategies for improved communication and collaboration within the PAH research community. Among several initiatives was the establishment of a regular research forum, linked to existing educational meetings including Medical Grand Rounds and the Centre for Clinical Research Excellence.

The Research Committee also provides input to the program theme and content and structure of the 2011 Research Symposium including an inaugural international fellow in Professor John Wass who delivered a keynote address on ‘Health problems of Our Times’.

The Research Committee will continue to develop strategies to raise the profile of research while implementing ways to strengthen research partnerships, productivity, and quality.

Professor Ken Ho
Chair
The Princess Alexandra Research Foundation

Our Mission: To bring research to life
Our Vision: To prevent and cure disease

The PA Research Foundation funds groundbreaking, lifesaving research aimed at developing better diagnoses, treatments and preventions for some of Australia’s biggest health challenges. The PA Research Foundation is fortunate to receive donations from the general public, the business community, bequests, PA hospital staff and the thousands of patients and their families who have benefited from the medical treatment provided by the PA Hospital.

The PA Research Foundation supports over 600 PAH based researchers from Queensland Health, The University of Queensland, Queensland University of Technology and Griffith University. Our researchers are at the forefront of discoveries across all health and medical research disciplines including medical, nursing, allied health and basic research.

Robert Bowen
Chairman

The PA Research Foundation is a statutory authority established in 1984 to raise funds for world class health and medical research at the Princess Alexandra. The PA Research Foundation is managed by the CEO and an independent Board of Directors composed of local business leaders and medical community appointed by the Governor of Queensland on advice from the Minister of Health.

The PA Research Foundation aims to build on the significant health and medical research advancements. With the Translational Research Institute (TRI) opening shortly, the PAH campus will be positioned at the forefront in shaping the future of health in Queensland and the world. The PA Research Foundation is excited to continue promoting the PAH campus as a premier site for clinical research and an internationally acclaimed academic health research centre and enhancing interdisciplinary collaborations between clinical researchers and basic scientists.

In 2011, the PA Research Foundation consolidated funding with PAH Private Practice Trust Fund to establish the $1.4 million PA Research Support Scheme, administered by the Centres for Health Research.

In December 2011, the PA Research Foundation and the Private Practice Trust Fund were delighted to announce the 17 high calibre recipients of the 2012 grants supporting innovative projects in areas such as: improving hospital waiting times, liver and kidney disease, cancer, hypertension, irritable bowel syndrome, pituitary dysfunction, asthma, cardiovascular disease and understanding the physiological effects of hormones.

I would like to thank all those who generously donated to the PA Research Foundation and in so doing so invested in the future health and well being of our families and communities.

Real People– Real Research– Real outcomes.
T3 – Translation to clinical practice

Translating knowledge into actual clinical practice - once clinical applications have been demonstrated through the T2 translation, clinicians must find ways to move these findings into the daily care of patient. Translates results from T2 research into clinical practice. Researchers explore ways of applying recommendations or guidelines in general practice.
The Acquired Brain Injury Outreach Service (ABIOS) is a specialist community rehabilitation service for people with acquired brain injury, their carers and service providers. During 2011, ABIOS has continued its success in many research arenas. Work has commenced to implement funded collaborative research projects with the Brain Injury Rehabilitation Unit and Griffith University looking at efficacy oriented care and family involvement in rehabilitation. The second pilot year commenced for the Department of Communities funded initiative exploring self-directed funding support for people with disability. Work has also continued on research in the areas of knowledge translation and consultancy within rehabilitation and aged care settings, models of rehabilitation for Aboriginal and Torres Strait Islander communities and transition from hospital to home following brain injury. New collaborative research has been funded and commenced investigating psychosocial care following injury with a focus on identity reconstruction and exploration of the training needs of volunteer workforces to support STEPS (Strategies Teaching Educators Parents Students) programs. New research has also commenced investigating the effectiveness of a memory skills program.

Ray Quinn
Manager

Research Activities

Finding the new ‘me’: An exploration of personal identity following traumatic injury (Kendall M, Amsters D, Goddard K, Smith S, Kendall E, Morris E, Hinchy K). This project aims to investigate identity threat and reconstruction among people with spinal cord injury and acquired brain injury. During 2011, the project received funding and commenced data collection. It is anticipated that the study will inform the development of better models of psychosocial care following injury.

Supporting the growth of peer-professional workforces in health care settings: an investigation of the training and support needs of volunteer leaders of the STEPS Program (Turner B, Kennedy A, Kendall M, Muenchberger H). This project commenced in 2011 after being successfully funded to investigate the training needs of peer-professional volunteer workforces and evaluating training modalities to enhance capacity and sustainability of these workforces. Data collection is complete and data analysis is underway.

Clinical knowledge translation from specialist health practitioners to general health practitioners - evaluating a consultancy model of service delivery (Amsters D, Kuipers P, Kendall M, Lindeman M). This project, which commenced in 2009, has continued with data collection using a Q Sort survey during 2011. Data analysis is currently underway. The project aims to explore the efficacy of consultancy as a means of health service delivery and clinical capacity building in rehabilitation and aged care settings.

Improving community-based rehabilitation for Aboriginal and Torres Strait Islander Queenslanders with Acquired Brain Injury (Gauld S, Smith S, Kendall M). This is an ongoing project that aims to develop and evaluate models of service delivery in community-based rehabilitation for people with acquired brain injury that are appropriate and relevant for Aboriginal and Torres Strait Islander communities. During 2011, work has continued on expansion of the project into other Aboriginal and Torres Strait Islander communities.

Determinants of successful community transition for individuals with acquired brain injury and their families (Fleming J, Worrall L, Cornwall P, Haines T, Ownsworth T, Kendall M, Chenoweth L). This Australian Research Council (ARC) Linkage funded project involves a collaborative team of researchers from University of Queensland, Griffith University and Princess Alexandra Hospital. Industry partners include Disability Services and ABIOS. The project is a multisite project and data analysis has continued during 2011.

Self-directed support funding for people with disabilities: A pilot evaluation (Quinn R, Goddard K, Kendall M). This project, funded by the Department of Communities, aims to implement and evaluate self-directed funding support models for 80 people with disabilities living in the community, with the aim of increasing client autonomy, perceived control and self-determination. Internal and external evaluations are key components of the project. The project entered its second year of data collection during 2011.
Efficacy Oriented Care: An intervention with brain injured patients, family members, nurses and allied health professionals (Kuipers, P., Mitchell, M., Fleming, J., Mills, C., Kendall, M., Turner, B). This project had received funding from Griffith University and the PA Foundation during 2010 and planning for data collection occurred during 2011. Using exploratory interviews with patients, families and staff, combined with information drawn from significant previous work in self efficacy undertaken by the research team, this study will develop an efficacy-oriented care intervention for trialling across the continuum of care following acquired brain injury.

Evaluating the ‘Making the Most of your Memory’ group memory skills education program in acquired brain injury rehabilitation (Morgan, C., Goddard, K., Kendall, M). This new project was developed and commenced during 2011, aiming to implement and evaluate an evidence-based memory skills program intervention in acquired brain injury rehabilitation. Data collection for the preliminary pilot of the project has been completed and analysis of data is underway.

Awards and Prizes

Dr Ben Turner
- Finalist, Consumer Partnerships, Healthcare Improvement Awards, Queensland Health, STEPS

Ms Areti Kennedy
- Excellence in individual contribution to workforce innovation, Health and Community Services Workforce Innovation Awards, Health and Community Services, STEPS

Ms Elissa Morriss
- $2000 Travelling Scholarship, PAH, Stroke research

National and International Presentations

Ms Areti Kennedy
- 2011 Health and Community Services Workforce Innovation Conference, Brisbane

Ms Karen Goddard
- National Occupational Therapy Conference, Gold Coast

Ms Susan Gauld
- National Occupational Therapy Conference, Gold Coast

Ms Elissa Morriss
- International Neuropsychological Society/ASSBI conference, Auckland, New Zealand

Dr Melissa Kendall
- ANZSCOS/AFRM Conference, Brisbane
- STEPS Leader Conference, Brisbane

Dr Ben Turner
- ANZSCOS/AFRM Conference, Brisbane

Ms Clare Morgan
- STEPS Leader Conference, Brisbane

Ms Sue Wright
- STEPS Leader Conference, Brisbane

Ms Sharon Smith
- STEPS Leader Conference, Brisbane
- Australian Association of Social Workers (AASW) QLD and Nth QLD Conference

Major Grants and Financial Support

Other competitive funding: $80,383
The Alcohol and Drug Assessment Unit (ADAU) is a small multidisciplinary service based in the Division of Medicine. It provides outpatient treatment programs for patients referred from PAH and the community. Treatment approaches predominately involve Cognitive-Behavioural Therapy, often supplemented with medication. Research conducted at ADAU is directly related to improving clinical outcomes.

Dr Gerald F.X. Feeney
Medical Director

Research Activities

Validation of the Cannabis Assessment Instruments. Better cannabis assessment tools are required. ADAU conducted a series of studies on patients referred for cannabis use and published validation of scales exploring cannabis expectancies (or the anticipated benefit of using cannabis) and cannabis self-efficacy (or capacity to resist using cannabis). These scales are predictive of cannabis use and have treatment applications.

Neuropsychological and Psychosocial functioning of liver transplantation patients. ADAU examined the neuropsychological functioning of patients post liver transplantation for alcoholic liver disease. Significant improvement in neuropsychological functioning post transplantation was confirmed. Psychosocial function is now being examined.

Psychological Predictors of Treatment Outcomes for Alcohol Dependence. Substance abuse treatment approaches are predominately psychological. Adjunctive medication is often required. Identifying the psychological factors which predict relapse remains an ongoing challenge in treatment. ADAU recently identified that both alcohol expectancy and drinking refusal self-efficacy improved over a 12 week CBT program and were predictive of treatment success.

Alcohol Craving. Alcohol craving is an important clinical marker for treatment relapse. It can be managed both psychologically and pharmacologically. Few reliable and valid psychometric instruments are available to measure alcohol craving. ADAU with collaborators from QUT developed a new measure of alcohol craving. ADAU is developing an abbreviated version of this instrument.
Research in the Anaesthetic Department continued to grow further with several new projects including the multicenter collaborative trial POISE 2 Study - Peri-operative ischemic evaluation study and Development of a Registry of Regional Anaesthesia - the AURORA study.

Catherine Jowett, full-time research nurse, continued in her role, 2nd year in this position. The hospital private practice fund enabled this full time employment which helps the department to expand the research activities.

The Anaesthetic Research Committee Members are: Dr Bruce Burrow, Dr Bart McKenzie, Dr Nicole Fairweather, Dr Rebekah Ferris, Dr Jarrod Ngan, Dr Ben Lloyd, Dr Adrian Hall, Dr Kerstin Wyssusek.

Dr Peter Moran
Director of Anaesthesia

Dr Pal Sivalingam
Director of Research, Anaesthetic Department

Research Activities

Clinical Trials

Continuous Local Anaesthetic Wound Infiltration in Hepatobiliary Surgery – A Comparison with Placebo (Moran P, Radford L). The aim of this project is to establish whether continuous local anaesthetic wound infiltration for 48 hours post-operatively is useful in Hepatobiliary procedures in terms of better pain relief and a reduced opiate consumption via patient-controlled analgesia regime.

IV Oxycodone: A Comparison of IV Oxycodone and IV Morphine Patient Controlled Analgesia in Post Laparoscopic Nephrectomy Patients. (Solomos J, Sivalingam P). (T2). The aim of this project is to assess the analgesic efficacy and side effect profile of IV oxycodone compared with that of widely used IV Morphine.

Placement of LMA Supreme versus GuardianCPV. (Madina D, Sivalingam P, Brodie C). (T2). The aim of this project is to see if there is any difference between the LMA Supreme and the GuardianCPV airways with respect to: leak pressure, cuff pressure and fibroptic grading of airway placement.

The Effects of priming solution composition on the acid base balance and inflammatory response during cardiopulmonary bypass. (Davies P, Lloyd B, Venkatesh B) (T2). The aim of this research project is look at the acid-base and inflammatory effects of rapid haemodilution with two different intravenous crystalloid preparations, PlasmaLyte 148 and the other a balanced bicarbonate solution.

POISE 2 Study - Peri-operative ischemic evaluation study. POISE 2 is a large, international, placebo-controlled, factorial trial to assess the impact of clonidine and acetyl-salicylic acid (ASA) in patients undergoing noncardiac surgery who are at risk of a perioperative cardiovascular event.

Other Research

AURORA: The Australian and New Zealand Registry of Regional Anaesthesia. (Ngan J). The aim is to establish a large clinical registry of patients who have received peripheral nerve blockade so as to determine the quality and safety of routine care.

Anaesthetic Management of Cytoreductive surgery and Hyperthermic Intraperitoneal Chemotherapy (HIPEC) (Sivalingam P, Sparks D. N. Fairweather). This project is a chart audit looking at the intra operative management of these cases and their post operative outcomes.

Current Management of Post Operative Pain Control Post Leg Amputation Chart audit. (Ney A, Trinh H). This is a chart audit comparing the management and degree of post operative pain in patients having leg amputations with those undergoing fem-pop bypass surgery with a view to improving current treatment if required.
The Australian Prostate Cancer Research Centre – Queensland (APCRC-Q) experienced several highlights in 2011. A newly refurbished office area housing our administrative and clinical arms was opened on level 1 in August 2011. The Multidisciplinary Team for Advanced Prostate Cancer Clinical Trials Unit, launched in 2010, continued to make significant progress in incorporating a multidisciplinary approach to management of these patients. Our first international clinical trial (budget $2.2 M), sponsored by the Malaysian government and Davos Life Science Ltd, aimed at testing the anti-cancer effect of the vitamin E isomer gamma-tocotrienol on castration resistant prostate cancer patients was negotiated in 2011. This trial is based on the findings of Dr Patrick Ling in the Centre. Patient recruitment will start in 2012 at the Princess Alexandra Hospital and hospitals in Malaysia with Dr Simon Wood leading the recruitment team at the Princess Alexandra Hospital.

Professor Nelson was appointed to Chair Movember’s Global Action Plan’s global scientific committee in 2011. She has been working closely with Movember in the implementation of the first of these large scale international projects, which is specifically aimed to analyse biomarkers in localized disease, metastatic and advanced disease in response to treatment. The APCRC-Q will participate in this $5M international project in the areas of circulating tumour cells, exosomes and serum biomarkers.

Members of the APCRC-Q received significant research funding awards in 2011. Dr Patrick Ling led 2 successful NHMRC grants ($1.15 M) for his prostate cancer research awarded for 2012-2014. Dr Amy Lubik, the first PhD student in the Centre, was awarded her PhD from QUT in December 2011.

Professor Colleen Nelson
Executive Director

Professor Judith Clements
Scientific Director

Research Activities

Clinical Trials

The Multidisciplinary Team Clinic for Advanced Prostate Cancer. The APCRC-Q’s Multidisciplinary Team for Advanced Prostate Cancer Clinical Trials Unit is a key component of the Centre’s research. The Unit integrates the expertise of urology, medical oncology, radiation oncology, and endocrinology for the treatment of prostate cancer. It is a vital link between laboratory research and clinical trials and helps accelerate the discoveries that will ultimately underpin improvements in clinical outcomes for prostate cancer patients across Australia.

Efficacy of the vitamin E isomer gamma-tocotrienol on castration resistant prostate cancer (P Ling, S Wood, C Nelson). This clinical trial was initiated by Davos P/L, Malaysia and is based on the preclinical studies from Dr Patrick Ling’s laboratory showing an anti-cancer effect of the vitamin E isomer gamma-tocotrienol on castration resistant prostate cancer. Patient recruitment will start in 2012 at the Princess Alexandra Hospital and hospitals in Malaysia with Dr Simon Wood leading the recruitment team at the Princess Alexandra Hospital.

Other Research

Veridex CellSearch Circulating Tumour Cell (CTC) Test (M Fung, L Jovanovic Australasia’s first and only Veridex CellSearch CTC automated system is located at the PAH. It measures CTCs that have detached from the tumour and entered the patient’s blood and is used to monitor treatment response and cancer progression in a non-invasive way. Several APCRC-Q staff are trained to use the system. With the PAH Cancer Collaborative Group, we will examine CTCs in high risk prostate cancer patients with localised disease.

Exosomes as a potential biomarker for advanced prostate cancer (P Russell, C Soekmadji). Exosomes are a structural component of cells that are secreted or shed into bodily fluids. Prostate cancer cell exosomes have been shown to provide potential biomarkers to detect cancer. This study involves isolating exosomes from human prostate cancer cell lines, and eventually CTCs, that have undergone various treatment regimes and which reflect various stages of prostate cancer in order to identify any potential new biomarkers.

The role of single nucleotide polymorphisms (SNPs) in prostate cancer etiology, detection and disease progression (J Batra, J Clements, A Spurdle, F Lose). We have continued our involvement in the international genome wide association study (GWAS) Consortium - PRostate cancer Association To Investigate Cancer associated Alterations in the genome (PRACTICAL). Our contribution of DNA samples from 2700 men (cases and controls) to this GWAS of ~50,000 men with prostate cancer (29 studies worldwide) has helped identify seven new prostate cancer susceptibility loci for prostate cancer risk. This was work was published in the prestigious scientific journal, Nature Genetics, in 2011. Other ongoing studies are aimed at determining the functionality of these SNP variants and their applicability as lab-based screening tools for diagnosis and monitoring of treatment and prognosis.
Targeted nanoparticles for imaging prostate cancer (PJ Russell, A Khatri, G Cowin, B Thierry, C Power). This study uses antibody-targeted ferromagnetic nanoparticles to improve the sensitivity of magnetic resonance imaging, in order to detect microdeposits or micrometastases of prostate cancer, including to lymph nodes. The ability to detect such deposits will allow imaging of treatment effects in real time, and help in staging of prostate cancer to assist clinical management decisions.

Multifocal prostate cancer project (C Nelson, L Jovanovic). The objectives of this study are to identify genes which are differentially expressed in multiple tumours, within a patient and across a cohort of patients. In collaboration with partners at PAH and Sullivan Nicolaides Pathology, archival tissue specimens from ten patients with 48 tumour foci have been examined. Expression microarray analysis has highlighted some very provocative results of potential prostate cancer tumour biomarkers as classifiers of multifocal tumours.

Insulin C-peptide as a biomarker for androgen deprivation therapy-induced Metabolic Syndrome (I McKenzie, C Nelson). This small pilot study of 36 men confirmed an increase in serum C-peptide levels in men receiving androgen deprivation therapy for advanced prostate cancers compared to 47 control men with localised disease pre-treatment and suggests the need for a formal and larger prospective study assessing the effects of hyperinsulinaemia on progression to castrate resistance.

Relationship between serum insulin levels and the progression of castrate resistant prostate cancer (J Gunter, A Lubik, C Nelson). This project includes examining the stimulatory effects of insulin on intra-prostatic steroid (androgen) synthesis and assessing possible correlations between elevated insulin levels and time-to-progression to castrate resistant prostate cancer in prostate cancer cell lines. Amy Lubik’s work was published in the prestigious scientific journal, Cancer Research, in 2011. These studies will help develop new insights into the relationship between metabolic syndrome and androgen deprivation therapy.

Delineating the role of steroids other than androgens in castration-resistant prostate cancer (M Sadowski, S McPherson, C Nelson). This project aims to identify the role of other steroid hormones, like progesterone, in regulating genes that may control/promote prostate cancer cell survival following androgen deprivation. Several candidate genes with critical roles in the cell cycle (survival) regulated gene pathways have been selected from expression microarray data for ongoing analysis. This approach could lead to new therapeutic targets in castrate resistant prostate cancer.

Inter-relationships between castrate resistant prostate cancer, radiation and chemotherapy (C Nelson, R Vasireddy). This project will investigate the biological significance and develop targeted therapeutics for GADD45g – a key gene that promotes prostate cancer cell survival. Dr Vasireddy, with Professor Nelson, identified that GADD45g acts as an upstream regulator of several key molecules that control balance between prostate cancer cell survival and death, processes that are key to radiation and/or chemotherapy damage to cells.

Functional Analyses of Prostate Specific RNA in Prostate Cancer (C Nelson, J Lai). In this project, Professor Nelson and Dr Lai have mined RNA sequencing libraries from the Illumina Tissue bank that was performed on 14 different tissues. From this data ‘blocks’ of RNA that are specifically expressed in the prostate have been mapped and indicate that the SLC45a3 locus, a locus which forms chimeric RNA with the ELK4 transcription factor downstream and is more highly expressed in higher metastatic prostate cancers, is androgen regulated. The functional importance of this RNA block is currently being assessed.

Tyrosine kinases as therapeutic targets for prostate cancer (PJ Ling). Dr Patrick Ling has performed a Lentiviral short-hairpin RNA library screening approach to identify protein kinases associated with chemotherapy drug (i.e. Docetaxel) sensitivity and identified more than 10 candidate protein kinases which appear to either increase or decrease the response of prostate cancer cells to Docetaxel treatment. A key target, PACE-1, was the subject of a successful NHMRC grant awarded to Dr Ling in 2011.

Understanding the role of the EphB4 tyrosine kinase receptor in prostate cancer (S-A Stephenson, A Herington, J Mertens-Walker, R Rutkowski, J Lisle, P Gill). The EphB4 receptor tyrosine kinase is increased in prostate cancer cells and contributes to cancer cell survival and spread. Intriguingly, EphB4 can have dual and opposing roles - tumour suppression or tumour promotion. We also have novel evidence that EphB4 can localise to the nucleus of prostate cancer cells and bind directly to DNA. The aim of this project is to characterise these novel observations to determine the potential of EphB4 as a novel therapeutic target for prostate cancer.

Proteolytic and non-proteolytic roles for PSA and related kallikrein serine proteases in prostate cancer progression (L Clements, C Nelson, P Russell, D Hutmacher, J Gorman, J Harris). PSA is dysregulated in prostate cancer and as such is used as a diagnostic biomarker. This study is using proteomic and
gene microarray techniques in novel 3D tumour microenvironment models to determine the functional role of PSA and related proteases in prostate cancer progression. This comprehensive analysis will help determine their potential or downstream signalling pathways as new therapeutic targets.

**3D biomaterials to develop biomimetic prostate cancer in vitro and in vivo preclinical models (D Hutmacher, P Russell, C Nelson, J Clements, C Soekmadji, D Loessner, R Fuhrman Luck, S Sieh, P Hesami, K Chambers, M Doran).** This project is developing 3D synthetic biomaterial models to replicate the tumour microenvironment that prostate cancer cells grow in. Tissue engineered bone scaffolds are also being used in vivo and in vitro to allow in depth analysis of the interaction between bone and prostate cancer cells in bone metastasis. These analyses are providing exciting data that may have a major impact on the way laboratory studies are performed in tumour cell biology. These models should provide more meaningful molecular data when investigating new drug targets in the laboratory setting.

**The role of prostate cancer stem cells and mesenchymal stem cells in prostate cancer (P Ling, D Hutmacher, J Clements, P Russell, C Soekmadji).** The aim of the project is to determine how prostate cancer stem cells and mesenchymal stem cells play a role in bone metastasis using the above tissue engineered 3D bone models. The factor, angiopoietin-1, was shown to be a critical factor in stem cell maintenance and was the subject of a successful grant application to the NHMRC in 2011. In collaboration with The University of Hong Kong and Provital Pty Ltd, Dr Ling also showed that a compound called PSP, which is extracted from the mushroom Turkey Tail, can significantly inhibit prostate tumour formation. This compound was also effective in targeting prostate cancer stem cells.

**Major Grants and Financial Support**

| Total NHMRC Funding: | $1,159,960 |
| Other competitive funding: | $4,606,763 |

**National and International Presentations**

**Professor Judith Clements**
- 3rd Australia-China Biomedical Research Conference
- 5th PacRim Breast and Prostate Cancer Meeting
- ISBER 2011: Impact and Public Benefits of Biorepositories
- 12th Australasian Prostate Cancer Conference Melbourne
- International Symposium on Kalikreins and Kalikrein-related peptidases, Rhodes
- World Congress on Urological Research Innsbruck

**Professor Colleen Nelson**
- 5th PacRim Breast and Prostate Cancer Meeting
- B1’s 4th Annual World Cancer Congress

**Professor Pamela Russell**
- 5th PacRim Breast and Prostate Cancer Meeting
- 12th Australasian Prostate Cancer Conference Melbourne
- International Symposium on Kalikreins and Kalikrein-related peptidases, Rhodes
- World Congress on Urological Research Innsbruck

**Professor Adrian Herington**
- 5th PacRim Breast and Prostate Cancer Meeting
- International Symposium on Kalikreins and Kalikrein-related peptidases, Rhodes
- World Congress on Urological Research Innsbruck

**Dr Patrick Ling**
- Palm International Nutra-Cosmeutical Conference, Kuala Lumpur
- International Conference on Mechanisms of Action of Nutraceuticals (ICMANS)

**Dr Shirly Sieh**
- 12th Australasian Prostate Cancer Conference Melbourne

**Dr Sally-Anne Stephenson**
- 12th Australasian Prostate Cancer Conference Melbourne

**Dr Carolina Soekmadji**
- 12th Australasian Prostate Cancer Conference Melbourne

**Ms Ruth Fuhrman-luck**
- International Symposium on Kalikreins and Kalikrein-related peptidases, Rhodes

**Dr Jyotsna Batra**
- 12th Annual International Congress of Human Genetics

**Dr Martin Sadowski**
- 14th Annual Australian Cell Cycle Workshop
The Brain Injury Rehabilitation Service (BIRU) and Acquired Brain Injury Outreach Service (ABIOS) teams are researching models for a proposed new transitional rehabilitation service for those with acquired brain injury to enable ongoing therapy in their home on discharge from hospital. Neurorehabilitation for success depends on timing and the environment in which therapy is undertaken. An injured person’s natural environment is usually more relevant from a contextual point of view. The transitional rehabilitation program will offer an additional choice for management which will compliment the successful BIRU Day Hospital program.

The Brain Injury Rehabilitation Unit is actively involved in collaborative research in all professional Allied Health areas as well as with University faculties located in Brisbane. Research highlights include a continuation of piloting and researching clinical management strategies for hypertonicity (spasticity); and further research utilising Magnetic Resonance Imaging (MRI) including diffusion tensor imaging as a surrogate marker in acquired brain injury.

Dr Ron A Hazelton
Medical Director

Research Activities

Clinical Trials and Normal Gait in association with hemiplegic upper limb (Nascimento M, Cave C, Kuipers K & Hazelton R). This study aims to analyse gait and balance in relation to the hypertonic (spastic) upper limb in patients with hemiplegia.

Management of Painful Hemiplegic Shoulder (Kuipers K, Cave C, Nascimento M & Hazelton R). This study aims to refine clinical management with the development of a clinical pathway and the accrual of further results following differing management strategies.

Additional BIRU Related Research can be seen under professional Allied Health Reports.

Major Grants and Financial Support

Funding from other sources: $60,000

National and International Presentations

Dr Ron A Hazelton

- Australasian Faculty of Rehabilitation Medicine (AFRM)/ Australian and New Zealand Spinal Cord Society (ANZCOS), Brisbane
- Australian Rheumatology Association (ARA), Canberra
The Princess Alexandra Breast Endocrine Unit continues to be involved in both the Royal Australasian College of Surgeons (RACS) Sentinel Node versus Axillary Clearance (SNAC) I & II Trials of Sentinel Node Biopsy versus Axillary Clearance for Operable Breast cancer. The SNAC I Trial completed recruitment in 2006 however all patients are still being monitored to 10 years post surgery. The SNAC II Trial is still recruiting patients however because this trial is predominantly for patients with larger and multi-focal breast cancers recruitment to it has been slower not only at the PAH but also nationally. Dr Neil Wetzig (Chair Breast Endocrine Unit) is a Principal Investigator in the RACS SNAC I Trial and Chief Investigator in the RACS SNAC II Trial.

Dr Neil Wetzig
Chairman

Research Activities

Clinical Trials

RACS SNAC I & II Trials of Sentinel Node Biopsy versus Axillary Clearance for Operable Breast cancer. The SNAC I Trial completed recruitment in 2006 however all patients are still being monitored to 10 years post surgery. The SNAC II Trial is still recruiting patients however because this trial is predominantly for patients with larger and multi-focal breast cancers recruitment to it has been slower not only at the PAH but also nationally.

IBIS II DCIS Trial (Bennett, I). An International multicentre study of anastrozole versus tamoxifen in post-menopausal women with hormone sensitive Ductal-Carcinoma-in-Situ. This study is co-ordinated by the Australian New Zealand Breast Cancer Trials Group.

IBIS II Prevention Trial (Bennett, I) An international multicentre study of anastrozole versus placebo in post-menopausal women at increased risk of breast cancer. This study is co-ordinated by Australian New Zealand Breast Cancer Trials Group.

Other Research


Morphological and Molecular Analysis of a Breast Cancer Cluster at the ABC Studio in Toowong (Waddell N., Stein S. R., Wagner S. A, Bennett I., Holland J., Pogo B., Gonda T., Brown M., Leo P., Saunders N., McMillan N., Coccia S., Lakhani S. R., Chenevix-Trench G., Newman B., and Francis G. D). This conjoint project is currently being undertaken and has received research grant funding from the NBOCC, Australia. This is a collaboration between the following institutions, institutes and universities: Queensland Institute of Medical Research, Institute of Molecular Biosciences, University of Queensland, Pathology Queensland, Princess Alexandra Hospital, University of Queensland Centre for Clinical Research, School of Chemistry and Molecular Biosciences, University of Queensland and the University of Queensland, Diamantina Institute.

Major Grants and Financial Support

| Total NHMRC Funding: | $583,154 |
| Other competitive funding: | $100,000 |

National and International Presentations

Dr Neil Wetzig

- Fourth Multi-disciplinary Update on Thyroid and Parathyroid Surgery, Noosa
- Breast Screen Australia Conference (Celebrating 20 Years of Screening), Melbourne
- St Vincent’s Hospital / Peter McCallum Institute Biennial Breast Cancer Update, Melbourne
- Royal Australasian College of Surgeons (RACS) Annual Scientific Congress, Adelaide

Associate Professor Ian Bennett

- Applied Ultrasound for Breast Surgeons Workshop. ASBD & BreastSurgANZ Society; Sydney
- ASUM Multidisciplinary Ultrasound Workshop, Sydney
- Breast Screen Australia Conference (Celebrating 20 Years of Screening), Melbourne
- Royal Australasian College of Surgeons (RACS) Annual Scientific Congress, Adelaide
Established in 2008, the Cancer Nursing Research Group is led by Associate Professor Alexandra McCarthy, who holds a formal joint appointment between Cancer Services Southern and the School of Nursing, Queensland University of Technology. Professor Patsy Yates from the School of Nursing, QUT, is formally appointed Visiting Fellow to Cancer Services Southern. Professors McCarthy and Yates led significant clinical research achievements and other policy and education outcomes in 2011 as a result of the strong clinical, academic and multidisciplinary partnerships they have developed with major stakeholders and clinicians throughout the Southern Area, especially at the Princess Alexandra Hospital.

Associate Professor Alexandra McCarthy

Research Activities

Clinical Trials

Cryotherapy for docetaxel-induced nail toxicities: Case control study. (McCarthy A, Shaban R, Vick J, Ryan J, Watson C). This project, funded by the Princess Alexandra Foundation, investigates the feasibility and efficacy of ‘frozen glove’ therapy to prevent the hand and nail toxicities that can result from the administration of taxotere. The pilot phase of 25 patients was completed in 2010. Recruitment and data collection for a further sample of 60 patients for the main study has reached the halfway point, and should be completed by the end of 2012.

Evaluating novel methods for delivering non-pharmacological interventions for dyspnoea in cancer patients. (Yates P, Clavarino A, Hardy J). This multicentre, blinded randomised controlled trial aims to evaluate the efficacy of a tailored multi-component non-pharmacological intervention comprising breathing retraining and psychosocial support for managing dyspnoea in lung cancer patients.

Other Research

Cancer self management discharge to survivorship. (Yates P, McCarthy A, Anderson D). This project, funded by the Department of Health and Ageing, investigated self management strategies for bowel and breast cancer patients to enhance their health care and well being after treatment. Completed in mid-2011, the results of the study were presented at the Annual Scientific Meeting of the Clinical Oncology Society of Australia. The results have informed a further funding application to extend the study to other cancer patients.

Standardised two-step process of pre-screening and comprehensive assessment of the older cancer patient with solid malignancy. (McCarthy A, Yates P, Walpole E, Thomson D, Salkeld G, Hausmann S, Skerman H). This mixed-method study investigates whether a standardised, computerised, nurse-administered assessment of cancer patients 65 years or older can determine fitness for chemotherapy. Data collection occurred from October 2010 and will be complete by March 2012. A model of service delivery for older cancer patients will be developed from the data.

Major Grants and Financial Support

Other competitive funding: $555,000
Funding from other sources: $29,909
The broad expertise the Cardiology Department has secured a large number of clinical trials from a variety of commercial companies, the National Institute of Health and investigator-driven research over the past year. Research areas cover coronary artery disease, cardiac arrhythmias, cardiac devices, acute/chronic systolic/diastolic heart failure, coronary angiography and percutaneous transluminal coronary angioplasty, cardiac echocardiography, cardiac Magnetic Resonance Imaging (MRI) and cardiac surgery. Implementation of Good Clinical Research Practice is paramount in all our clinical research.

Research achievements within the department have been attained from various cardiology departments:

Echocardiography: Dr Sudhir Wahi:
• Collaborative research with Professor Marwick from the Cleveland Clinic, Ohio, United States of America to develop consensus criteria on echocardiography for the grading of the severity of chronic aortic regurgitation;
• Evaluate the role of the rate of rise of Right Ventricular (RV) systolic pressure in the assessment of RV function;
• Develop a mitral regurgitation score or consensus criteria, using the current American Society of Echocardiography (ASE) guidelines, to improve intra and inter observer agreement in grading the severity of mitral regurgitation;
• To validate a novel method to calculate pulmonary vascular resistance on transthoracic echocardiography, compared to invasive pressure measurement of right heart catheterization.

Electrophysiology: Dr Gerald Kaye:
• Development of a computer based animation teaching programme in electrophysiology in conjunction with the arts department, at Griffiths University.

Aboriginal Health: Ms Vivian Bryce:
• Cardiology clinic models of care in Indigenous communities.
• Use of Multi-disciplinary teams inclusive of the Aboriginal Health Worker.
• Empowering Cherbourg community building knowledge and capacity in relation to cardiovascular health.

The Cardiology Department continues to lead the world with the investigator initiated Protect-Pace Study. Dr Gerald Kaye is the International Study Chair and Professor Thomas Marwick is the Echocardiograph Core Lab Chair for this study. The PAH Cardiology Department has the highest number of participants recruited worldwide.

Dr Paul Garrahy
Director of Cardiology

Research Activities

Clinical Trials

Alecardio Study (Dr Paul Garrahy) – New study drug to reduce cardiovascular risk in patients with a recent Acute Coronary Syndrome event and Type 2 diabetes mellitus.

AIPHIE Study (Dr John Hill) – Anti-arrhythmic study drug vs amiodarone vs placebo as a calibrator for the prevention of ICD interventions or death.

Atlas-2 Study (Dr Paul Garrahy) – Antiplatelet agent + ASA +/- Clopidogrel vs Placebo + ASA +/- Clopidogrel in Acute Coronary Syndrome.

Averroes Study (Dr Paul Garrahy) – Antiplatelet agent vs aspirin to prevent stroke in atrial fibrillation patients who have failed or are unsuitable for Vitamin K antagonist treatment.

daiHeart 1 Study (Dr Paul Garrahy) – Lipid medication vs placebo on cardiovascular risk in stable coronary disease patients with a documented recent Acute Coronary Syndrome.
Echo-CRT Study (Professor Thomas Marwick and Dr Dariusz Korczyk) – Heart failure subjects outside the standard ICD insertion guidelines parameters.

Freedom Study (Dr Paul Garrahy) Percutaneous transluminal coronary angioplasty vs coronary artery bypass grafting in diabetic subjects with multivessel disease.

ZoMaxx II Study (Dr Paul Garrahy) Comparison of new drug-eluting stent vs TAXUS™ Express™ Paclitaxel- Eluting Coronary Stent System in de novo coronary artery lesions.

Rhythm AF Study: Dr Paul Gould - International Registry of atrial fibrillation.

Other Research


Evaluation of In-Hospital Cardiac Arrests (Boyde M, Padget M, Tewhatu L).


BNP in metabolic syndrome (Korczyk D, Gould P, Doneva S) Substudy of Differential effect of right ventricular pacing sites on cardiac Neurohormone Production.


National and International Presentations

Ms Cindy Hall
- Association of Regulatory and Clinical Scientists, Sydney

Dr Terri Hall
- Cardiac Society of ANZ, Perth

Dr Mathivathana Indrajith
- Cardiac Society of ANZ, Perth

Dr Dariusz Korczyk
- China Interventional Therapeutics/TCT Meeting, Beijing

Dr Richard Lim
- European Heart Failure Association, Berlin, Germany
- Cardiac Society of ANZ, Perth
- Euro PCR, Paris, France

Ms Robyn Peters
- Brisbane South Palliative Care Collaborative

Dr Yeshwant Singhal
- Cardiac Society of ANZ, Perth
The Cardiothoracic Surgical Unit is a tertiary referral unit providing acute and elective services to South East Queensland and Northern New South Wales. The department currently performs approximately 750 cardiac and thoracic operations per annum. It is a training unit for the Royal Australasian College of Surgeons and fosters a research focus amongst both accredited training and non-accredited junior doctors with 7 presentations at the national society scientific meeting. The unit is also involved in an international multi-centre study as well as local and national collaborative studies.

Associate Professor Julie Mundy
Director

Research Activities

Clinical Trials

Prospective randomized study to determine the clinical outcomes of tissue and mechanical aortic valve replacement in patients aged 55-70 yrs. (Shah P, Mundy J, Marwick T). This is a prospective randomized study to identify whether tissue or mechanical aortic valve replacements have less major adverse postoperative events (MAPE) and better short and long term survival in the age group 55 - 70 years. The Prince of Wales Hospital, Sydney is also undertaking the trial. Princess Alexandra Hospital has recruited 40 patients to date.

Steroids in Cardiac Surgery Trial (Shah P, Lo W). The main objectives of this study are to evaluate if methylprednisolone given before cardiopulmonary bypass reduces 30-day all-cause mortality and/or significant myocardial injury in high-risk patients. The is an international multi-centre trial sponsored by the Canadian Institutes of Health and co-ordinated through the Public Health Research Institute, Hamilton Health Sciences, McMaster University, Canada. The Princess Alexandra Hospital is the highest Australian recruiter – 127 patients in less than 12 months.

Major Grants and Financial Support

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National and International Presentations

**Associate Professor Julie Mundy**
- Advanced Echo Symposium, Brisbane

**Dr Pallav Shah**
- ASCTS Annual Scientific conference, Queenstown
The Cardiovascular Imaging Research Group provides clinical and research capability in cardiac imaging and image processing, including multi-modality interests that are unique in Australia and the Asia-Pacific region. The group have expertise in new echocardiographic imaging technologies such as tissue Doppler, strain and strain rate imaging, myocardial backscatter and contrast echocardiography. This work is carried out in our research echo/stress area in the main hospital and image processing area in the Department of Medicine.

The group comprises of researchers, physicians, PhD scholars, visiting scholars, research study nurses, research assistants and students. Group members generated over 130 publications in peer-reviewed journals in the last 5 years, as well as presentations and invited lectures at major international meetings in Asia, the USA and Europe.

The centre’s academic director is Associate Professor Tony Stanton, who is also a consultant cardiologist with Queensland Health. Associate, Professor Stanton rejoined the cardiovascular imaging research centre in 2011. The group’s general manager is Dr. Brian Haluska who also holds a position as a research fellow. The group works in close collaboration with Adjunct Professor Tom Marwick who founded the group in 1998, and Dr Sudhir Wahi. Adjunct Professor Marwick is currently the Section Head of Cardiovascular Imaging at the Cleveland Clinic, Cleveland, Ohio, USA, and Dr. Wahi is a consultant cardiologist with Queensland Health and the director of the clinical echocardiography laboratory.

Associate Professor
Tony Stanton
Academic Supervisor

Dr Brian Haluska
General Manager

Research Activities

The research group’s work focuses on four themes to deal with the complex association of cardiovascular disease with other diseases such as diabetes, hypertension and renal disease as well as to understand how cardiac imaging techniques can influence patient outcomes and cost-effectiveness of care.

Detection of subclinical myocardial disease. Using image processing techniques such as tissue Doppler imaging, speckle tracking, strain and strain rate image and myocardial torsion, we are able to detect early changes in myocardial mechanics both at rest and with stress which may lead to advanced cardiovascular disease. Early intervention and treatment in these “at-risk” patients may prove beneficiary in the long term.

Assessment of myocardial viability, coronary artery disease and contractile reserve. In patients at risk who have symptoms, stress echocardiography has been able to identify patients who don’t need further treatment and can be spared a coronary angiogram. The ability to diagnose viable myocardial segments in the heart after infarction without having to use other expensive and potentially dangerous tests is beneficial to both the patients and surgeons in decision making. And in patients with valvular disease assessing contractile reserve with exercise is crucial in deciding whether patients need surgery.

Nurse-led intervention in cardiovascular disease management programs. In patients with heart failure and peripheral vascular disease as well as in patients at risk of developing cardiovascular disease, the ability to provide testing and manage the patient’s care without having to spend time in hospital or travel repeatedly to clinic appointments is beneficial to both the patients and health care system. We have a team of highly qualified research nurses who recruit patients, assist in testing and then follow the patients’ progress and monitor their care. This includes medication changes, referrals to specialists, hospital admissions and quality of life. We believe that this is the future of managed care in Australia.

High resolution vascular imaging, assessment of central arterial pressure, arterial distensibility and vascular reactivity. There is a close association between abnormal vascular function and patients having coronary artery disease, hypertension, renal failure and heart failure. We have been using high resolution ultrasound imaging of large arteries to measure intima-media thickness (IMT) which is a measure of atherosclerotic burden. In patient with increased age-corrected increased IMT, early treatment and risk factor modification will probably decrease future cardiovascular events. Work that we have done in the past has also shown that early detection of subclinical vascular dysfunction as evidenced by increased arterial stiffness and decreased arterial distensibility can not only be reversed but when intervened on, but can also change patients’ risk of developing future disease. This is done using applanation tonometry which measures arterial pressure non-invasively at either the brachial, carotid or femoral artery. Using mathematical formulas we can derive central blood pressure (pressure at the heart) and also how fast the arterial pressure waves travel from one site to the next which is a measure of arterial stiffness.

Major Grants and Financial Support

| Total NHMRC Funding: | $1,354,209 |
| Other competitive funding: | $265,678 |
| Funding from other sources: | $50,000 |
The Centre for Functioning and Health Research (CFAHR) operates across the Queensland Health Metro South Health Service District, and is a strategic collaboration with leading Queensland university partners. This unique allied health research centre integrates research, education and practice across the health care continuum to deliver innovative changes in practice.

In 2011 CFAHR team grew considerably and researchers enjoyed strong success in obtaining competitive funding, including involvement in an NHMRC Early Career Fellowship and in a Centre for Research Excellence. CFAHR researchers contributed to numerous cross-disciplinary studies, building networks and fostering allied health clinician research. They also conducted numerous research training and mentorship activities across the district. The CFAHR team also saw impressive results in research translation, with numerous high quality publications and presentations of research across clinician, academic and policy-maker audiences.

Professor Liz Ward
Head of Research Unit

Research Activities

Clinical Trials


The effect of Nintendo Wii-Fit on endurance, balance and rehabilitation engagement following a traumatic brain injury (Gesch J, Fleming J, Griffin J, Kuys S).

Improving physical activity outcomes for inactive patients (McPhail S).

Overcoming barriers to accessing obesity management expertise through innovative telemedicine service delivery (Hickman I, Reeves M, Eakin E, Veerman L, McPhail S).

Randomised controlled cross-over phase 3 trial comparing the new indwelling Provox3 Voice Prosthesis with the currently used Blom-Singer Classic Indwelling Voice Prosthesis for voice rehabilitation after total laryngectomy (Hancock K, Ward E, Lawson N, Van As Brooks C).

Other Research

Allied health research capacity building project (Pager S, Holden L, Golenko X).

Allied health research capacity survey: Evaluation of the Centre for Functioning and Health Research 2010-14 (Pager S).

An exploration of contextual factors in completed suicides in the Northern Territory (Pridmore S, Kuipers P).


An investigation into the effectiveness of computer-based therapy for patients with aphasia (Clark K, Finch E, Hill A, Copland D).

Assessing the sensitivity and specificity of screening questions for referral prioritisation in a Medical Assessment and Planning Unit (MAPU) (Vivanti A, McPhail S, Robinson, K).


Can impaired swallow function (dysphagia) be accurately assessed online: a telehealth feasibility study (Ward E, Sharma S, Burns C, Theodoros D, Russell T).


Cognitive remediation therapy (CRT) for help seeking youth experiencing social, educational or vocational difficulties (Hodgson A, Dark F, Kuipers P, McPhail S).

Comparison of two education delivery methods of an image interpretation program for radiographers (Neep M, Steffans T, McPhail S).


Descriptions of community by people with spinal cord injuries (Kuipers P).


Dysphagia following thermal burn injury: clinical risk factors and prognostic indicators of recovery (Rumbach A, Ward E, Bassett L, Muller M).


Evaluating change in occupational therapy reasoning and practice through Web-based Virtual Patient cases (Kuipers K, Pouton T, Kuipers P, Copley J, McPhail S).


Evaluation of a multidisciplinary early intervention group for post-coma unresponsive patients and patients in minimally responsive states (Seeto T, Griffen E, Budden C, Kuys S, McPhail S).


Evaluation of the utility of a newly developed virtual reality prospective memory (PM) task in individuals with traumatic brain injury (TBI) (Fleming J, Shum D, Man M).

Examination of a Telehealth service for the management of swallowing and communication disorders of patients with head and neck cancer (Burns C, Ward E, Bassett L, Malcolm K, DelRosso F, Kenny L, Greenup P).


Factors affecting dysphagia management in Malaysia (Mustaffa Kamal R, Ward E, Cornwall P).

Financing and management of lifetime care for adults with acquired disabilities and high care needs (Foster M, Hanman P, Flemming J, Tilse C).


Improving communication between health practitioners, students and patients with aphasia (Finch E, Lettlehan J, Flemming J, McPhail S, McGovern D, Brown K).


Integrating remote access physical activity behaviour change programs into outpatient clinics: An investigation of patient and staff perceptions (McPhail S).


Past and current leisure activities of individuals in a brain injury rehabilitation unit (Brathwaite H, Flemming J, Gustafsson L, Griffin J).


Rehabilitation of prospective memory following traumatic brain injury (Fleming J, Shum D, Strong J).

Remote-access personalised physical activity behaviour change programs to address priority health needs: Translation to hospital outpatient settings (McPhail S, Marshall A, Kuipers P).

Splinting to prevent forearm rotation - to what degree? (Slaughter A, Miles L, Fleming J, McPhail S).

Supporting allied health professionals- evaluating a peer group supervision model for Queensland (Hall K, Pager S, Kuipers P, Bell K).

The effect of environmental barriers on community integration following traumatic brain injury (Fleming J, Nalder E, Alves-Stein S).

The effectiveness of intensive voice therapy in the management of vocal nodules (Fu S, Theodoros D, Ward E).

The effects of thrombolysis following ischaemic stroke on communication and swallowing outcome (Finch E, Clark K, Short K, Smith L, Antonio M, Atken P).

The evaluation of a tracheostomy simulation training program for speech pathologists (Bassett L, Ward E, Hyde T, Baker S, Hancock K).

The transition experiences of stroke patients and their carers (Worrall L, Fleming J, Grohn B, Naider E, Hall A).


Translating novel personalised physical activity behaviour change programs to address priority health needs in multidisciplinary outpatient clinical settings (McPhail S, Marshall A, Kuipers P, Hickman I).

Use of innovative mobile telehealth technology to enable a new service delivery solution for dysphagia management (Ward E, Theodoros D, Russell T, Burns C).

Working to improve outcomes for clients with mental illness or challenging behaviour in Residential Aged Care Facilities (RACF) through clinical education and training of staff (Hill C, Honwood K, Delaney N, McPhail S).

Swallowing, nutrition and patient-rated function in patients with oropharyngeal SCC treated curatively with altered fraction radiotherapy with concomitant boost or chemoradiation (Cartmill B, Cornwell P, Ward E, Porceddu S).

Speech Pathology Service Provision in Residential Aged Care Facilities (Bennett M, Ward E, Scarinci N).


Pathways and Choices for Younger people (18-55) with high care needs (McIntyre D, Fleming J, Foster M, Tweedy S).


Awards and Prizes
Dr McPhail, Steven
- Early Career Award, NHMRC Improving physical activity outcomes for inactive patients

Major Grants and Financial Support
Total NHMRC funding received: $173,517
Other competitive funding: $830,628

National and International Presentations
Professor Liz Ward
- Kalsbad Dysphagia Symposium, Germany
- Smart Strokes Conference, Gold Coast
- Speech Pathology Australia Conference, Darwin
- Dysphagia Research Society, San Antonio, USA
- PEVOC Conference, Marseille, France

Associate Professor Jennifer Fleming
- Combined Australasian Faculty of Rehabilitation Medicine and Australian and New Zealand Spinal Cord Society Conference, Brisbane
- Occupational Therapy Australia Conference, Gold Coast
- Progress in MS Conference, Melbourne
- STEPS Program Leader Network Training Forum, Brisbane
- Queensland Health Inviting Innovation Conference, Brisbane
- OT Australia Advanced Cognitive Rehabilitation Workshop, Brisbane, Townsville & Sydney

Associate Professor Pim Kuipers
- Second Asia Pacific CBR Congress, Manila, Philippines
- World Report on Disability Symposium, Sydney
- STEPS Program Leader Network Training Forum, Brisbane
- Mobility Solutions for Aboriginal and Torres Strait Island People Symposium, Adelaide

Dr Steven McPhail
- International Clinical Neuroscience Forum, Chongqing, China
- Combined Australasian Faculty of Rehabilitation Medicine and Australian and New Zealand Spinal Cord Society Conference, Brisbane
- Australian Physiotherapy Association Conference, Brisbane
- Queensland Health Inviting Innovation Conference, Brisbane
Integrative Medicine is an established paradigm shift in medicine in many geographical areas and considered to be a developing progressive health initiative focusing on patient disease prevention strategies and novel therapies. Many people use the term Integrative Medicine interchangeably with alternative medicine in an expression of synonymy. This is not the case, nor was it ever. Alternative medicine comprises all those therapies not taught in conventional medical schools, based on the ideas that range from those that are sensible and associated with biologically plausible mechanisms of action and worth investigating and then including in mainstream medicine to those that are unwise, imprudent, and a few that are risky to dangerous. The role of our Centre is to support evidence based research that expands the conventional model of care, while further educating clinicians in the emerging evidence base of disease prevention and therapeutic care.

Furthermore, the Centre’s Venomics group’s major research includes work on proteins such as Textillinin-1, Haempatch and factor V which have been patented and have been licensed to QRx Pharma as part of their ASX listing. This group has carried out screening of 20 Australian snake venoms and their venom gland’s cDNA profiles in search of novel DNA sequences. Many of these identified sequences have been added to the NCBI database. Novel cDNA sequences which have been defined as having potential IP value have been retained in the view to patenting. On September 20th 2011, Provisional Patent “Serum Preparation” was lodged with APO from the Venomics research group, CICMM. To date 6 patents have been established which includes novel genetic sequence data as part of their composition claims and functional studies. Three other potential patents are in current development.

Research Activities

Clinical Trials

Does Tai Chi regular practice improve depression and metabolic syndrome for depressed adults at risk of developing cardiovascular disease? (Xin L, Van der Hall E, Vitetta L. The trial is now completed and the data is under analysis.

A Pilot Trial Assessing the Efficacy of GlycOmega Greenshell Mussel Powder on OA of the Knee. (Vitetta L, Coulson S, Vecchio P). The trial is now completed.

A clinical trial investigating supplementation with B12 and other B group vitamins to reduce chemotherapy induce peripheral neuropathy in patients diagnosed with a malignancy. (Schloss J, Vitetta L, Colosimo M). The trial is ongoing.

Gastrointestinal Microbiota Profiles in A Comparative Clinical Study Assessing the Therapeutic Efficacy of Green-Lipped Mussel (Perna canaliculus).

Extract and Glucosamine Sulphate in Knee Osteoarthritis. (Coulson S, Vitetta L, Butt H, Vecchio P). The trial has now been initiated.

Other Research:

To investigate probiotic supplementation as an intervention against the toxic and inflammatory effects of gluten and irritable bowel syndrome. (Briskey D, Vitetta L, Peake J).


Use of snake venom prothrombin activators in blood collection tubes to produce high quality serum to improve patient outcomes. (Lavin MF, De Jersey J, Masci PP and Dimeski Gj).

Dermaten sulphate as an oral prophylactic antithrombotic agent. (Osborne S, Seymour R, Masci PP and Du Q).

Major Grants and Financial Support

Other competitive funding: $78,000
Funding from commercial studies: $142,000
Funding from other sources: $555,166

National and International Presentations

Associate Professor Luis Vitetta
- General Practice Conference and Exhibition, Sydney
- CSIRO / ACNEM 1st International Conference on Nutrition in Medicine, Sydney

Associate Professor Luis Vitetta
Director
The Centre for Kidney Disease Research (CKDR) is one of Australia’s leading kidney disease research centres with an international reputation for excellence in research. Consisting of the Translational Research Laboratories, PAH Nephrology Clinical Research Group, the Australasian Kidney Trials Network (AKTN) and the Research Unit at Royal Brisbane and Women’s Hospital, the researchers of the CKDR are working at the forefront of global trends in research to understand the cellular and molecular basis of kidney disease and to trial innovative new clinical treatments to improve the health and well-being of people with kidney disease. Renowned for its studies in acute and chronic kidney disease and kidney cancers, the CKDR has particular expertise in translating results from laboratory and clinical sciences for application to improve public health outcomes.

The year was extremely productive with major research highlights and achievements including successful completion of recruitment of 371 patients for the HONEYPOT trial; successful completion of the balANZ trial (n=185); one successful new NHMRC Project Grant application for funding in 2012, award of a Public Service Medal to David Johnson for outstanding public service, particularly research into the early detection and management of kidney disease and successful completion of several PhD projects and initiation of several new projects.

Associate Professor
Glenda Gobe
Co-Director

Professor David Johnson
Co-Director

Professor Robert Fassett
Co-Director

Research Activities
Clinical Trials

Peritoneal Dialysis

The balANZ trial - A multicentre randomised controlled trial of Balance® in Australian and New Zealand PD patients (Johnson DW, Coburn A). This project aims to look at the impact of using novel, biocompatible peritoneal dialysis solutions on clinical outcomes in peritoneal dialysis patients.

Predictors and outcomes of peritonitis in the Australian and New Zealand PD patient populations (Johnson DW). This national registry study aims to determine the predictors, microbiology, treatment and outcomes of peritonitis in peritoneal dialysis patients.

The IMPENDIA trial – Multi-centre, prospective, randomized trial to demonstrate Improved Metabolic Control of PPEN Vs DDDD in DIAbetic CAPD patients (Johnson DW, Coburn A). This multi-centre, multi-national randomised controlled trial is looking at the impact of low sugar dialysis solutions on blood sugar control in diabetic dialysis patients.

The impact of APD versus CAPD on survival of Australian and New Zealand peritoneal dialysis patients (Johnson DW, Badve S). This national registry study aims to determine whether the use of machine cyclers impacts on clinical outcomes in peritoneal dialysis patients.

A systematic review of the effects of biocompatible peritoneal dialysis solutions on patient outcomes (Johnson DW). This Cochrane review of randomised controlled trials aims to determine whether or not novel, biocompatible peritoneal dialysis solutions improve clinical outcomes in peritoneal dialysis patients.

A randomised, controlled trial of exit site application of Medihoney™ Wound Gel for the prevention of catheter-associated infections in peritoneal dialysis patients (HONEYPOT trial) (Johnson DW, Hawley CM, Isbel NM, Clark C, Coburn A, Vergara L). This multi-centre, multi-national randomised controlled trial is looking at the impact of topical Medihoney versus mupirocin on the rate of catheter-associated infections in peritoneal dialysis patients.

A randomised controlled trial of oral HEMe iron polypeptide Against Treatment with Oral Controlled Release Iron Tablets for the correction of anaemia in peritoneal dialysis patients (HEMATOCRIT trial) (Barracough K, Johnson DW, Hawley CM). This single-centre randomised controlled trial aims to determine whether a novel iron supplement (heme iron polypeptide) leads to better correction of anaemia in peritoneal dialysis patients compared with standard iron tablets.

Peritoneal dialysis outcomes after temporary haemodialysis transfer for severe peritonitis. (Badve S, Johnson DW). This national registry study is evaluating the outcome of peritoneal dialysis patients who temporarily
transfer to haemodialysis because of severe peritonitis and then choose to return to peritoneal dialysis.

Predictors, treatments and outcomes of relapsing versus recurrent peritonitis. (Burke M, Johnson DW). This national registry study evaluated the predictors, treatment and outcomes of peritoneal dialysis patients who experienced an episode of peritonitis within 4 weeks of a prior episode due either to the same organism (relapsed peritonitis) or a different organism (recurrent peritonitis).

Predictors, treatments and outcomes of repeat versus non-repeat peritonitis. (Thirugnanasambathan T, Johnson DW). This national registry study evaluated the predictors, treatment and outcomes of peritoneal dialysis patients who experienced an episode of peritonitis more than 4 weeks after a prior episode due either to the same organism (repeat peritonitis) or a different organism (non-repeat peritonitis).

Effect of aminoglycosides on residual renal function decline in peritoneal dialysis (Badve S, Johnson DW). This national registry study evaluated whether treating peritonitis episodes with intraperitoneal aminoglycoside antibiotics led to an accelerated loss of kidney function in peritoneal dialysis patients.

Elderly Peritoneal Dialysis Patients Have Similar Peritonitis-Free Survival and Lower Risk Of Technique Failure but Higher Risk Of Peritonitis-Related Mortality Compared With Younger Patients. (Johnson DW). This national registry study evaluated the impact of patient age over 60 years on peritoneal dialysis outcomes.

Remote Indigenous Peritoneal Dialysis Patients Have Higher Risk Of Peritonitis, Technique Failure, All-Cause and Peritonitis-Related Mortality. (Johnson DW). This national registry study evaluated the impact of indigenous racial origin on peritoneal dialysis outcomes.

Effect of seasonal variation on peritonitis incidence in Australia and New Zealand. (Cho Y, Johnson DW, Hawley C, Badve S). This national registry study evaluated the impact of season on peritonitis rates, microbiology, treatment and outcomes in peritoneal dialysis patients.

Effect of climatic region on peritonitis incidence in Australia and New Zealand. (Cho Y, Johnson DW, Hawley C, Badve S). This national registry study evaluated the impact of living in tropical, subtropical, temperate, grassland or desert climates on peritonitis rates, microbiology, treatment and outcomes in peritoneal dialysis patients.

Effect of remoteness of residence on peritonitis incidence in Australia and New Zealand. (Cho Y, Johnson DW, Hawley C, Badve S). This national registry study evaluated the impact of living more than 100 km away from a peritoneal dialysis unit on peritonitis rates, microbiology, treatment and outcomes in peritoneal dialysis patients.

Weekend vs weekday presentations with peritoneal dialysis-associated peritonitis. (Cho Y, Johnson DW, Hawley C, Badve S). This national registry study evaluated the impact of microbiology, treatment and outcomes of peritonitis in peritoneal dialysis patients presenting to hospital on a weekend (when staffing levels are reduced) compared to a weekday.

Nutrition in PD Study: Medical, Nutritional and Social Factors affecting Protein Intake in Peritoneal Dialysis Patients. (Young V, Campbell K, Dr S Badve, A Bates, Johnson, D). The purpose of this study is to find what barriers there might be to having good nutrition while having PD.

Haemodialysis

Ethanol lock therapy for the prevention of tunnelled catheter-related bacteraemia in haemodialysis patients (Broom J, Playford G, Johnson DW, Hawley CM). This single-centre randomised controlled trial evaluated the effect of instilling alcohol in dialysis catheters versus standard heparin on bloodstream infections.

A randomised, placebo-controlled trial of expentifyline on haemoglobin levels in patients with erythropoietin-resistant anaemia. (The HERO trial) (Johnson DW, Hawley CM, Leary D, Harlen K, Badve S). This multi-centre randomised controlled trial aimed to evaluate the effect of expentifyline versus placebo on correction of anaemia in patients already treated with erythropoiesis stimulating agents.

Effects of Alternate Night Nocturnal Hemodialysis on sex hormone levels. (Van Eps C, Hawley C, Jeffries J). This observational study evaluated the impact of dialysing every second night at home on sex hormone levels compared to standard three times a week haemodialysis in hospital.

A randomized, placebo-controlled study to assess the effects of Cholesterol-lowering therapy with a combination of simvastatin and Ezetimibe on the Risk of Major Cardiovascular Complication Among Individuals with Chronic Kidney disease (SHARP trial) (Johnson DW, Sudak J). This multi-centre, multi-national randomised controlled trial evaluated the effects of cholesterol lowering drugs on heart disease in patients with chronic kidney disease.

The initiating dialysis early and late (IDEAL) study – peritoneal dialysis substudy. (Johnson DW, Leary D). This multi-centre, multi-national randomised controlled trial post hoc study examined the impact of starting peritoneal dialysis early (ie at higher than standard levels of kidney function) on clinical outcomes (such as death, heart attacks, etc).

Evaluation of Cinacalcet HCl Therapy to Lower Cardiovascular Events (EVOLVE) (Hawley, C, Sudak, J). This multi-centre, multi-national randomised controlled trial aims to assess the effects of a novel calcium-sensing receptor blocker (cinacalcet) on heart disease events in patients with chronic kidney disease.
Quality of Life and alternate nightly nocturnal home haemodialysis. (van Eps CL, Jeffries J, Johnson DW, Campbell S, Isbel N, Mudge D, Hawley CM). This observational cohort study aims to evaluate the impact of dialysing every second night at home on quality of life compared to standard three times a week haemodialysis in hospital.

Effects of the dose of erythropoiesis stimulating agents on cardiovascular events, quality of life, and health-related costs in haemodialysis patients: the clinical evaluation of the dose of erythropoietins (C.E. DOSE) trial. (Johnson DW, Strippoli GFM). This multi-centre, multi-national randomised controlled trial aims to evaluate the effects of a fixed high dose of erythropoietin (18,000 IU/week) versus a fixed low dose of erythropoietin (6,000 IU/week) on death, cardiovascular events, quality of life and costs in haemodialysis patients.

A Clinical Trial of Intensive Dialysis. A Multicentre, Unblinded, Randomised, Controlled Trial to assess Quality of Life, Clinical Outcomes and Cost Utility for Extended vs Standard Duration of Dialysis in Patients with ESKD (ACTIVE). (Van Eps CL, Johnson DW, Campbell S, Isbel N, Mudge D, Hawley CM, Sudak J). This multi-centre, multi-national, open-label randomised controlled trial aims to evaluate the effects of extended hours home haemodialysis (>24 hours/week) versus standard hours home haemodialysis (<18 hrs/week) on quality of life, death, cardiovascular events and healthcare costs.

A randomised, double-blind, placebo-controlled, factorial design trial to assess the effect of aspirin and fish oil (omega 3 fatty acids) in the prevention of early thrombosis in arterio-venous fistulae in patients with Stage IV or V chronic kidney disease requiring haemodialysis (FAVoured). (Hawley C, Mudge D, Coburn A, Watson M, Paul-Brent P). This multi-centre, multinational randomised controlled trial is evaluating the effects of fish oil and aspirin on clotting of dialysis access in haemodialysis patients.

The BLOCADE trial (Hawley C, Isbel N, Mudge D, Vergara L, Paul-Brent P, Leary D, Badve S). This multi-centre randomised controlled trial aims to evaluate the effects of beta-blocker therapy versus placebo on death and heart events in haemodialysis patients with impaired heart function.

A systematic review of beta blocker therapy in CKD patients with cardiomyopathy (Badve S, Hawley C). This Cochrane systematic review evaluated the effects of beta-blocker therapy versus placebo on death and heart events in chronic kidney disease patients with impaired heart function.

Home versus in-centre haemodialysis (Johnson DW, Strippoli GFM). This Cochrane systematic review of randomised controlled trials aims to evaluate the relative benefits of dialysis at home versus at hospital.

Transplantation

An investigation into the influence of CYP3A5, CYP3A4 and MDR-1 gene polymorphisms on immunosuppressant pharmacokinetics and pharmacodynamics. (Staatz C, Barradough K, Johnson DW, Isbel NM).

This observational cohort study aims to evaluate the effects of gene mutations on blood levels of anti-rejection drugs (tacrolimus, prednisone and mycophenolate mofetil) and clinic outcomes in kidney transplant recipients.

Intravenous versus oral iron supplementation for the correction of post-transplant anaemia (Mudge DW, Tan K, Haley CM, Campbell SB, Isbel NM, Nicol DL, Johnson DW). This single-centre randomised controlled trial evaluated the effects of intravenous iron versus iron tablets on correction of anaemia following a kidney transplant.

A partially blinded, prospective, randomised multicentre study evaluating efficacy, safety and tolerability of oral sotestaurin plus standard or reduced exposure tacrolimus vs myfortic® plus tacrolimus in de novo renal transplant recipients. (Campbell S, Isbel N, Johnson DW, Hawley CM, Mudge DW, Van Eps CL, Bali V). This industry-sponsored, multi-centre randomised controlled trial is evaluating the safety and effectiveness of a new anti-rejection drug (sotestaurin) in kidney transplant patients.

Biomarkers in Transplantation External Qualification Phase (BIT2) (Isbel N, Campbell S, Johnson DW, Hawley CM, Mudge DW, Van Eps CL, Leary D). This observational cohort study is examining the roles of different biomarkers (proteins measured in the blood of urine) for predicting clinical outcomes in kidney transplant patients.

A prospective observational case-control study to assess predictors for BK viraemia in adult kidney transplant recipients. (Isbel N, Barradough K, Leary D, Johnson DW). This observational case-control study is trying to identify what factors predict the occurrence of BK virus infection after kidney transplantation.

The AVATAR trial (Johnson DW, Isbel N, Watson M, Paul-Brent P). This multi-centre, multi-national randomised controlled trial aims to evaluate the effect of angiotensin convertin enzyme inhibitors (a type of blood pressure pill) versus placebo on the progression of kidney dysfunction in kidney transplant patients with some evidence of kidney damage (as evidenced by leakage of protein into the urine).

Omega 3 aspirin Skin cancer study (Campbell S, Isbel N, Green A, Whitman D). A single centre placebo controlled study to examine the benefit of Omega 3 and aspirin in the prevention of nonmelanoma skin cancer in renal transplant recipients.

General Nephrology

Cardiovascular Outcomes in Renal Atherosclerotic Lesions. Randomised and Multi-Center Two-Group Clinical Trial to Assess the Best Treatment for Patients with High Blood Pressure and Renal Artery Stenosis: Stenting with Anti-Hypertensive Medical Therapy, Compared to Medical Therapy alone. (CORAL). (Mudge DW, Sudak J). This multi-centre, multi-national randomised controlled trial is evaluating whether patients with kidney disease and high blood pressure due to narrowing of the kidney arteries is best treated with...
blood pressure pills alone or by inserting a stent into the kidney arteries to keep the artery open.

Angiotensin converting enzyme inhibitors, angiotensin receptor blockers and combined therapy in patients with micro- and macroalbuminuria and other cardiovascular risk factors: a systematic review of randomised controlled trials. (Johnson DW, Strippoli GF). This Cochrane review of all available randomised controlled clinical trials aims to evaluate the effects of angiotensin converting enzyme inhibitors and/or angiotensin receptor blockers (forms of blood pressure pills) on clinical outcomes (heart events and death) in patients with chronic kidney disease.

Outcomes of end-stage renal failure secondary to haemolytic-uraemic syndrome in Australia and New Zealand – a multi-centre registry study. (Mahondas J, Johnson DW, Badve S, Hawley C). This national registry is looking at dialysis and kidney transplant outcomes in all patients treated for haemolytic-uraemic syndrome in Australia and New Zealand since 1963.

Outcomes of end-stage renal failure secondary to anti-glomerular basement membrane antibody disease in Australia and New Zealand – a multi-centre registry study. (Tang W, Johnson DW, Badve S, Hawley C). This national registry is looking at dialysis and kidney transplant outcomes in all patients treated for end-stage renal failure secondary to anti-glomerular basement membrane antibody disease in Australia and New Zealand since 1963.

Outcomes of end-stage renal failure secondary to Alport’s syndrome in Australia and New Zealand – a multi-centre registry study. (Mallett A, Johnson DW, Badve S, Hawley C). This national registry is looking at dialysis and kidney transplant outcomes in all patients treated for end-stage renal failure secondary to Alport’s syndrome in Australia and New Zealand since 1963.

Outcomes of end-stage renal failure secondary to fibrillary glomerulonephritis in Australia and New Zealand – a multi-centre registry study. (Mallett A, Johnson DW, Badve S, Hawley C). This national registry is looking at dialysis and kidney transplant outcomes in all patients treated for end-stage renal failure secondary to fibrillary glomerulonephritis in Australia and New Zealand since 1963.

Outcomes of end-stage renal failure secondary to Wegener’s granulomatosis in Australia and New Zealand – a multi-centre registry study. (Bose B, Johnson DW, Badve S, Hawley C). This national registry is looking at dialysis and kidney transplant outcomes in all patients treated for end-stage renal failure secondary to anti-glomerular basement membrane antibody disease in Australia and New Zealand since 1963.

Results of a national survey of Australian and New Zealand Renal nurses: Opinions on the content and effects of clinical practice guidelines for chronic kidney disease. (Johnson DW). This national survey of renal nurses in Australia and New Zealand evaluated their opinions regarding the clinical value and usefulness of best practice clinical guidelines for patients with chronic kidney disease.

The role of 25-hydroxyvitamin D deficiency in promoting insulin resistance and inflammation in patients with chronic kidney disease: a randomised controlled trial. (Petchey WG, Hickman LJ, Duncen E, Prins JB, Hawley CM, Johnson DW, Barralough K, Isbel NM). This single-centre randomised controlled trial evaluated the effects of vitamin D supplementation on markers of diabetes and inflammation in patients with chronic kidney disease.

Interventions for erythropoetin-resistant anaemia in dialysis patients. (Badve S, Hawley CM, Johnson DW). This Cochrane systematic review of all randomised controlled trials aims to evaluate the effects of different treatments for improving the effectiveness of erythropoietin to treat anaemia in chronic kidney disease.

Consumer involvement in topic and outcome selection in the development of clinical practice guidelines. (Johnson DW). This qualitative study examined the value of involving patients in decisions about what clinical areas should be covered by best practice clinical guidelines under development.

An Open-label, Multicentre, Randomised, 3-arm Study to Investigate the Comparative Efficacy and Safety of Intravenous Ferric Carboxymaltose (Ferinject® High- and Low-dosage Regimens) versus Oral Iron for the Treatment of Iron Deficiency Anaemia in Subjects with Non-dialysis-dependent Chronic Kidney Disease. (Mudge DW, Van Eps CL., Johnson DW, Campbell S, Isbel N, Hawley CM, Bali V). This industry-sponsored randomised controlled trial is investigating the safety and effectiveness of a new form of intravenous iron supplement to correct iron-deficiency anaemia in patients with chronic kidney disease not yet on dialysis.

A randomised controlled trial comparing the impact of aggressive risk factor and lifestyle modification utilising a nurse led co-ordinated care plan with standard care to limit the progression of cardiovascular disease in patients with chronic kidney disease. (LANDMARK 3) (Isbel N, Sonnenburg K, Dittner L). This single-centre, randomised controlled trial investigated the effects of a co-ordinated lifestyle program (diet and exercise) on the development of heart disease in patients with chronic kidney disease.

A Randomized, Double-Blind, Placebo-Controlled, Multi-Center, Phase 2b Study to Evaluate the Safety and Efficacy of Pyridoxamine Dihydrochloride in Patients With Nephropathy Due to Type 2 Diabetes. (PYR-210) (Isbel N, Litkin M). This industry-sponsored randomised controlled trial is investigating the safety and effectiveness of a new agent on the prevention of nerve damage in patients with diabetes.

A Phase 3, Multi-center, Double-blind, Placebo-controlled, Parallel-arm Trial to Determine Long-term Safety and Efficacy of Oral Tolvaptan Tablet Regimens in Adult Subjects with Autosomal Dominant Polycystic Kidney Disease. (TEMPO) (Johnson DW, Campbell S, Isbel N, Hawley CM, Mudge DW, Litkin M). This industry-sponsored randomised controlled trial is investigating the safety and effectiveness of a new agent on slowing cyst growth and progression of kidney disease in patients with polycystic kidneys.
The PEXIVAS trial (Hawley C, Isbel N, Harlen K, Reidlinger D, Badve S). This multi-centre, multi-national randomised controlled trial aims to evaluate the effect of plasma exchange (replacing the patients plasma with synthetic plasma) on clinical outcomes in patients with anti-neutrophil cytoplasmic antibody (ANCA)-associated vasculitis.

The IMPROVE-CKD trial (Hawley C, Badve S, Reidlinger D, Morrish A). This multi-centre, multi-national randomised controlled trial aims to evaluate the effect of the phosphate binder, lanthanum carbonate, versus placebo on aortic pulse wave velocity (a surrogate measure of cardiovascular disease) in patients with moderately advanced chronic kidney disease.

The CKD-Fx trial (Johnson DW, Badve S, Hawley CM). This multi-centre randomised controlled trial aims to evaluate the effects of allopurinol (a drug commonly used to treat gout) versus placebo on the progression of kidney failure in patients with moderately advanced chronic kidney disease.

A systematic review of steroid therapy in patients with chronic kidney disease due to IgA nephropathy (Johnson DW). This Cochrane systematic review evaluated the effects of steroid therapy versus other treatments on clinical outcomes in patients with chronic kidney disease due to IgA nephropathy.

A systematic review of interventions for treating sexual dysfunction in patients with chronic kidney disease (Johnson DW, Strippoli GF). This Cochrane systematic review of randomised controlled trials evaluated the safety and effectiveness of treatments of erection problems and sexual dysfunction in patients with chronic kidney disease.

The TESTING trial (Johnson DW). This multi-centre, multi-national randomised controlled trial aims to evaluate the effects of steroid therapy versus standard blood pressure treatment on kidney failure progression in patients with chronic kidney disease due to IgA nephropathy.

A systematic review of steroid therapy in patients with chronic kidney disease due to IgA nephropathy (Johnson DW). This Cochrane systematic review evaluated the effects of steroid therapy versus other treatments on clinical outcomes in patients with chronic kidney disease due to IgA nephropathy.

The SHARP Trial (Johnson DW, Sudak J). This investigator-initiated, multi-centre randomised controlled trial examined the effects of lowering cholesterol with simvastatin plus ezetemibe in patients with chronic kidney disease.

Hepatitis C study (Bese B, Johnson DW, Hawley C, Badve S). This multicentre registry study examined the effect of dialysis modality on the survival of end-stage kidney disease patients with chronic hepatitis C infection.


Other Research

Enhancing erythropoietin therapy in ischaemia-reperfusion therapy in heart and kidney (G Gobe, D Johnson, M West, L Brown, D Vesey, N Bennett, V Diwan, G Cowin, M Goligorsky (International)).

Mechanisms of cytoprotection by erythropoietin in the hypoxia/ischaemia-injured neonatal brain (M Yamada, G Gobe, P Colditz, D Johnson).

Anti-oxidant action of carvedilol in protecting the kidney from cisplatin-induced nephrotoxicity (MA Carvalho Rodrigues, G Gobe, A Cardoza dos Santos (International), N Bennett).

Cadmium toxicity to proximal tubular epithelium of the kidney: roles of inflammation and mitochondrial dysfunction (M Corbier, G Gobe, N Bennett, D Vesey, S Satianup, S Roy).

Does oxidative stress contribute to renal cell aging and chronic kidney disease via dysfunctional mitochondria and can this be modulated by using combined anti-oxidant therapy? (G Gobe, D Small, J Coombes, D Johnson, S Roy).


Control of myofibroblast numbers in chronic kidney disease (G Gobe, T Hewitson, C Winterford, H Schirra, S Roy).

Biomarkers for renal cell carcinoma (R Rajandram, G Gobe, C Morais, D Johnson, K Oliver).

Understanding the resistance of renal cell carcinoma to therapies (C Morais, G Gobe, D Johnson, K Oliver).

Protease-activated receptor-2 and renal carcinogenesis (D Vesey, D Fairlie, G Gobe, D Johnson).

Endotoxins in dialysates and progression of chronic kidney disease (D Vesey, A Wilkinson, N Isbel).

Androgen receptor and androgen self sufficiency in prostate cancer (N Bennett, G Gobe, T Yang, S Lee, D Johnson, PF Gardiner, J Hooper, D Lambie).


Inhibition of Nuclear Factor kappa B Attenuates Tumor Progression in an Animal Model of Renal Cell Carcinoma (Healy H, Morais C, Johnson DW, Gobe G).

Inhibition of nuclear factor kappa B transcription activity drives a synergistic effect of pyrrolidine dithiocarbamate and cisplatin for treatment of renal cell carcinoma (Healy H, Morais C, Johnson DW, Gobe G).


Bioactive botanical compounds as clinical intervention tools (Houghton C, Coombes JS, Fassett RS).

Awards and Prizes

Professor David Johnson

- Public Service Medal, Commonwealth of Australia, Chronic kidney disease research

Major Grants and Financial Support

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National and International Presentations

Professor David Johnson

- Australasian Proteinuria Consensus Meeting, Sydney
- Australasian Heads of Renal Units Meeting, Melbourne
- PD Academy, Sydney
- Australasian Creatinine Consensus Meeting, Sydney
- 4-CMGH Meeting, Taiwan
- Dialysis Nephrology Transplant Workshop, Hunter Valley, NSW
- Peritoneal Dialysis University, Kuala Lumpur, Malaysia
- International Society of Blood Purification, Beijing, China
- EuroPD, Birmingham, United Kingdom
- Cardiff Renal Colloquium, Cardiff, Wales
The Centre for Liver Disease Research has an international reputation in human liver disease research. The mission is to determine the mechanisms by which obesity and fatty liver impair the response of the liver to injury from multiple causes and to develop specific strategies to improve the outcome of patients with liver disease. The vision is to successfully integrate scientific and clinical research projects in order to rapidly translate scientific outcomes into clinical practice to benefit the health of the community affected by liver disease.

Dr Graham Rich was awarded Young Investigator Award - Clinical Science by the Gastroenterological Society of Queensland. Victoria Gadd was Young Investigator Award Finalist at the Coolum meeting of the Gastroenterological Society of Queensland.

Dr Michelle Melino was Young Investigator Award Finalist at the Australian Gastroenterology Week.

Centre Director, Elizabeth Powell, was awarded a professorial promotion.

Associate Professor
Elizabeth Powell
Co-Director

Associate Professor
Julie Jonsson
Co-Director

Associate Professor
Andrew Clouston
Associate Director

Research Activities

Clinical Trials


The pharmacogenetics of drug induced liver injury. (Martin J, Powell E, Horsfall L).

Other Research


Factors affecting the progression of liver disease and response to treatment. (Powell EE, Jonsson JR, Clouston AD).


Awareness and opinions of non-alcoholic fatty liver disease by hospital specialists. Powell E, Bergqvist C-J, Skoien R, Horsfall L, Clouston A, Jonsson J.
Awards and Prizes

Dr Graham Rich

- Young Investigator Award, Clinical Science Research Presentation, Gastroenterological Society of Queensland - Validation of selection criteria for liver biopsy in patients with suspected fatty liver disease.

Dr Michelle Melino

- Young Investigator Award – Finalist, Gastroenterological Society of Australia - Monocytes/macrophages in chronic liver diseases

Ms Victoria Gadd

- Young Investigator Award – Finalist, Gastroenterological Society of Queensland - Monocytes/macrophages in chronic liver diseases

Major Grants and Financial Support

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National and International Presentations

Professor Elizabeth Powell

- 21st Conference of the Asian Pacific Association for the Study of the Liver Postgraduate Course – 3 plenary lectures, Bangkok, Thailand
- Liver Down Under, Perth

Dr Richard Skoien

- ALA Hepatology and Luminal Research Workshop, Kiama
- Australian Rheumatology Association (Queensland) Annual Scientific Meeting, Gold Coast

Ms Victoria Gadd

- ALA Hepatology and Luminal Research Workshop, Kiama
- Gastroenterological Society of Queensland 15th Annual Coolum Update
- Australian Gastroenterology Week, Brisbane
- Liver Down Under, Perth

Dr Michelle Melino

- Australian Gastroenterology Week, Brisbane

Dr Graham Rich

- Gastroenterological Society of Queensland 15th Annual Coolum Update

Associate Professor Andrew Clouston

- RCPA Small Biopsy Pathology Course, Adelaide
- New and Evolving Concepts and Contemporary Issues in Surgical Pathology, Sydney
- Gastroenterological Society of Australia - Australian Gastroenterology Week, Brisbane
- Asia-Pacific Hepato-Pancreatico-Biliary Association Congress, Melbourne.
This was an important and constructive year for the Centre for Research in Geriatric Medicine. Many of our more ambitious research projects came to a conclusion, with results to appear in journals across 2012-13.

Our studies in geriatric syndromes in hospital demonstrated a very high prevalence of dementia (about 25%) among hospital patients aged over 70 years, suggesting the need for hospitals to adjust their design and skill sets for this rapidly growing patient group. We also showed that the majority of older medical patients are dependent in personal care even before becoming unwell, reinforcing the need for hospitals to have functional maintenance programs to prevent decline and support recovery during serious illnesses.

Two projects developed Quality Indicators which reflect care quality in acute hospital wards and in post-acute community programs for older people. We commenced work on a similar project for care of older people in the Emergency Department, to conclude in 2013.

Using accelerometers to measure activity, we commenced an RCT to examine whether accurate measurement and goal setting can increase patient activity and improve outcomes among older rehabilitation patients.

The centre commenced an exciting program of work to take specialist care into the residential aged care setting through telehealth. A demonstration project in a local nursing home used video-conferencing to introduce a range of hitherto inaccessible specialties to the bedside. Several more demonstrations and evaluation projects are planned for the next 2 years.

The centre welcomed Dr Ruth Hubbard as a Senior Lecturer to our department. She was recruited from Cardiff, Wales, through the support of an Office of Health and Medical Research Fellowship. Ruth has a passionate interest in the measurement of frailty. The application of her ideas to day to day practice has the potential to better target health interventions across a wide range of medical specialties.

**Professor Len Gray**
Director, Centre for Research in Geriatric Medicine
Director, Centre for Online Health UQ

**Associate Professor Paul Varghese**
Director, Geriatric and Rehabilitation Unit, PAH

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**Research Activities**

**Clinical Trials**

*Reliability of an “Online” Geriatric Assessment Procedure* (Gray L, Counsell S, Edwards H, Martin-Khan M, Wootton R, Darzins P). The aim of this project is to test the reliability and safety of a comprehensive geriatric assessment performed ‘online’ in making geriatric triage decisions. This project is a NHMRC Project Grant 2009-2011. The Project is led by Professor Len Gray at CRGM, with co-investigators Professor Steve Counsell (US), Professor Helen Edwards (The Queensland University of Technology), Dr Melinda Martin-Khan (CRGM), Professor Richard Wootton (Norway) and Associate Professor Peteris Dazins (Monash University).

Patients in acute care referred for geriatric assessment are randomised to either paired live and online assessments or live/live assessments. Online assessments are completed by viewing the assessment ‘online’ in a web based system. Each doctor designates a triage decision and agreement is compared between paired assessments. Doctors and nurses have been trained in the assessment procedure and research protocol at all three sites. Data collection is complete at all three sites (QLD, VIC). Data analysis and publication preparation is now underway.

*Promoting activity for frail aged in post-acute hospital settings: A randomised controlled trial of accelerometry* (Gray L, Peel N, Cameron I, Karunanithi M, Paul S, Crotty M, Kurrie S.). The study is a parallel group randomised controlled trial in geriatric rehabilitation units in 3 states (QLD, SA, NSW). The Qld site is GARU at PAH. The primary aim is to test whether activity levels can be increased by the provision of activity data from accelerometry monitoring to intervention patients and their clinicians to meet explicit activity goals. The control group is offered standard care. Secondary aims are to explore the effects of increased walking activity (if achieved) on patient outcomes and undertake a cost benefit analysis. Commencement of recruitment began in October 2011 and is expected to be completed as per project plan in November 2012.

**Other Research**

*A telehealth coordination service for the nursing home: Needs Assessment and Proof of concept* (L Gray, A Smith, S Edirippulige). This study aims to develop and test a service coordination model, which would link a range of specialist services to nursing homes using a variety of telehealth strategies. This study is comprised of a “needs analysis” and testing of a series of service types to establish proof of concept. This study is undertaken in
the partnership with Masonic Care Queensland. In the first phase of the project, we examined the current level of demand for specialist care and GP consultations for nursing home residents. Both retrospective and prospective examinations were conducted to understand the current demand. The phase II of this study involved a demonstration and evaluation of several telehealth systems to provide health services to the residents of the nursing home. We established a network facility for conducting online consultations between the Masonic Care Sandgate nursing facility and a panel of specialist consultants.

Hospital Employees Awareness and Attitudes to Dementia Study (Travers C, Lie D). The project aims to deliver and evaluate a brief dementia educational program (1 hour) for non-clinical hospital staff and volunteers at Princess Alexandra Hospital (PAH).

Ethical approval was obtained to conduct the project and 4 educational sessions were provided to a cross-section of staff and volunteers at PAH. The sessions were conducted by specialist dementia education staff from the Queensland Dementia training and Study Centre. The sessions were well-received by the 33 attendees. Additional sessions are being conducted in 2012.

Towards a national framework for dementia prevention, promotion and early intervention: What are the options? (Lie D, Travers C, Martin-Khan M, Halliday L). The options for a population health approach to dementia prevention, promotion and early intervention were reviewed.

A comprehensive literature review of national and international dementia strategies was undertaken and five meeting consensus development activities (workshops, forums) were undertaken to develop consensus in relation to preferred options for inclusion within a new national dementia framework. Details of the project were presented at 3 national conferences, a report was prepared as well as a paper for publication in a peer-reviewed journal.

Clinical outcomes, staff and carer perceptions of acute hospitalisation of patients with dementia (Gray L, Byrne G, Pachana N). The project aims to determine the prevalence and incidence of dementia and delirium among older patients (aged 70 years and older) admitted to acute care hospitals in Australia. Secondly, it aims to determine whether the outcomes of older patients with dementia or delirium differ to those of same-aged patients without the conditions following admission to an acute hospital.

Considerable progress was achieved in 2011 and the expert review of patient records was completed to determine whether the patient had a diagnosis of dementia or delirium. Four papers were drafted for submission to peer-reviewed journals for publication.

Development and Evaluation of Quality Indicators in Post-Acute Transition Care: An Observational Study (Cameron I, Crotty M, Gray L). This project was part of an NHMRC Health Services Program Grant 2006-2011 “Transition Care: Innovation and Evidence”. The project was led by Professor Len Gray at CRGM, with co-investigators Dr Nancye Peel, CRGM, and Professors Ian Cameron, University of Sydney, Maria Crotty, Flinders University and Paul Scuffham, Griffith University. The project aimed to develop and test a suite of Quality Indicators (QIs) for Transition Care Programs (TCPs) and to examine the “whole of episode” costs of persons moving from acute care through a transition care episode.

An initial set of QIs (both process and outcome) was developed from literature and reviewed and refined by an expert panel. Prevalence and incidence data for the draft QIs collected from 351 TCP admissions in 6 community-based TCPs was provided to the expert panel and a consensus approach adopted to develop a working set of QIs for describing and benchmarking quality of care provided by TCPs. An economic analysis assessed the clinical and resource implications of the program. The project was completed in March 2012 and results have been disseminated in forums and peer reviewed publications.

Appropriate Prescribing in Older Persons (Scott I, Martin J, Gray L). This project aims to conduct the detailed design work, and to conduct validation of the components of a new prescribing strategy for older patients, created by our research team. This strategy aims to minimise the use of medications in older patients to those which provide the most benefit without causing adverse drug reactions or creating a large drug administration burden. Initially we plan to explore prescribing patterns among hospital medical patients, to gauge appropriateness and to explore relationships with functional measures contained in a large data repository that we have built in recent years.

Developing a quality framework for the care of older patients in the Emergency Department (Burkett E, Gray L, Jones R, Martin-Khan M). The aim of this project is to develop a set of quality indicators (QIs) for older persons in the Australian emergency department setting. The project is led by Dr. Ellen Burkett (ED physician, Queensland Health), with co-investigators Professor Len Gray (UQ), Dr. Melinda Martin-Khan (UQ) and Associate Professor Rich Jones (US). The project is funded by the Queensland Emergency Medicine Research Foundation (QEMRF). Initial preparations for the project are complete. Eight sites from three Australian States have agreed to participate. Expert panel meetings have been set for early 2012. Based on a review of the literature and input from the expert panel, a preliminary set of indicators will be developed for field testing.

Are hospitals providing quality care for people with dementia? (Gray L, Byrne G, Jones R, Martin-Khan M, Morris J, Pachana N). The aim of this project is to develop a suite of quality indicators to measure the quality of care associated with patient outcomes for people with dementia in hospital. The project is led by Professor Len Gray, with co-investigators Associate Professor Gerard Byrne (UQ), Associate Professor Rich Jones (US), Dr.
Melinda Martin-Khan (CRGM), Professor John Morris (US), and Professor Nancy Pachana (UQ). The project is funded by the J.O. & J. R. Wicking Trust.

An initial set of QIs (both process and outcome) were developed in consultation with an expert panel and a review of relevant scientific literature. The focus was on common geriatric syndromes of significant relevance to patients with dementia. Data was collected from 648 acute care patients in 9 Australian hospitals. A final expert panel was convened to review the field study results and QI definitions. The RAND-UCLA consensus approach will be used to decide the final QI set.

**Award and Prizes**

**Professor Len Gray**
- Australia Day, Queensland Health Achievement Award, Queensland Health for Telehealth

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**National and International Presentations**

**Professor Len Gray**
- Australian College of Rehabilitation Medicine Annual Scientific Meeting, Brisbane
- Ninth Asia/Oceania Regional Congress of Gerontology and Geriatrics (GERO2011), Melbourne
- Baycrest Centre for Education and Knowledge Exchange in Aging, Toronto, Canada
- interRAI RBC Global Summit - Aging, Health and Well-Being-Personal, Government and Business Partnerships, Toronto, Canada
- ACI Orthogeriatrics Symposium 2011, Concord
- International conference on successes and failures in telehealth (SFT-11), Brisbane
- Needs Assessment of the Aged and Disabled: An International Experience. Hosted by the University of the Mediterranean, Marseille, France

**Dr Nancye Peel**
- The University of Queensland School of Medicine Research Day, Brisbane
- Ninth Asia/Oceania Congress of Geriatrics and Gerontology, Melbourne
- 3rd National Transition Care Forum, Melbourne
- 10th National Conference on Injury Prevention and Safety Promotion, Brisbane

**Ms Bonnie Pim**
- National Database of Nursing Quality Indicators 5th Annual Conference, Miami Florida

**Dr Salih Salih**
- The University of Queensland School of Medicine Research Day, Brisbane
- The Statewide Older Persons’ Health Clinical Network 2011

**Ms Linda Schnitker**
- 2nd Annual Dementia Congress, Melbourne
- National Dementia Research Forum 2011, Sydney
- PAH Week

**Dr Catherine Travers**
- 20th National Conference Australian Health Promotion Association Conference, Cairns
- Alzheimer’s Australia 14th National Conference, Brisbane
- The University of Queensland School of Medicine Research Day, Brisbane
- 5th National Dementia Research Forum, Sydney
- Ninth Asia/Oceania Regional Congress of Gerontology and Geriatrics Conference, Melbourne

**Dr Melinda Martin-Khan**
- 2nd Annual National Dementia Congress, Melbourne
- Alzheimer’s Australia 14th National Conference, Brisbane
- The University of Queensland School of Medicine Research Day, Brisbane
- National Dementia Research Forum 2011, Sydney
- Ninth Asia/Oceania Regional Congress of Gerontology and Geriatrics (GERO2011), Melbourne
- International conference on successes and failures in telehealth (SFT-11), Brisbane
Clinical Governance

The Clinical Governance Unit continued to provide support and oversight to the safety and quality systems across the Hospital. It consists of a number of sections: the Quality Team, who manage accreditation, a range of clinical audits, falls and the death review processes; the Clinical Services Evaluation Team, who manage the Senior Medical Performance Review (SMPR), a range of clinical audits, the Clinical Review and Audit Register and the Clinical Governance Scoreboard; the Patient Safety Officers, who manage the Clinical Incident processes and provide HEAPS training. The unit includes the hospital solicitor, who provides legal services and the Patient Liaison team, who manage the complaints and compliments from patients.

Dr Michael P Daly
Executive Director

Research Activities

Senior Medical Officer Performance Review: Establishing Reliability and Validity of Peer Review Assessment. (Ashby R, Harris K, Winning M, Khatun M). This is a performance appraisal and development tool that aims to demonstrate and summarise clinician performance and development activities. It is a quality activity that allows examination, reflection and potential improvement of an individual’s medical practice. This provides a combination of objective clinical and administrative data and measured peer review assessment. This research is the first of its type in Australia and will ultimately strengthen the SMPR process and improve patient safety and satisfaction. It is awaiting submission.

Early Triage of senior clinician performance concerns- improving outcomes for healthcare. (Daly M, McCormack L, Dulhunty J, Seidl I). This research is assessing the effects of a locally developed early Triage model, for the early management of senior clinician performance concerns.

The Bundaberg Emergency Response Team. (Daly M, Cleary M, McCormack L). A case review of the Bundaberg Emergency Response Team that was drafted into Bundaberg Hospital in the immediate aftermath of the eruption of the Dr Patel scandal in 2005.

International and National Presentations

Ms Michelle Winning
- ISQUA - 28th International Conference - Hong Kong

Ms Renea Collins
- 3rd Annual International Congress of Cardiology, Beijing China

Dr Peter Lee
- International Forum on Quality & Safety in Healthcare, Amsterdam
- Australia Health Care Week, Sydney
- ISQua 28th International Conference
The department has maintained an active research program. Numerous drug utilisation studies have been performed in collaboration with Pharmacy. Two large studies, one in patients with gram negative sepsis treated with gentamicin and another in patients with major haemorrhage treated with Factor VII, were completed during the year.

Apart from providing a state-wide analytical service for tacrolimus, the department has maintained its involvement in the development and provision of drug assays for immunosuppressant drugs and remains a national and international reference centre. Collaborations arising from this facility include research in the fields of transplantation, haematology, renal medicine, gastroenterology, clinical toxicology, endocrinology, hypertension, cardiology, pharmacy and industry. A collaborative research agreement with Waters Corporation involves the measurement of endogenous steroids utilising the latest mass spectrometry technology. A highly accurate aldosterone assay has been developed. Collaborative studies have been conducted on hepcidin, a novel iron biomarker, after the development of a new liquid chromatography – mass spectrometry (LC-MS) method in the laboratory.

Associate Professor
Peter Pillans
Director

Research Activities


Improved patient outcomes through dosage individualisation of the newer immunosuppressant drugs (Staatz CE, Tett SE, Taylor PJ, Johnson DW, Lynch SV).


Development of LC-MS assays of clinical significance and utility. (Collaboration with Waters Corporation). Taylor P, Cooper D.


Off-label use of Factor VIIa in major haemorrhage. (Donovan P, Iedema J, Pillans P).

Awards and Prizes

Mr Paul Taylor

» Best Oral Presentation Award (The Roche Diagnostics Australia), at the Australian Association of Clinical Biochemist 49th Annual Scientific Conference.

National and International Presentations

Mr Paul Taylor

» 49th Annual Scientific Conference of the Australasian Association of Clinical Biochemists. Brisbane

Major Grants and Financial Support

Total NHMRC Funding: $155,250
Year 2011 was a very successful year for The University of Queensland Dermatology Research Centre (DRC) both in getting new competitive NHMRC and other funding and by expanding the nucleus of our group by inviting the group of Dr Tarl Prow to join us. Dr Prow’s group works on novel delivery strategies for antioxidant delivery to photoaged skin, nanodermatology and the development micromedical devices for skin. Dr Prow’s group began work on his NHMRC funded study on targeted antioxidant delivery and has begun filing PCTs on two inventions. By these developments the DRC is confirm its role within the dermatology research arena in Queensland. Of significance, the work on the awarded NHMRC Project Grant has commenced and the collaboration with the Institute of Molecular Biosciences (IMB), the Queensland Institute of Medical Research (QIMR) and Associate Professor Mark Smithers’ Princess Alexandra Hospital Melanoma Unit has been strengthened. To date we have recruited close to 200 study participants with moderate to high risk melanoma patients and already published the first papers based on this NHMRC grant underlining the international and national recognition of the quality of research capable within the centre.

In October Professor H. Peter Soyer, chair of the DRC, was awarded an NHMRC Practitioner Fellowship commencing in 2012 with an appointment of 5 years. The intensive collaboration with the Diamantina Institute (DI) is flourishing and Professor Soyer will be involved in several upcoming NHMRC grants with UQDI researchers. In November, Professor Soyer together with Professor Frazer and

Professor Brown from UQDI was awarded a PAH Research Support Grant titled “A study of risk factors for squamous cell cancer”. Professor Soyer was also officially appointed a TRI member for the SOM/PAH. The ultimate vision of these ongoing activities is that the DRC becomes an integral part of the “Skin Cancer Division” at the Translational Research Institute at the PAH precinct.

The long term plan in developing a new centre of excellence in dermatology in the PAH Precinct, namely the Queensland Centre of Dermatology, has been presented as a business case and in avid discussion with key stakeholders in particular with Dr Richard Ashby, the Executive Director of PAH. The Centre has been further active in promoting research and also pilot projects in the emerging field of teledermatology. The close collaboration with the UQ Centre of Online Health (COH) is highlighted by the publication of a book edited by Professor Soyer titled “Telemedicine in Dermatology” together with Anthony Smith, the Deputy Director of the UQ COH, and by collaboration on a Centre of Research Excellence application.

Professor H. Peter Soyer
Professor and Chair,
Dermatology Research Centre
Director, Dermatology Department

Research Activities
Clinical Trials
Actinic Keratosis (AK) Surveillance Feasibility Study (Wheller L, Soyer P, Neale, Gilmore S, Saunders N, Duncan L). The study aims to determine the feasibility of using Fotofinder and Reflectance Confocal Microscopy (RCM) to document natural history of AK lesions, to identify RCM characteristics that predict progression from AK to SCC, to determine the correlation between degree of photo damage to skin and incidence of AK’s to SCC, to determine whether genetic, immunological and environmental factors influence the incidence and/or natural history of AKs and to determine the feasibility for larger prospective longitudinal cohort study.

Sixty participants are recruited from the dermatology and renal outpatients (require evidence of 2 or more AKs in their arms/hands). Book for an initial visit - includes questionnaire, RCM images on 2 AKs evident, whole body imaging (18 photos), 2 silicone impressions on the hands (dorsum) and biopsy of suspicious lesions if necessary and participant consent obtained. Final visit takes place in 3 month period after the initial visit and involves follow-up images, RCM and silicone impressions on the same sites as previously obtained. Recruitment of 45 participants so far with half having completed their initial visit as entailed. Data collection in progress and expected meeting with the Principal Investigators in the next few weeks to discuss the optimal way for data interpretation and analysis.
A study of risk factors for Squamous Cell Skin Cancer (Frazer I, Soyer P, Lambie D). The study aims to test whether virus infection on the skin contributes to the risk of developing skin cancer and also to test if the ability to mount an immune response also contributes to the risk of developing skin cancer. It is anticipated to have 200 participants for this project. Participants are likely to be recruited from dermatology and renal outpatients at the PAH and possibly Prince Charles Hospital as well (ethics under way). Patients come for their initial visit and are required to complete a questionnaire and if then biopsies are taken of suspected lesions. Results of the biopsies taken at PAH are followed up by the research coordinator to ensure that any skin cancers that require further management are referred accordingly to the dermatology or renal departments or to the participant’s private General Practitioner or dermatologist. Blood sampling may also be obtained during the visit for testing of immunity.

Consensus is still being obtained on the extraction of the DNA/RNA and which unit is primarily responsible for this process. Biopsies taken from the AK study patients (who overlap with this study) are being used to evaluate this process. Consensus on blood sampling will also get finalised at present. Once these are established, the project will start recruiting at full swing.

Immunohistochemistry and Other Molecular Analysis of Phenotypically Characterised Equivocal Melanocytic Proliferations study (Soyer, P, Gabrielli B, Pavey S, Sturm R, Smithers M, Lambie D, Douglas M, Banan P). The aim of the study is to validate potential novel bio-markers unique to various phenotypically characterized naevi and stages of melanoma progression. We will use the combined techniques of dermoscopy, reflectance confocal microscopy, IHC, microarray, and sequencing data to define which changes in the naevus appearance observed by in situ imaging on the patient are directly related to which genetic alterations; and how these predict for progression to melanoma.

Description: Suspicious melanocytic tissue samples will be assessed and characterized using dermoscopy and reflectance confocal microscopy prior to being excised. Excised melanocytic lesions will then be processed for routine histopathology, and will initially be examined by a pathologist for clinical evaluation. The remaining tissue material will then be available for biochemical analysis (IHC and Microarray).

Ongoing longitudinal study in progress which started in September 2010. A total of 45 samples have been sent to tumour bank so far. Amongst these 45 samples, 9 were sent in 2010 and 27 sent in 2011 and 9 sent this year (2012).

PNI Data Registry: Ongoing project co-ordinated by the Queensland Perineural Research Group to establish an up to date registry of management, outcomes and surveillance of patient’s diagnosed with skin cancer complicated by perineural invasion in Queensland.

The study aims are: to identify outcomes relating to perineural invasion in BCC, SCC, keratoacanthoma (KA) and melanoma; specifically to quantify outcomes of local recurrence, distant metastasis and disease specific death due to BCC, SCC, KA and melanoma with PNI; to record treatment modalities for BCCs, SCCs, KAs and melanomas with PNI; to compare and contrast outcomes (in terms of local recurrence, distant metastasis and disease specific death) between treatment modalities; to define an evidence-based, risk adapted treatment algorithm for skin cancer with PNI, based on outcome and treatment modality findings; to evaluate histopathological specimens of PNI from a broad spectrum analysis including mathematical modeling.

Patients diagnosed with perineural invasion are approached for inclusion in the study and upon consenting have their relevant details input into the secured web-based registry. The treating specialists generally follow up with their PNI patients every 6-12 months, and a follow up proforma will be provided to the registry coordinator at these visits. The registry will run for a minimum of 5 years looking to extend to 10 years.

Status: Ongoing collaboration with private specialists to enhance patient recruitment. Continued updating and addition of new patients to the registry as more specialists become involved. Improvement of the data registry to better reflect treatment modalities in use and outcomes observed.

Naevus Surveillance using Total Body Photography and Dermoscopy (Smithers M, Green A). The aims of the study are to fully characterise the elements and timing of morphological changes associated with the metamorphosis from naevus to melanoma and to identify characteristics associated with the normal life cycle of a naevus.

Full body photography with individual dermoscopic naevus images recorded and morphology classified and described. Follow patients up twice a year for 3 years with re-imaging of all naevi and documenting any dermoscopic changes arising at each appointment. Ongoing longitudinal study in progress.

Pigmentation Genotypes (MC1R) and Phenotypic Correlations with dermoscopic naevus types and distribution (Sturm R, Duffy D, Smithers M). The aims of the study are to examine the relationship between genes, the dermoscopic characteristics of melanocytic naevi and melanoma risk; to characterise genes that influence the probability of an individual carrying particular naevus subclasses.
Full body photography with individual dermoscopic naevus images recorded and morphology classified and described. Digital photographs of hair and eyes to document pigmented phenotype, and skin pigmentation measured with spectrophotometer. Saliva samples collected for genotyping.

Status: Ongoing longitudinal study in progress.

Targeted Redox Therapy for Photoageing Prevention and Treatment (Prow T, Roberts M). Our goal is to target natural reduction/oxidation (redox) modifiers, i.e. niacin and sulforaphane, to the skin deeper layers to treat photoageing using physically enhanced delivery. Niacin and sulforaphane have been separately shown to prevent UV induced skin cancer. Niacin is a NADH precursor used to drive cellular DNA repair, collagen repair and antioxidant responses found in meat, beans and dairy. Sulforaphane is a natural extract of broccoli sprouts that induces antioxidant protein expression. These drugs have the potential to facilitate cellular repair and decrease oxidative stress (ROS), thereby underpinning our metabolic approach to preventing and treating sun damaged skin.

We will investigate a novel means of physically enhancing the topical delivery of antioxidants with elongate microparticles in excised skin and in volunteers.

We have found that our novel delivery technology improves topical delivery by 15 fold in human skin. We are running excised skin and volunteer delivery experiments in parallel.

Characterisation of Striae Distensae with Confocal Microscopy (Gilmore S, Rolfe H). The aim of the study is to determine the confocal microscopic features of established striae distensae. In addition to this characterisation, we aim to use the confocal microscope to detect dermal subclinical changes in early disease. Cohorts of healthy female subjects with established stria alba are being investigated using confocal microscopy.


Genome-wide Investigation of the Phenotypic Underpinnings of Psoriasis (Gilmore Stephen, Saunders, Nick). This study aims to uncover regulatory elements, perhaps micro RNAs or other non-coding RNAs, that play significant roles in the inherited predisposition to psoriasis. A large body of research has shown that the phenotypic expression of psoriasis is due to the aberrant behaviour of keratinocytes, leading to hyper-proliferation of the epidermis, and the aberrant behaviour of immunocytes, leading to dermal inflammation. Recent work has identified a micro RNA that may be involved in the regulation of gene expression in both keratinocytes and immunocytes. Work of this kind has motivated us to seek possible regulatory elements that may predispose to the psoriatic phenotype.

During the study we will examine, using either conventional micro-array chips, or the newer deep sequencing technology, normal-looking skin from psoriatic subjects, and normal-looking skin from normal controls.

All samples have been collected; tissue and bioinformatic analyses has begun in early 2011.

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National and International Presentations

Associate Professor Stephen Gilmore
- Artificial intelligence in melanoma recognition, 44th Annual Scientific Meeting of the Australasian College of Dermatologists, Perth

Dr Zac Boyce
- The remote assessment of melanocytic skin lesions: a viable alternative to face-to-face consultation. Successes and Failures in Telehealth and 2nd Annual Meeting of the Australasian Telehealth Society, Brisbane

Professor H. Peter Soyer
- Dermoscopy of naevi and melanomas. PAH Nephrology Department Friday Lunchtime Research and Journal Club Program.
- Emergency imaging technologies for the diagnosis of melanoma. GP Update Evening, UQ School of Medicine, Ipswich and UQ Health Care, Ipswich
- Melanoma diagnosis and treatment guidelines. The Inaugural Darling Downs Skin Cancer Conference, Toowoomba
- Dermoscopy. The Inaugural Darling Downs Skin Cancer Conference, Toowoomba
- Technology in Dermatology – a 5 year reflective. PAH Week, Brisbane
- Emerging imaging technologies: confocal microscopy, teledermatology and the iPhone. UQ Skin Cancer Conference, Hamilton Island
Clinical presentation, dermoscopy and histology mismatch. UQ Skin Cancer Conference, Hamilton Island
Is histology the gold standard? Australasian College of Skin Cancer Medicine Annual Scientific Meeting, Gold Coast
Clinicopathologic correlation of melanocyte proliferations. 32nd Australasian Dermatopathology Society Annual Conference, Adelaide
The basic diagnostic procedures in dermoscopy. 38th Society for Skin Structure Research meeting, Tokyo, Japan
International short course on dermoscopy, Graz, Austria
Telemedicine and its impact on health care delivery. SCCANZ Skin Cancer Conference, Gold Coast
Teledermatology workshop at Victoria Skin & Cancer Foundation, Melbourne
The Australasian College of Dermatologists Skin Cancer Management Workshop: An Introduction to Dermoscopy in General Practice, Sydney
Advanced Dermatopathology Course: Dermoscopic/Histopathologic

Correlations in Melanocytic Proliferations. 22nd World Congress of Dermatology, Seoul, Korea
Dermatooncology Course: Clinical Exam, Dermatoscopy and Teledermatology in detecting early melanoma. 22nd World Congress of Dermatology, Seoul, Korea
Teledermatology Symposium: Mobile Teledermatology. 22nd World Congress of Dermatology, Seoul, Korea
Dermoscopy for the Experienced Course: What’s New in Dermoscopy. 22nd World Congress of Dermatology, Seoul, Korea
The Value of Dermatoscopy Workshop: Whither Dermatoscopy. 22nd World Congress of Dermatology, Seoul, Korea
Dermatology for Beginners Course: Introduction and Principles of Dermoscopy. 22nd World Congress of Dermatology, Seoul, Korea
Update on Skin Cancer Detection. 10th National Conference of the Australian Dermatology Nurses’ Association, Perth
The Morphological Universe of Melanocytic Proliferations. Melanoma Summit, Wellington, New Zealand
Intense Dermoscopy/Histology Workshop. Australasian College of Skin Cancer Medicine, Brisbane
Advanced Dermoscopy Course: The role of dermatopathology in the evaluation of equivocal dermoscopic lesions. American Academy of Dermatology 69th Annual Conference, New Orleans, USA
Dermoscopic naevus pattern in high risk melanoma patients and their correlation with MC1R Alleles. Joint Meeting of the International Dermoscopy Society, the International Society for Digital Imaging of the Skin, and the International Confocal Working Group, New Orleans, USA
The Department of Diabetes and Endocrinology was fortunate to have some new staff join its ranks in 2011. Professor Ho, Chair of Centres for Health Research and Senior Endocrinologist adds to the Department his international reputation in acromegaly and growth hormone research. Professor Ho’s exceptional PhD student, Dr Paul Lee, also moved to the PAH and has established a laboratory to continue ground breaking research in brown fat. Paul has now left for a post-doctoral position at the NIH, in the United States and much of the clinical aspects related to this work will be undertaken by Dr Christina Jang. We also saw the arrival of Associate Professor Warrick Inder, Senior Endocrinologist from St. Vincent’s Hospital in Melbourne. Associate Professor Inder’s research interests are in the hypothalamic pituitary axis and steroid replacement therapy.

The telephone linked care project, assessing a computer based programme with voice recognition to assist patients in self-management of diabetes concluded its 12 month follow-up, hence analysis and writing up of data are now in progress. Through Dr Trisha O’Moore-Sullivan, links with the CCRE assessing cardiovascular abnormalities in obesity and diabetes are maintained as well as assessing interventions to address insulin resistance in fatty liver disease. Associate Professor Russell maintains a productive collaboration with Professor Nathan Efron (Queensland University of Technology) and Professor Rayaz Malik (Manchester, UK) in the LANDMark Study, a 5 year follow-up study assessing novel ophthalmic markers of peripheral neuropathy.

Diabetes and Endocrinology

Associate Professor Anthony Russell
Director

Research Activities

Clinical Trials

Diestrogens and the Metabolic Process: Regulatory interaction with the GH-IGF-system in health and disease. (Ho K). Oestrogens play a key role in fat metabolism. Oestrogen-based drugs are among the most widely used medications. And their use may predispose to the development of fatty liver disease and obesity. This project investigates the metabolic consequences of oestrogen-based treatment to advocate and develop safer treatments.

The Physiology of Brown adipose tissue in adult humans. (Ho K). This project sets out to discover how to stimulate the growth and activity of brown fat in humans. Brown fat burns energy in contrast to white (normal) fat which stores energy. This project develops the activation of brown fat as a novel approach for the treatment of obesity.

CRE in Improving Quality and Safety at the interface between primary and secondary level care. (Jackson C, Mitchell G, Askew D, Scott I, Foster M, Dart J, Hollingworth S, Davies P, Russell A). This study is an expansion of the new model of care assessing management of diabetes in the community by up-skilled GPs with the support of an Endocrinologist. It is expanding the model into the areas of palliative care and heart failure.


Ophthalmic markers in diabetic neuropathy. (Efron N, Boulton A, Malik R, Prins J, Russell A). This study is assessing corneal nerve abnormalities, retinal nerve fibre thickness and peripheral field defects as markers of diabetic peripheral neuropathy. It is 3 years into a 5 year longitudinal study with good retention rates.

Telephone Counselling For Maintenance Of Physical Activity, Weight Loss & Glycaemic Control In Type 2 Diabetes. (Eakin E, Marshall A, Dunstan D, Reeves M, Graves N, Russell A and O’Moore-Sullivan T). This study continues to follow-up patients with Type 2 diabetes who have received telephone counselling to determine its effectiveness in self-management of lifestyle factors.
Other Research

Utilisation of a Day 5 metyrapone short synacthen test for assessment of the hypothalamic pituitary adrenal axis post pituitary surgery. (Cuneo R, Duncan E and Russell A). Recruitment of patients continues to determine whether patients require steroids on discharge from hospital rather than the traditional retesting interval of 6 weeks post surgery.

SCALE study: Assessment of Liraglutide for weight loss in obese non-diabetic individuals. (Russell A). The recruitment of the trial is now completed.

GSK trial. Assessment of a GLP-1 agonist in patients with Type 2 diabetes. (Russell A). The trial is now completed.

Observational Programme to assess Somatuline Autogel in the treatment of Acromegaly. (Russell A). The recruitment of this trial is now completed.

Awards and Prizes

Professor Ken Ho

* Senior Plenary Award, Endocrine Society of Australia

Major Grants and Financial Support

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National and International Presentations

Professor Ken Ho

* Consensus Guidelines, Complications in Acromegaly, Pituitary Society, London, United Kingdom
* Management Forum on Opiates and Neuroendocrine Dysfunction, The US Endocrine Society, Boston, USA
* Moderator, Clinical Practice Guidelines on Pituitary incidentaloma, The US Endocrine Society, Boston, USA
* GH in Sport, 12th International Pituitary Congress, Boston, USA

Associate Professor Warrick Inder


Associate Professor Anthony Russell

* ADEA State Conference. “Partnerships in diabetes”. Novotel Hotel, Brisbane.
* Eli Lilly Directions in Diabetes (National meeting of Endocrinologists). Hilton, Sydney. Management of Steroid Induced Diabetes

Awards and Prizes

Professor Ken Ho

* Senior Plenary Award, Endocrine Society of Australia

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The University of Queensland Diamantina Institute’s central mission is to translate scientific discoveries into practical outcomes for patients. Our focus is to prevent, diagnose and treat chronic diseases such as cancers, autoimmune diseases such as inflammatory arthritis, and infection.

As newly appointed Director, it was particularly gratifying to note that UQDI researchers were awarded more than $4.6M in new funding by the National Health and Medical Research Council and the Australian Research Council, achieving grant successes well above the national average. I congratulate Dr Ray Steptoe, who was awarded a prestigious Australian Research Council Future Fellowship; Associate Professor Nick Saunders for the award of a Cancer Council (Queensland) Senior Research Fellowship; and Dr Angus Harding, who was awarded a UQ Foundation Research Excellence Award.

This year also saw development of the UQ Centre for Clinical Genomics (UQCCG), one of the largest genomic centres in the Southern Hemisphere, rivalled only by a sister centre in China. UQCCG, a joint initiative between UQ and UQDI, has resulted in a major research facility for the University, housing world-leading infrastructure in genomics and bioinformatics and supported by specialist staff trained in genomic medicine. It was particularly gratifying to note that UQDI’s international reputation for research excellence in genomic medicine resulted in the recruitment of Professor Peter Visscher, one of the world’s leading authorities in quantitative genomics, whose work concentrates on understanding the influence of genetic changes at a population, rather than individual, level.

Research Activities

Research at UQDI is clustered into research themes, each with its own strategic direction and research focus:

- Autoimmunity
- Cancer Biology
- Epithelial Cancer
- Melanoma

The epithelial cancer division aim is to develop effective Immunotherapy for epithelial cancers and chronic viral infections of skin. The objectives of the current research are to: define how local inflammation influences the local development of effector cytotoxic T cells; develop and trial effective immunotherapy for persistent HPV infection and associated tumours, determine the role of papillomaviruses and polyomaviruses in squamous skin cancers.

Our recent preclinical research work has demonstrated that 1) Activated NKT cells influence the local ability of effector T cells to kill epithelial targets; 2) These cells achieve this via an IFN-γ dependent mechanism and the IFN-γ responding cells appear not to be bone marrow derived, 3) activation of NKT cells is likely via caspase cleaved IL-18, which is produced as a result of inflammasome activation in an as yet undefined cell type, activated in hyperproliferative epithelium, 4) local inflammation in the skin induced by Toll Like Receptor activation promotes local trafficking of effector memory T cells and promotes local effector T cell function.

Thus, the nature and balance of the local pro-inflammatory stimuli seems to determine the eventual effectiveness of cytotoxic T cell precursors induced by immunotherapy or by natural antigen presentation.
**Clinical Trials**

A recent clinical trial (Jardine et al, in press, Human Vaccines) has shown that for chronic viral infection of skin, local inflammation is a determinant of the effectiveness of systemically administered immunotherapy for genital warts, as would be predicted from the preclinical research.

*A Multicentre uncontrolled extension study evaluating the long-term safety and efficacy of SAR153191 in patients with ankylosing spondylitis.* (Pr. Brown, Matt). This is a trial of a novel anti-IL6 treatment for ankylosing spondylitis which commenced in late 2009.

*A Multicentre study of the efficacy and safety of adalimumab in subjects with axial spondyloarthritis.* (Pr. Brown, Matt) This is a trial of the TNF-antagonist adalimumab in preradiographic ankylosing spondylitis, which commenced in late 2009.

*A randomised, controlled double blind study to evaluate the effects of simvastatin in reducing atherosclerosis in early rheumatoid arthritis.* (Pr. Thomas, Ranjeny, White D, Pahau H). The aims of this study are to examine the effectiveness of cholesterol-lowering medicine in atherosclerotic disease progression in rheumatoid arthritis. Patients with rheumatoid arthritis symptoms beginning within the past 12 months, and who have no history of cardiovascular or cerebrovascular disease are eligible. Sensitive ultrasound measures of the arteries and blood tests are taken before and after treatment to assess the progression of disease. Patients are randomly allocated to receive cholesterol-lowering therapy with either simvastatin or no active substance (placebo) for 2 years. Ultrasound and blood measurements are taken yearly to assess progression of arthritis and atherosclerosis.

A *Phase 1 trial of rheumavax to induce antigen specific tolerance in patients with rheumatoid arthritis.* (Thomas R, White D, Vecchio P). This study aims to demonstrate that a vaccine made from a patient’s own blood cells, (known as Rheumavax) can safely modify (reduce or desensitize) the body’s immune response to a specific rheumatoid arthritis antigen. The trial is taking place at the Princess Alexandra Hospital, Brisbane (PAH) and is a co-operative effort between clinicians and researchers at this hospital and at the University of Queensland. Dendritic cells are a type of white blood cell. Their role in the immune system is to switch other cells, known as T cells, on to attack mode. This is achieved by presenting antigens to T cells. Antigens are substances that the body normally recognises as foreign. An example of an antigen to which we are all exposed is flu antigen. There is considerable evidence that dendritic cells are involved in diseases such as rheumatoid arthritis and other autoimmune diseases. In these disease states, the body’s immune system starts attacking its own tissues/organs, because T cells recognise and respond to self-antigens. The investigators are testing a new way to reduce immune responses to antigen using dendritic cells. Rheumavax is a vaccine made from modified dendritic cells mixed with rheumatoid arthritis antigens. A drug called Bay11-7082 is added to Rheumavax to modify the way the dendritic cells interact with T cells with the aim of reducing the immune response to RA self–antigens in the body. Enrolment in this trial is closed.

*A randomised, placebo controlled, double blind study to evaluate the effects of resveratrol supplementation on insulin resistance, hepatic and abdominal fat deposition, systemic inflammation, oxidative stress, antioxidant activity, gene expression and plasma metabolic markers in patients with non-alcoholic fatty liver disease.* (Chachay V, Prins J, Macdonald G, Hickman I, Whitehead J, Martin J, Ferguson M, Kirkpatrick C, O’Moore Sullivan T, Cowin G, Thomas G, Franklin M). The aim of this study is to investigate the therapeutic potential of resveratrol, a polyphenol found in the skin of grapes, red wine, berries and peanuts, in the metabolic dysregulations characteristic to non-alcoholic fatty liver disease (NAFLD). The prevalence of NAFLD is 35% in the general population but found almost universally in obese patients with type 2 diabetes. There is currently no treatment other than recommending weight loss, and addressing individual risk factors.
Resveratrol supplementation has shown promising results in animal models of NAFLD. Resveratrol improved a variety of risk factors such as insulin resistance, liver fat content, inflammation, and shifted the gene expression profile towards that of animals who were exercised and given an energy restricted diet.

**Awards and Prizes**

Professor Matt Brown was recognized by The University of Queensland as one of its leading researchers based on research performance and was also awarded a Senior Principal Research Fellowship from the National Health & Medical Research Council.

Professor Ian Frazer was elected a Fellow of the esteemed Royal Society of London. The Royal Society, a 350-year old scientific academy, encompasses the most distinguished scientists from across the globe. Current and previous Fellows include Michael Faraday, Stephen Hawking and Isaac Newton.

Dr Ray Steptoe was awarded a prestigious Australian Research Council Future Fellowship that will allow him to continue to work on new therapies for diseases of immune regulation and tolerance.

Associate Professor Nick Saunders was awarded a Cancer Council Queensland Senior Research Fellowship to continue his research into the early diagnosis and treatment of epithelial cancers.

Dr Angus Harding was awarded a University of Queensland Research Foundation Excellence award for his research into the cause and cure of brain cancer.

As a measure of recognition of innovation and translation, Professor Ranjeny Thomas was awarded a finalist in the Australian Innovation Challenge for her ground-breaking research that has resulted in the world’s first clinical trial for a vaccine against rheumatoid arthritis. Finalist, Health Section, Australian Innovation Challenge

UQDI’s SPARQ-ed Coordinator, Dr Peter Darben, was recognised as part of National Science Week by being named as a winner of the 2011 Peter Doherty Awards for Excellence in Science and Science Education.

**Dr Ray Steptoe**
- Runner-up, UQDI Publication of the year
- Australian Research Council Future Fellowship

**Associate Professor Nicholas Saunders**
- Cancer Council Queensland Senior Research Fellowship

**Dr James Wells**
- UQ Early Career Researcher grant

**Major Grants and Financial Support**

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</table>
In the middle of 2011 Professor Coman retired from his position as Chairman and Director of the Ear Nose Throat (ENT) Department and was appointed Emeritus Professor with the University of Queensland. Associate Professor Ben Panizza was appointed Director of Otolaryngology, Head and Neck Surgery at the Princess Alexandra and Logan Hospitals. Associate Professor Chris Perry was appointed Chairman of the Multidisciplinary Head and Neck Clinic at the Princess Alexandra Hospital.

In July 2011 the ENT Department held the annual Global Postlaryngectomy Cadaver Demonstration Course at PAH and Prince Charles Hospital run by Professor Frans Hilgers for the Princess Alexandra Hospital and The University of Queensland. Professor Coman held a multidisciplinary symposium on Diagnosis & Management of Throat Cancer in the Auditorium at the PAH. We held two cadaver dissection courses – Head & Neck and Rhinoplasty both held at the University of Queensland. Our fourth Thyroid and Parathyroid Disease Conference was run by Chris Perry at Sheraton Noosa in November and once again it was highly successful with 130 registrants with five overseas invited surgeons and a strong local faculty. Associate Professor Ben Panizza and Professor Danesi from Italy convened their 6th International Course on Endoscopic Approaches to the Skull Base in Nice, France. Bill Coman also ran the 9th Upover Downunder International ENT Conference in Campitello, Italy. There were 60 registrants, half from Australia and half prominent ENT surgeons from Europe and North America.

There has been established at the Princess Alexandra Hospital a Queensland Centre of Excellence for Head and Neck Cancer (QCEHNC) with a $15 Million grant received from Atlantic Philanthropies, Queensland Government and Princess Alexandra Hospital (PAH). There is an overseeing Board, Chaired by Dr Richard Ashby, Chief Executive Officer at PAH. The research undertaken will help result in novel therapeutic, diagnostic targets and in particularly immunotherapy in the management of HNSCC patients who in the past deemed inoperable. The ultimate aim of immunotherapy in HNSCC is to develop a vaccine to protect those at risk. The work will also create an important baseline database of molecular pathways in HNSCC, risk factors, stimulating future projects to young surgeons and basic researchers in new novel small molecule therapies, and attracting additional sources of funding and commercialization of research results.

The PAH and Griffith University spinal regeneration study won the ‘People’s Choice’ Award for Science Excellence – the Eureka Awards of the Governor of New South Wales after being nominated as one of the three research groups for excellence in translational research. The Eureka Awards could be regarded as the top science award in the county.

Research Activities

Clinical Trials
A randomized phase II study comparing standard chemotherapy vs standard chemotherapy and immunotherapy in NPC patients with recurrent or metastatic disease (Hanna R, Moss D, Panizza B, Porceddu S). This study will continue on from the Phase 1 trials performed in association with the department.

Other Research
Development of neurotropism in cutaneous squamous cell carcinoma of the head and neck (Panizza B).

Surgery for Otitis Media in Indigenous populations. (O’Leary S, Perry C, Kong K, Coates H).
Ataxic Telangiectasia study in association with Professor Martin Lavin of the QRI, and Allan Mackay-Sim, Griffith University to grow olfactory stem cells for future drug therapy research.

Annika Anntonnson has been awarded an NHMRC grant in association with QIMR for HPV on Squamous Cell Carcinomas of the Head and Neck for $218,129 for two years.

Development of a topical macrolide solution for use in chronic airway inflammation. (Wallwork B). This project is funded by the Garnett-Passe and Rodney-Williams Foundation.

Genomic expression of cutaneous squamous cell carcinoma of the head and neck with perineural invasion (Warren T). This is a research project in collaboration between Greenslopes, PAH, QIMR and UQ.

The efficacy of EBC46 in the treatment of head and neck squamous cell carcinoma (Adams R). This is a research project in collaboration between Greenslopes, PAH, QIMR and UQ.

Anti-inflammatory and anti-biofilm effects of naturally occurring extracts in airway inflammation (Thompson M). This is a research project in collaboration between PAH, QIMR and Griffith University.

Endoscopic approaches to the skull base; Anatomical studies (Van Rompey J). This is a research project in collaboration between PAH, Georgia Health Sciences University USA and UQ.

Development of a topical macrolide solution for use in chronic airway inflammation (Allstop T).

Major Grants and Financial Support

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National and International Presentations

Associate Professor Ben Panizza

- 6th International Cadaveric Dissection Course on Endoscopic Approaches to the Anterior Skull Base, Nice, France
- 1st Trisociety Head and Neck Meeting (Australia and New Zealand / Singapore / Hong Kong), Singapore
- Australian and New Zealand Society of Paediatric Otolaryngology, Brisbane
- Visiting Professor, Medical College of Georgia, Augusta, Georgia, USA
- Guest Lecturer, Head and Neck Service, Memorial Sloan-Kettering Cancer Center, New York, USA
The department is a designated Level 6 Trauma centre. Over 45,000 patients attend the ED each a year with an admission rate of over 34%.

Research activities during the year were diverse reflecting the diverse patient population addressing access block, the aged, the patients who leave the ED before completing assessment and treatment (known as “did not waits”) and those who present with cardiac pain. Publications from 2011 as listed below also reflect the wide variety of research interests of staff and collaborating researchers.

Staff were successful in receiving funding from the Queensland Emergency Research Foundation and the Princess Alexandra Research Foundation. Thirteen peer-reviewed journal articles were published and seven post-graduate studies were underway or completed. Including in the latter are research doctoral degrees being undertaken by ED consultants.

Research continues to be a focus within the department and this was boosted in 2011 with the presence of a Nurse Researcher and the creation of the position of Academic Research Manager. The former position is funded by Queensland Health and the latter is collaboration among the University of Queensland’s School of Medicine, The Queensland Emergency Medicine Research Foundation and the Department. These two positions will facilitate research within the department and provide support to internal and external researchers.

Dr Philip Kay Director

Research Activities

*Did not waits* (Melton N). The study forms part of a master of science program determining the prevalence and characteristics of “did not wait for treatment” patients and institutions in Southeast Queensland Emergency Departments.

*BUD study* (Sinnott M, Spencer, L). The project which is being undertaken with researchers at QUT started in 2011 to develop and validate a mathematic model for the bed unit day system thereby reducing access block and improving patient access and safety.

Emergency Department Capacity Building (Sinnott, M). In order to increase the capacity for research within the Emergency Department a position of Academic Research Manager was created and competitive funding was secured for two years starting in 2011.

NICER Trial (Thom, O). This study is examining the use of a portable cardiac output monitor to monitor the effect of intravenous fluid administration in critically ill patients and potentially allow the earlier introduction of medications to support the circulation. It is currently running at The Prince Charles Hospital and Redcliffe District Hospital and will commence recruiting at Princess Alexandra Hospital soon.

EASI Study (Thom, O). Multi centre study examining the contamination of ultrasound probes in the Emergency Departments and Intensive Care units with bacteria and body fluids. Data collection complete and results are being analysed.

CREDIT (Burkett, E). The study which was completed in 2011 was a prospective cohort study of cardiac risk profile of emergency department patients with chest pain. It undertook a comparative analysis of risk stratification tools.

EDQI (Burkett, E). The study which started in 2011 is developing a quality framework for the care of older patients in the Emergency Department.

Major Grants and Financial Support

Other competitive funding: $321,755

Awards and Prizes

Ms Sarah Weber

- Best Presentation Concurrent Session in Office of the Chief Nursing Officer
- Commended Narrative Presentation in Emergency Nurses in Disaster Health Christchurch AusMAT

National and International Presentations

Ms Sarah Weber

- Passionate About Practice Conference, Brisbane
- College of Emergency Nursing Australia (CENA) Conference, Adelaide
- Australasian College for Emergency Medicine (ACEM) Spring Seminar, Launceston
In addition to maintaining its collaboration with Matt Brown’s group (Diamantina Institute) seeking genetic causes of primary aldosteronism (PA), the Centre capitalised on a United States discovery that somatic mutations in a potassium channel gene (KCNJ5) are common in aldosterone-producing adenomas removed from patients with PA by embarking on a collaborative project in this area with Dr Kevin O’Shaughnessy (UK). This has already resulted in a major paper in Hypertension and formed the basis of an NHMRC project grant application. Dr Eduardo Pimenta (UQ Senior Lecturer and Hypertension PHO) continued his PhD studies assessing the importance of salt in the development of cardiovascular and renal damage in PA, now near completion. In 2011 he published 15 scientific papers and one book chapter, commenced a PAH Research Foundation-funded project to examine the interaction of aldosterone excess and salt in causing obstructive sleep apnoea, was Clinical Researcher Award Finalist for the Queensland Health and Medical Research Awards (ASMR) and won Young Investigator Award and Best Oral Presentation at the 8th Asian-Pacific Hypertension Congress of Hypertension, Taiwan. Dr Ashraf Ahmed was awarded his PhD examining physiological and pharmacological factors affecting the aldosterone/renin ratio in screening for PA, which generated five full papers in Journal of Clinical Endocrinology and Metabolism. His work demonstrated higher ratios among women (especially during the luteal menstrual phase and those taking a popular oral contraceptive preparation) than men, and in subjects taking beta-blockers, and lower ratios in persons receiving SSRI antidepressants, as well as improved quality of life associated with aldosterone-antagonizing medication treatment in patients with PA. Finally, Professor Michael Stowasser was named 2012 Gaston Bauer Lecturer by the Cardiac Society of Australia and New Zealand.

Professor Michael Stowasser E/Professor Richard Gordon Co-Directors

Research Activities

Clinical Trials

The BP GUIDE study — assessing the value of using central BP measurements to guide treatment of hypertension (Sharman J, Stowasser M). This study is still in progress but very close to completion. It promises to have a major impact on the appreciation of the usefulness of central BP monitoring as a guide to clinical management of hypertension.

Other Research

Elucidating genetic mechanisms responsible for familial hyperaldosteronism type II and other forms of primary aldosteronism (Stowasser M, Gordon R, Brown M, Duncan E, O’Shaughnessy K, Leo P, Duffy D). Primary aldosteronism is the commonest specifically treatable and potentially curable form of hypertension and FH-II the commonest familial variety. Intensive efforts are being directed towards detecting mutations that cause these conditions.

Role of aldosterone in determining salt appetite in patients with primary aldosteronism (Pimenta E, Stowasser M, Gordon R). This study showed that aldosterone excess is associated with an increased salt appetite, and this is reversed by unilateral adrenalectomy in patients with unilateral adrenal forms of primary aldosteronism.

Effects of dietary salt in determining the severity of obstructive sleep apnoea and cardiovascular and renal damage in patients with primary aldosteronism (Pimenta E, Stowasser M, Gordon R). Recruitment is well underway and results should be available in the next few months.

Effects of physiological and pharmacological factors on the aldosterone/renin ratio, used to screen for primary aldosteronism (Ahmed A, Stowasser M, Gordon R, Taylor P, Pimenta E). This work demonstrated that the aldosterone/renin ratio (ARR) is affected by gender, phase of menstrual cycle, use of a popular oral contraceptive agent, beta-blocker treatment and treatment with SSRI antidepressants, and these factors need to be taken into account when interpreting ARR results.

Development of a semi-automated liquid chromatography–tandem mass spectrometry (LC–MS/MS) method for the measurement of plasma aldosterone and cortisol (Taylor P, Stowasser M, Gordon R, Cooper D). A major breakthrough for clinical research and management in this area, Paul Taylor’s new, rapid-throughput mass spectrometric method for measuring aldosterone and cortisol has proven highly reliable and reproducible and is being sought as a gold-standard method for aldosterone measurement by external investigators as well as becoming the standard approach for samples being used for our clinical research.

P. Hodgson J, Ludbrook J, Mangoni A, McGrath B, Nelson M, Sharman J, Stowasser M as members of the Ambulatory Blood Pressure Working Group of the High Blood Pressure Research Council of Australia. This multicentre collaboration has already led to the development of new guidelines for the use of ambulatory BP monitoring that are being widely circulated.

Phenotypic features associated with KCNJ5 mutations and their role in the development of familial and apparently non-familial primary aldosteronism (Stowasser M, Gordon R, O’Shaughnessy K). The Centre has confirmed breakthrough US findings that mutations in KCNJ5 are frequent in aldosterone-producing adenomas. In addition, we have shown that these mutations appear to be associated with larger tumors with a specific biochemical and morphological phenotype. This work should have a major impact on our understanding of the pathogenesis of PA and may lead to new treatment strategies.

Responsible genetic mutations and phenotypic diversity in familial hyperkalemic hypertension aka Gordon syndrome (Gordon R, Stowasser M, Pimenta E, Lifton R, O’Saughnessy K). This is a collaborative study with Richard Lifton’s group (USA) and Kevin O’Saughnessy’s group (UK). Lifton has already published on two new mutations (in CUL3 and KLHL3) causing Gordon syndrome, which was named after our Centre’s founder and current Co-Director, Richard Gordon, a co-author on that paper.

Awards and Prizes

Dr Eduardo Pimenta
- Young Investigator Award, Asian-Pacific Congress on Hypertension
- Best Oral Presentation Asian-Pacific Congress on Hypertension

Mr Paul Taylor
- AACB Roche Oral Presentation Prize, Australian Association of Consultant Biochemists

Professor Michael Stowasser
- Gaston Bauer Lecturer, Cardiac Society of Australia and New Zealand

Major Grants and Financial Support

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National and International Presentations

Professor Michael Stowasser
- European Congress of Endocrinology, Rotterdam, Netherlands
- 2nd Progress in Primary Aldosteronism Conference, Munich, Germany
- 21st International Congress of Clinical Chemistry and Laboratory Medicine, Berlin, Germany
- Australasian Renin Academy, Cardiac Society of Australia and New Zealand, Perth
- 8th Asian-Pacific Congress on Hypertension, Taipei, Taiwan
- Symposium for the Australian Association of Clinical Biochemists (New South Wales) and Hunter Area Pathology Service, Newcastle
- 33rd Scientific Meeting of the High Blood Pressure Research Council of Australia, Perth

Dr Eduardo Pimenta
- National British Hypertension Society, Annual Scientific Meeting, Cambridge, United Kingdom
- High Blood Pressure Research/American Heart Association and Inter-American Society of Hypertension Scientific Sessions, Orlando, United States of America
- 8th Asian-Pacific Congress on Hypertension, Taipei, Taiwan
- 33rd Scientific Meeting of the High Blood Pressure Research Council of Australia, Perth

Mr Paul Taylor
- 49th Annual Scientific Conference of the Australian Association of Consultant Biochemists, Sydney
The Department of Gastroenterology and Hepatology’s research has a strong and growing track record in the field of Gastroenterology & Hepatology. The Department has a strong interest in translational research that is particularly well established in the field of liver disease, but is also increasing in the field of luminal gastroenterology. The latter is complemented by important clinical Research and Development that has already changed departmental clinical practice.

Research wise, the strong and long established focus on the pathophysiology of liver disease has continued. In the field of endoscopy and interventional endoscopy the Department has contributed to pioneering new treatment modalities with regard to the endoscopic treatment of large polyps (that previously required surgical intervention), and also the treatment of Barrett’s neoplasia of the oesophagus. An emerging new field is the role of immune activation for the manifestation of functional gastrointestinal disorders. Another important area of research is the development of quality and safety in the delivery of services. A project conducted in 2011 in relation to this will be presented this year at the American Gastroenterology Meeting along with a number of other projects.

The research conducted by members of the Department was best reflected by the inaugural research forum held in July 2011 which was extremely successful with 23 oral presentations. It is hoped to make this an annual event. In addition, the reputation of the Department has attracted overseas students who contributed significantly to our ongoing investigations.

A live endoscopic workshop was hosted by the Princess Alexandra Hospital Endoscopy Unit on 14th and 15th September as part of Australian Gastroenterology Week 2011. The event was convened by Dr Luke Hourigan and Dr Saurabh Gupta. The international faculty included Dr Nagi Reddy (India) and Dr Paul Fockens (Netherlands). Twenty one cases were discussed live with a panel and audience in the auditorium at the Brisbane convention centre. This was followed by expert demonstration of diagnostic and interventional endoscopic techniques assisted by PA endoscopy nursing staff. Our nursing staff were outstanding and demonstrated a high level of skill and composure. The endoscopic workshop was a great success. It was well received by the conference delegates. PA Endoscopy was congratulated by the Gastroenterology Society of Australia. The Princess Alexandra Endoscopy Unit would again like to thank PACU, Radiology, Anaesthetics and BTS for their valued support throughout this event.

Key achievements for the year include a number of awards: Dr Terrance Tan was awarded the Young Investigator Award by the Gastroenterological Society of Queensland at the 15th Annual Coolum Update in 2011, and Dr Graham Rich was awarded Young Investigator Award – Clinical Science by the Gastroenterological Society of Queensland. Victoria Gadd was a Young Investigator Award Finalist at the Coolum meeting of the Gastroenterological Society of Queensland and Dr Michelle Melino was a Young Investigator Award Finalist at the Australian Gastroenterology Week. Dr Elizabeth Powell, Director of the Centre for Liver Disease Research was awarded a professorial promotion.

Professor Gerald Holtmann
Director

Research Activities

Clinical Trials

Non-invasive assessment of hepatic steatosis by magnetic resonance imaging (Magnetic Resonance Imaging (MRI)) and spectroscopy (MRS).

The pharmacogenetics of drug induced liver injur. (Martin J, Powell E, Horfall L).
Other Research
The role of the gastrointestinal tract microbiota and chronic infections in irritable bowel syndrome (Holtmann G & Polkinghorne A).


Factors affecting the progression of liver disease and response to treatment. (Powell E, Jonsson JR, Clouston AD).


Awareness and opinions of non-alcoholic fatty liver disease by hospital specialists. (Powell E, Bergqvist C-J, Skoien R, Horsfall L, Clouston A, Jonsson J).

Awards and Prizes
Dr Graham Rich
- Young Investigator Award, Clinical Science, Research Presentation

Dr Richard Skoien

Dr Bradley Kendall
- Sydney Endoscopy Symposium, Sydney
- Gastroenterological Society of Queensland, Brisbane
- Australian Gastroenterology Week, Brisbane
- Beacon International Consortium Meeting, Brisbane

Professor Gerald Holtmann
- Vietnam Society of Gastroenterology, Current Management of Reflux Disease, Vietnam

Major Grants and Financial Support

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National and International Presentations

Professor Elizabeth Powell
- 21st Conference of the Asian Pacific Association for the Study of the Liver
  Postgraduate Course - 3 plenary lectures. Bangkok, Thailand
- Liver Down Under, Perth

Dr Richard Skoien
- ALA Hepatology and Luminal Research Workshop. Kiama
- Australian Rheumatology Association (Queensland) Annual Scientific Meeting, Gold Coast

Dr Bradley Kendall
- Sydney Endoscopy Symposium, Sydney
- Gastroenterological Society of Queensland, Brisbane
- Australian Gastroenterology Week, Brisbane
- Beacon International Consortium Meeting, Brisbane

Professor Gerald Holtmann
- Vietnam Society of Gastroenterology, Current Management of Reflux Disease, Vietnam
Haematology

2011 has been a year of consolidation as well as planning ahead to be an academic haematology department in preparation for the opening of the Translation Research Institute. Research is a continuing and integral part of our work with a broad research portfolio ranging from laboratory based translational research to clinical trials. Each of our research areas has made further progress. There are research projects in the areas of leukaemias, lymphomas, amyloidosis, myeloma and other blood cancers. Achievement in research remains outstanding as judged by the recognition awards for our staff, a provisional patent for novel therapy in Chronic Lymphocytic Leukaemia (collaboration between PAH and the University of Queensland Diamantina Institute), the number open clinical trials 29 with 16 closed to accrual, 21 publications, invited talks at national and international level. The standing of the department internationally is confirmed by the number of international visiting experts.

Gill Devinder
Director

Research Activities

Clinical Trials

Clinical trials remain a major part of our activity and continue to thrive with increasing emphasis on Phase I and II trials as well as investigator initiated trials. PAH is one of the major contributors in Australasia to the ALLG Co-operative trial Group. There are 29 trials open and actively recruiting patients.

ALLG LS14 EBV Immune and viral biomarkers as tools to assist clinical outcomes in patients with EBV-associated lymphomas. (Gandhi, M). This trial is currently open to Accrual (2 participants recruited in 2011).

CC-5013-DLC-001 A Phase 2/3 Multicenter, Randomized Open-Label Study to Compare the Efficacy and Safety of Lenalidomide (Revlimid®) Versus Investigator’s Choice in Patients with Relapsed or Refractory Diffuse Large B-Cell Lymphoma (Gill, D). This trial is currently Open to Accrual (0 participants recruited in 2011).

CC-5013-CLL-008 / ORIGIN A Phase 3, Multicenter, Randomized, Open-Label, Parallel-Group Study of the Efficacy and Safety of Lenalidomide (Revlimid®) versus Chlorambucil as First-Line Therapy for Previously Untreated Elderly Patients with B-Cell Chronic Lymphocytic Leukaemia. (ORIGIN), (Gill, D). This trial is currently open to Accrual (0 participants recruited in 2011).

CC-4047-MM-003 A Phase 3, Multicenter, Randomized, Open-label Study to Compare the Efficacy and Safety of Pomalidomide in Combination with Low-Dose Dexamethasone versus High-Dose Dexamethasone in Subjects with Refractory or Relapsed and Refractory Multiple Myeloma (Mollee, P). This trial is currently open to Accrual (0 participants recruited in 2011).

CAM1107E2401 / ORIGIN A Phase 3, Multicenter, Randomized, Open-label Study to Compare the Efficacy and Safety of Lenalidomide (Revlimid®) versus Chlorambucil (GClb), Rituximab + Chlorambucil (RClb) or Chlorambucil (Clb) Alone in Previously Untreated CLL Patients Not Eligible for Fludarabine-Based Chemoimmunotherapy. (BO21004) (Marlton, P). This trial is currently open to Accrual (1 participant recruited in 2011).

Bone Loss Study Glucocorticoid-Induced Bone Loss in Lymphoma (Henden, A). This trial is currently open to Accrual (0 participants recruited in 2011).

PTLD 1 Treatment of Patients with Post-Transplant Lymphoproliferative Disorder (PTLD) with a Sequential Treatment Consisting of Anti-CD20 Antibody Rituximab and CHOP + GCSF Chemotherapy (Mollee, P). This trial is currently open to Accrual (0 participants recruited in 2011).

PTLD 2 Treatment of Patients with Post-Transplant Lymphoproliferative Disorder (PTLD) with a Sequential Treatment Consisting of Anti-CD20 Antibody Rituximab and CHOP + GCSF Chemotherapy (Mollee, P). This trial is currently open to Accrual (0 participants recruited in 2011).

CC-5013-MDS-005 A phase 3 Multicentre, randomized, double blind placebo controlled, parallel-group study to compare the efficacy and safety of Lenalidomide versus placebo in subjects with transfusion- dependent anemia due to low IPSS low or intermediate-1 risk Myelodysplastic syndromes without deletion 5Q(31) and unresponsive or refractory to erythropoiesis-stimulating agents. (Mills, T). This trial is currently open to Accrual (0 participants recruited in 2011).

ALLG MDS4 A Randomised Phase II Study Comparing the Efficacy of 5azacitidine Alone versus Combination Therapy with Lenalidomide and 5azacitidine in Patients with Higher Risk Myelodysplastic Syndromes (MDS) and Low Blast Count Acute Myeloid Leukaemia (AML) (Mills, T). This trial is currently open to Accrual (0 participants recruited in 2011).

ALLG MDS4 A Randomised Phase II Study Comparing the Efficacy of 5azacitidine Alone versus Combination Therapy with Lenalidomide and 5azacitidine in Patients with Higher Risk Myelodysplastic Syndromes (MDS) and Low Blast Count Acute Myeloid Leukaemia (AML) (Mills, T). This trial is currently open to Accrual (0 participants recruited in 2011).

BO21000 / GAUDI An open-label, multi-centre, non-randomised, dose-escalating phase Ib study to investigate the safety and tolerability of RO5072759 given in combination with CHOP or FC chemotherapy in patients with CD20+
B-cell follicular non-Hodgkin's lymphoma. (The GALUDI Study) (Marlton, P). This trial is currently open to Accrual (2 participants recruited in 2011).

ALLG HD8 / RATHL A Randomised Phase III Trial to Assess Response Adapted Therapy Using FDG-PET Imaging in Patients with Newly Diagnosed Advanced Hodgkin's Lymphoma (Gandhi, M). This trial is currently open to Accrual (5 participants recruited in 2011).

BDM3502 A Trial to Investigate the Efficacy of Bendamustine in Patients With Indolent Non-Hodgkin's Lymphoma (NH) Refractory to Rituximab (Wood, P). This trial is currently open to Accrual (0 participants recruited in 2011).

ARES A study to determine the incidence of aspirin resistance by Multiplex function testing in high risk patients experiencing arterial ischaemic events while taking aspirin. (Bird, R). This trial is currently open to Accrual.

ALLG CML10 / RESIST Response Post Tyrosine Kinase Inhibitor: Assessment of Sensitivity and Therapeutic Response to Next-line Therapy in CML: The Australasian RESIST Study (ALLG CML10) (Mills, T). This trial is currently open to Accrual (0 participants recruited in 2011).

ALLG CML6 / RESIDUUM An Australasian, Phase III, Multicentre, Randomised Trial Comparing First-Line Fludarabine, Cyclophosphamide and Rituximab (FCR) Chemotherapy With or Without Lenalidomide Consolidation in Physically Fit Patients with Chronic Lymphocytic Leukaemia (Gill, D). This trial is currently open to Accrual (0 participants recruited in 2011).

ALLG CLL6 / OFOCR An Australasian, Phase II, Multicentre, Randomised, Dose Intensification Study Investigating Oral Fludarabine, Oral Cyclophosphamide and IV Rituximab (ooFCVR) Tolerance in Previously Untreated Elderly (≥ 65 years old) Patients with Chronic Lymphocytic Leukaemia (CLL) (Gill, D). This trial is currently open to Accrual (0 participants recruited in 2011).

ALLG NHL24 Rituximab in Primary Central Nervous system Lymphoma. A Randomised HOVON/ALLG Intergroup Study. (Mapp, S). This trial is currently open to Accrual (0 participants recruited in 2011).

ALLG NHL21 Early Treatment Intensification with R-ICE Chemotherapy Followed by Autologous Stem Cell Transplantation Using Z-BEAM for Patients with Poor Prognosis Diffuse Large B-Cell Lymphoma as Identified by Interim PET/CT Scan Performed After Four Cycles of R-CHOP-14 Chemotherapy. (Gill, D). This trial is currently open to Accrual (1 participant recruited in 2011).

Cognition HSCT Cognition during Hematopoietic Stem Cell Transplantation (McCarthy, A). This trial is currently open to Accrual.

PNH Registry The Paroxysmal Nocturnal Hemoglobinuria (PNH) Patient Registry: "PNH Registry". (Mills, T). This trial is currently open to Accrual.

MDX1097-02 A Phase II, Open-label, Multi-Dose Study of the Monoclonal Antibody, MDX-1097, in Previously Treated Kappa Light Chain Restricted Multiple Myeloma Subjects with Stable measurable Disease (Molle, P). This trial is currently open to Accrual (0 participants recruited in 2011).

Griffith Lymphoma The Griffith University Genomics Research Centre Lymphoma Project. (Marlton, P). This trial is currently open to Accrual.

HCG Study A Pilot Study to Assess Adrenal Function after Pulsed High Dose Glucocorticoid in Cytotoxic Chemotherapy Regimens. Hypoadrenalism after Chemotherapy with Glucocorticoids (HCG). (Adams, R). This trial is currently open to Accrual.

Vitamin B CIPN A pilot clinical trial assessing the efficacy and safety of supplementation with a B complex vitamin to reduce the incidence of chemotherapy induced peripheral neuropathy in patients diagnosed with a malignancy (Vitetta, L). This trial is currently open to Accrual.

CLL Stem Cell Chronic Lymphocytic Leukaemia: Leukaemia Stem Cells and Biology. (Dill, G). This trial is currently open to Accrual.

Thrombotic thrombocytopenic Purpura (TTP) Registry (Bird, R). This registry is currently open to Accrual.

ALLG AML M14 A Programme of Development for Older Patients with Acute Myeloid Leukemia and High Risk Myelodysplastic Syndrome. (Marlton, P). This trial is currently closed to Accrual (1 participant recruited in 2011).

AP24534-10-201 / PACE A Pivotal Phase 2 Trial of Ponatinib (AP24534) in Patients with Refractory Chronic Myeloid Leukemia and Ph+ Acute Lymphoblastic Leukemia (CML) (Mills, T). This trial is currently closed to Accrual (1 participant recruited in 2011).

AMG531 An Open Label Study of AMG 531 in Severely Refractory Thrombocytopenic Subjects with Immune (idiopathic) Thrombocytopenic Purpura (ITP). (Bird, R). This trial is currently closed to Accrual (0 participants recruited in 2011).

20040209 / CLBH58902308 / PANORAMA A randomized, double-blind, phase III study of the efficacy and safety of oral panbortezomib vs placebo in combination with bortezomib and dexamethasone, in patients requiring therapy for relapsed or refractory multiple myeloma (Wood, P). This trial is currently open to Accrual (2 participants recruited in 2011.)
Orally to Subjects with Primary Myelofibrosis (PMF), Post-Polycythemia Vera Myelofibrosis (PPV-MF) or Essential Thrombocythemia Myelofibrosis (PET-MF). (COMFORTI) (Perkins, A). This study is now closed to Accrual (0 participants recruited in 2011).

CC-5013-MM-020 / FIRST A Phase III, Randomized, Open-Label, 3-Arm Study to Determine the Efficacy and Safety of Lenalidomide (REVLIMID) Plus Low-Dose Dexamethasone When Given Until Progressive Disease or for 18 Four-Week Cycles Versus the Combination of Melphalan, Prednisone, and Thalidomide Given for 12 Six-Week Cycles in Patients With Previously Untreated Multiple Myeloma Who Are Either 65 Years of Age or Older or Not Candidates for Stem Cell Transplantation. (MM-020) (NCT00689936) (Mollee, P). This study is now closed to Accrual (0 participants recruited in 2011).

CC-5013-MM-015 A Phase III, Multi-centre, Randomised, Double-Blind, Placebo-Controlled, 3-Arm Parallel Group Study to Determine the Efficacy and Safety of Lenalidomide (Revlimid) in Combination with Melphalan and Prednisone Versus Placebo Plus Melphalan in Subjects with Newly Diagnosed Multiple Myeloma Who are 65 Years of Age or Older. (Mollee, P). This study is now closed to Accrual (0 participants recruited in 2011).

CLBH589B2401 / LBHAZA A Phase Ib/II Clinical Evaluation of the Safety and Efficacy of Combining Panobinostat with 5-Azacytidine in Patients with High-Risk MDS or AML that are Unsuitable for Standard Induction Chemotherapy. (Mollee, P). This study is now closed to Accrual (0 participants recruited in 2011).

CSTI1572301 / TOPS A Randomized Open-Label Study of 400mg versus 800mg of Gleevec/Glivec (Imatinib Mesylate) in Patients with Newly Diagnosed, Previously Untreated Chronic Myeloid Leukaemia in Chronic Phase (CML-CP) Using Molecular Endpoints. (Mills, T) This study is now closed to Accrual (0 participants recruited in 2011).

CAML107A2405 / ENESTcmr An Open Label, Randomized Study of Nilotinib Versus Standard Imatinib (400/600 mg QD) Comparing the Kinetics of Complete Molecular Response for CML Patients with Evidence of Persistent Leukemia by RQ-PCR (ENESTcmr) (NCT00760877) (Mills, T). This study is now closed to Accrual (0 participants recruited in 2011).

EBV CTL Autologous EBV-specific T cells as therapy for relapsed / refractory EBV-positive lymphomas. (Gandhi, M). This study is now closed to Accrual (0 participants recruited in 2011).

C18083 / BRIGHT An Open-Label, Randomized, Multi-Center Trial of Bendamustine HCl and Rituximab (BR) Compared to Rituximab, Cyclophosphamide, Vincristine and Prednisone (R-CVP) or Rituximab, Cyclophosphamide, Doxorubicin, Vincristine and Prednisone (R-CHOP) Chemotherapy in First Line Treatment of Subjects with Indolent Non-Hodgkin’s Lymphoma (NHL). (Wood, P). This study is now closed to Accrual (4 participants recruited in 2011).

Other Research

Phase III Randomised Trial of Melphalan and Dexamethasone +/- Bortezomib in AL Amyloidosis (Goodman, Gottlieb and Booth).

AWARDS AND PRIZES

Associate Professor Maher Gandhi
- Invited to Senior Editorial Board, American Journal of Blood Research
- Research Clinical Research Fellowship (2012-2016)
- Elected Councillor to HAS – Dr Tony Mills.

National and International Presentations

Associate Professor Paula Marlon
- Highlights of ASH: Development of CLL, Brisbane
- HSANZ ASM “Core Vinding Factor AML” Brisbane
The Infection Management Services is comprised of a series of divisions including Clinical Infectious Diseases, Infection Control, Sexual Health and the Alternate Site Infusion Service. Each division of the Department provides services to the entirety of the Southern Zone of Queensland Health, except the Gold Coast.

The Department provides undergraduate and postgraduate teaching in all areas of Infectious Diseases, Infection Control as well as some Microbiology to Medical, Pharmacy and Science students of the University of Queensland. Post graduate education and activities are undertaken with a range of professional groups including Doctors, Nurses, Pharmacists and Laboratory Scientists.

The research program of the Department has the following foci:
- Epidemiology of healthcare associated infection including development of new epidemiological and statistical techniques for the early detection of adverse outcomes of an infective nature. There is particular interest in both community and hospital-acquired Methicillin-resistant Staphylococcus aureus and healthcare associated yeast and fungal infections.
- The prevention of healthcare associated infections, particularly those associated with intravascular devices.
- Antimicrobial resistance patterns, particularly in major hospital pathogens.
- Antimicrobial stewardship.
- The management and prevention of Hendra virus infections.
- Pharmacokinetics and pharmacodynamics of newer antimicrobial agents.
- The management of serious staphylococcal infections.

Achievements include ongoing publications in high impact peer review journals and success in competitive grant applications.

Dr Geoffrey Playford
Director

Research Activities

Clinical Trials

A phase III, double-blind, randomised study to evaluate the safety and efficacy of BAL8557 versus a Caspofungin followed by Voriconazol regimen in the treatment of candidaemia and other invasive Candida infections. (Playford G).

Open Label Study of Isavuconazole In the Treatment of Patients with Aspergillosis and Renal Impairment or of Patients with Invasive Fungal Disease caused by Rare Moulds, Yeasts or Dimorphic Fungi. (Playford G)

Pharmacokinetics, Safety and Tolerability of Intravenous Posaconazole Solution followed by Oral Posaconazole Suspension (SCH 56592) in Subjects at High Risk for Invasive Fungal Infections (Phase 1B) (Playford G).

A Phase III Randomized, Placebo-Controlled, Clinical Trial to Study the Safety and Efficacy of V212 in Adult Patients with Solid Tumor or Hematologic Malignancy. (Playford G).

A Study of V212 in the Prevention of Shingles in Patients Receiving an Autologous Bone Marrow or Stem Cell Transplant. (Playford G).

A Phase III, Randomized, Double-Blind, Placebo-Controlled, Adaptive Design Study of the Efficacy, Safety, and Tolerability of a Single Infusion of MK-3415 (human Monoclonal Antibody to Clostridium difficile toxin A), MK-6072 (human Monoclonal Antibody to Clostridium difficile toxin B), and MK-3415A (human Monoclonal Antibodies to Clostridium difficile toxin A and toxin B) in Patients Receiving Antibiotic Therapy for Clostridium difficile Infection (MODIFY I) (Playford G).


Major Grants and Financial Support

Total NHMRC Funding: $226,950

National and International Presentations

Dr Geoffrey Playford
- Centre for Infectious Diseases and Microbiology Public Health/Sydney Institute for Emerging Infections and Biosecurity Symposium, Sydney
- Infection Control Practitioners Association of Queensland Annual Scientific Meeting 2011. Brisbane
- Mycology MasterClass V, Hamilton Island
The Intensive Care Unit (ICU) has demonstrated another successful year in the critical care research program. This is particularly evident in the ongoing involvement with the Australian and New Zealand Intensive Care Society (ANZICS) Clinical Trials Group (CTG). The Unit is the leader for the international multi-center ADRENAL trial. It has recently completed the other major multi-center sepsis trial namely the STATINS study. It is also involved in the POLAR-RCT, looking at the effect of hypothermia in patients with traumatic brain injury. The unit has also contributed to number of large-scale international pharmaceutical trials. A close collaboration with the George Institute on the POST-RENAL study resulted in the first longitudinal study of its size, investigating the outcomes of critically ill renal patients. 2011 also saw the publication of the long-awaited Decompressive Craniectomy in Diffuse Traumatic Brain Injury trial (DECRa) collaboration on an important international trial with results of considerable significance to long-term patient outcomes.

Efforts continue on the establishment of a collaborative intensive care research centre between the intensive care units at Princess Alexandra Hospital, the Royal Brisbane and Women’s Hospital; the Prince Charles Hospital and the University of Queensland. The unit has been glad to welcome an increasing amount of Allied Health involvement in research projects, specifically from the physiotherapy and social work disciplines. The strengths of the research program include the multi-disciplinary nature of the team, as well as the broad reach of research questions across the entire continuum of critical illness. This level of productivity and success is only possible because of the enthusiasm and dedication of the medical, nursing and allied health staff of the unit. The group is looking forward to another productive year.

Professor Bala Venkatesh
Director of Research

Professor Leanne Aitken
Chair in Critical Care Nursing

Associate Professor
Chris Joyce
Director of Intensive Care

Research Activities

Point Prevalence - A systematic snapshot of current practice. ANZICS CTG (Joyce C. ) (T1).

Glitazones in Bacteraemia (Kruger P, Marmet S).

Placebo Reporting (Venkatesh B, Kruger P, Sonawane R).

Septicyte - Continuous Monitoring of Patients with Severe Sepsis or Septic Shock using SepticCyte®Lab and Procalcitonin Comparator to Determine the Relationship Between Inflammatory Index and Clinical Progression Outcome Measure (Venkatesh, B).

Vitamin D Study (Venkatesh B, Krishnan A, Ochola J).

Vitamin D follow up Study (Venkatesh B, Krishnan A, Grasso A).

Acetate study (Venkatesh B, Kruger P, Davies P).

Conscious 3 - AC-054-302 - A prospective, multi-center, double-blind, randomized, placebo-controlled, parallel-group study to assess the efficacy and safety of clazosentan in reducing vasospasm-related morbidity and all-cause mortality in adult patients with aneurysmal subarachnoid haemorrhage treated by endovascular coiling.

InROADS (Improving Analgesia Delirium and Sedation Management for Critically Ill Patients) (Aitken L, Mitchell M). Testing a Complex Intervention for Realising Optimal management of Analgesia, Delirium and Sedation.

POST-RENAL - Prolonged Outcomes Study of the RENAL Study (Joyce, C).

HECTIC Health and economic outcomes of critical trauma intensive care patients (Aitken L, Abbey J).
Clinical Trials
ADRENAL – A randomized blinded placebo controlled trial of hydrocortisone in critically ill patients with septic shock (Venkatesh, B). This study will include 3800 Intensive Care patients who have septic shock. They will be randomized to receive either hydrocortisone 200mg or placebo daily for 7 days as a continuous intravenous infusion while in Intensive Care.

The Prophylactic hypOthermia trial to Lessen trAumatic bRain injury – Randomised Controlled Trial (POLAR-RCT). (Joyce C, Nunnink L, Burkett E, Fuentes H). (T3). The POLAR-RCT is an AZICS CTG study. Traumatic brain injury (TBI) is a leading cause of death and long term disability, particularly in young adults, the POLAR trial has been developed to investigate whether early cooling of patients with severe traumatic brain injury is associated with better outcomes. The study also relies on a collaborative approach between the Intensive Care Unit, the Emergency Department and Queensland Ambulance Service. The study has successfully recruited 16 patients from PAH and QAS with around 100 recruited throughout Australia and New Zealand.

Cytofab 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. (Venkatesh, B). This is an international Pharmacological study looking into the use of an investigational product on patients with severe sepsis and septic shock in ICU. The study has now reached its recruitment targets.

Other Research
LOGIC - Long term Cognitive Impairment and Delirium in Intensive Care (Mitchell, M). This study will determine the incidence of delirium for ICU patients during their ICU stay (for a maximum of 28 days) and their cognition at 3 and 6 months following ICU discharge. The study seeks to determine the incidence of delirium in ICU patients and the cognition level of ICU patients at 3 and 6 months post ICU discharge. So far 12 patients have been enrolled and the psychological follow-ups of consented patients have commenced.

Major Grants and Financial Support
Funding from other sources: $125,000

National and International Presentations
Professor Bala Venkatesh
- 30th International Symposium on Intensive Care and Emergency Medicine, Brussels
- Malaysian Intensive Care Society, Kuala Lumpur, Malaysia
- Annual Scientific Meeting, Canberra
- ANZICS clinical trials group, Noosa
- College of Intensive Care Medicine
- Annual refresher course in intensive care medicine, Brisbane

Professor Leanne Aitken
- European Society of Intensive Care Medicine Annual Scientific Meeting, Berlin, Germany
- Royal College of Nursing International Research Meeting, Harrogate, United Kingdom
- ANZICS/ACCN Annual Scientific Meeting on Intensive Care, Brisbane

Associate Professor Peter Kruger
- 30th International Symposium on Intensive Care and Emergency Medicine, Brussels
- Colloquium on Pandemic Research Preparedness, Toronto, Canada
- Pathophysiology of deteriorating patients, Brisbane
- ANZICS clinical trials group, Noosa
The department has completed several research activities in the last year. These include:

- Systematic review of the literature on limitations of currently designed chronic heart failure multidisciplinary management programs (as part of the work with the Centre of Research Excellence on Quality of Care at the Interface between Primary and Secondary Care);
- Development and pilot testing of a 10-step guide for minimising inappropriate polypharmacy in older patients (in collaboration with the UQ Centre for Academic Research in Geriatric Medicine and UQ Centre for Effective Prescribing);
- Critique of the quality and transparency of clinical research and how it could be improved (in collaboration with Centre for Research in Evidence-based Practice at Bond University);
- Development of a checklist to be used when deciding if financial incentives for clinical performance in specific areas are more likely to do harm than good in regards to quality of patient care (in collaboration with Centre for Research in Evidence-based Practice at Bond University);
- Development and pilot testing of a Delphi method for determining which routinely reported clinical diagnoses routinely reported in hospital administrative data are most likely to represent potentially avoidable care-related adverse events (in collaboration with the Centre for Research Excellence in Patient Safety at Monash University);
- Systematic review of the characteristics associated with high-performing hospitals and other healthcare services (in collaboration with the Centre for Research Excellence in Patient Safety at Monash University);
- Analysis of the clinical utility of high-sensitivity troponin assays in the assessment of patients presenting to emergency departments with acute chest pain;
- Development of a guide for evaluating the validity, clinical impact and applicability of results of non-inferiority trials to clinical practice (in collaboration with CLARITY investigators from McMaster University in Canada);
- Formulation of a checklist for ascertaining when quality and safety improvement interventions are at stage of sufficient development and testing of effectiveness that warrants their widespread adoption by health service managers (in collaboration with the Centre for Healthcare Improvement at Queensland Health);
- Systematic review of failings in current clinical work practices which lessen quality of care and threaten sustainability of the Australian healthcare system;
- Analysis of factors required to ensure the relevance and usefulness of comparative effectiveness research to clinical practice;
- Review of factors at the level of both clinical micro-systems and organisational macrosystems that enable or impede the practice of evidence-based medicine (in collaboration with Centre for Research in Evidence-based Practice at Bond University);
- Review of the shortcomings in current training and continuing professional development programs for physicians that relate to the need to promote value-added, cost-conscious care within specialist practice (in collaboration with the Quality Expert Group of the Royal Australasian College of Physicians).

These research projects have given rise to several articles currently in press or under review in leading peer-reviewed journals and several national scientific meetings, and are expected to impact on decisions of health service managers and policy-makers.

Associate Professor Ian Scott
Director of Internal Medicine and Clinical Epidemiology
Research Activities

EPIC 3 study (Scott IA, Jackson C, O’Brien S, Davies P, Hollingsworth S, Ashkew D, Dart J) – This T2/T3 translation study involves assessment of a new collaborative model of care whereby general practitioners (GPs) develop advanced skills in management of heart failure and provide high-level care, in liaison with specialists and allied health team members, to patients with this condition in general practice settings. This aims to lessen the demand on hospital-based heart failure clinics and outreach services. A 6-week curriculum has been developed and several GPs have been awarded a Masters of Science degree in advanced heart failure management skills. A GP-specialist collaborative clinic is to start in 2012.

Management of syncope in a tertiary hospital (Susarla M, Scott IA, Jones M) – This T2 translation study is an ongoing retrospective audit of management of a cohort of patients presenting to emergency department with syncope.

Preventing the rebound – approaches to reducing unplanned readmissions to general medicine services (Shohag H, Scott IA) – This T3 translation study is a retrospective case-control study of unplanned readmissions to general medicine between 2005-2010. Preliminary analysis of 86 readmissions has identified several quality of care factors which has informed quality improvement interventions aimed at minimising readmissions. This data was presented at a national scientific meeting of the Internal Medicine Society of Australia and New Zealand and at a national conference on unplanned readmissions.

Assessing the appropriateness of warfarin use in patients with atrial fibrillation presenting with acute stroke (Hampe T, Khokulan V, Scott IA). This T2 translation study is a retrospective audit assessing the appropriateness of warfarin use in patients presenting with acute stroke according to level of absolute risk of thromboembolic vs haemorrhagic stroke as estimated using validated risk prediction tools.

Determining when IV albumen and colloid solutions confer patient benefit (Khadem G, Scott IA). This T3 translation study consists of a systematic review of the evidence-based indications for use of intravenous albumen and colloid solutions in patients in either medical or surgical settings.

Major Grants and Financial Support

Total NHRMC funding: $500,000

Awards and Prizes

Associate Professor Ian Scott
- John Sands Medal, Royal Australasian College of Physicians, Health services research, evidence-based medicine and quality improvement science

National and International Presentations

Associate Professor Ian Scott
- Queensland Health Patient Quality Improvement Service Forum, Brisbane
- Evidence-based Practice Seminar, Bond University, Gold Coast
- Financial Incentives Conference of Centre for Research in Evidence-based Medicine, Bond University, Gold Coast
- Australian College of Health Service Managers (Qland branch), Brisbane
- Discharge processes and readmission minimization. Presentation to Queensland Statewide General Medicine Clinical Services Network Forum. Brisbane
- RACP Annual Scientific Congress, Darwin
- Australasian Cochrane Symposium, Melbourne
- 2nd Annual Reducing Hospital Readmissions & Discharge Planning Conference, Melbourne
- Measuring Performance in Hospitals Conference, Melbourne
- Optimising Patient Flow Conference, Melbourne
- Australian and New Zealand Health Services Research Association, Adelaide
- Acute Medicine Conference, Hutt Valley Hospital, Wellington, NZ

Dr Golam Khadem
- RACP Annual Scientific Congress, Darwin

Dr Hasan Shohag
- Annual Scientific Meeting, Internal Medicine Society of Australia and New Zealand, Lorne, Victoria
The Lung & Allergy Research Centre (LARC) is focused on undertaking scientific research to understand the pathogenesis of asthma and other chronic pulmonary diseases, with particular interests in allergic inflammation and host defence against respiratory viral infections.

This past year has seen further growth in the Centre, and has been highly productive for all concerned with success in attracting research funding, multiple publications in peer-reviewed journals and book chapters, and a successful patent application.

Key achievements have included:
• Investigating the importance of antigen presenting dendritic cells (DC) in the pathogenesis of human allergic disease, confirming the importance of DC in asthma.
• Documentation of variations in the patterns of pollen allergy across different climatic regions of Australia.
• Describing the key determinants of host defence against viral infections in chronic respiratory disease, with particular emphasis on the function of plasmacytoid dendritic cells and innate interferon production.

Professor John Upham
Director

Research Activities

Clinical Trials
Randomised trial of azithromycin in asthma: efficacy and safety study (NHMRC funded) (Gibson P, Simpson J, Upham J, Reynolds P, Yang I, James A). This project is studying whether low dose azithromycin, an antibiotic with anti-inflammatory properties, will help people with severe asthma. Over four hundred people from several Australian cities will take part in this randomised controlled trial. Recruitment is continuing with final results expected in 2013.

Other Research
IgE cross-reactivity between a temperate grass pollen allergen mix and subtropical pollen extracts of Bahia and Bermuda grasses (Davies J). This is a project in collaboration with Stallergenes (Antony, France).

Environmental monitoring of subtropical grass pollen allergens that contribute to hay fever and asthma (Davies J, Godwin). This project is in collaboration with the University of Queensland Collaboration and Industry Fund and Co-Sponsorship from Stallergenes, (School Agriculture and Food Science UQ).

Development of an allergen-specific blood test for Bahia grass pollen allergy (Davies J, Upham J).

Allergic sensitization to grass pollens in patients with allergic rhinitis and asthma in subtropical regions of Australia (Asthma Foundation of Queensland) (Davies J, Upham J)

Grass pollens often make asthma and hay fever worse. However much previous research has ignored the pollens found in subtropical areas. It appears that allergy to paspalum grass pollen is much more common in Brisbane than in Melbourne. This has important implications for the design of allergy vaccines used in desensitisation.

Major Grants and Financial Support

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<th>Source</th>
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National and International Presentations

Professor John Upham
- MRC / University of Edinburgh Centre for Inflammation Research, Edinburgh, UK
- Princess Alexandra Hospital annual health & research symposium, Prince Charles Hospital, Brisbane

Dr Janet Davies
- Stallergenes Grass Pollen Workshop “Improving knowledge of grass pollen in Australia to help the clinician deal with respiratory allergy” University of Melbourne, Melbourne
- Jian Zhou Forum Diamantina Institute, Brisbane
- Brisbane Lung Research Group Children’s Medical Research Institute, Brisbane
- 5th Australian B Cell Dialogue, Gene Technology Access Centre, Melbourne
- The Asthma Foundation’s 2011 Asthma, Allergy and Anaphylaxis Conference, “Personalising treatment and care
Medical Oncology

The department is a tertiary-referral centre for cancer. Most clinics operate in a multi-disciplinary format with radiation oncology, surgical and allied health services. The department has an active clinical trials program primarily in breast cancer, melanoma, gastroesophageal cancer, colorectal cancer, lung cancer and germ cell tumours. Participation in clinical trials conducted under the auspices of national and international study groups such as the Australasian Gastro-Intestinal Trials Group, the Australian New Zealand Germ Cell Trials, the Australian New Zealand Breast Cancer Trials Group, Eastern Cooperative Oncology Group, National Surgical Adjuvant Breast and Bowel Group, European Organisation for Research and Treatment of Cancer, Australian Sarcoma Study Group has enabled the department access to and experience with the latest developments in treatment regimens for sarcoma patients. The unit has a considerable infrastructure of clinical trial research staff and shares research nurses and data managers with the Haematology Department and the Radiation Oncology Department.

Associate Professor
Damien Thomson
Director

Research Activities

Clinical Trials

Abiraterone An Open Label Study of Abiraterone Acetate in Subjects with Metastatic Castration-Resistant Prostate Cancer Who Have Progressed After Taxane-Based Chemotherapy (McCaffrey, E).

REGISTER A Multicentre Phase II study of Risk Evaluation in GIST with Selective Therapy Escalation for Response (AG0507GS) (Walpole, E).

CHALLENGE A Phase III Study of the Impact of a Physical Activity Program on Disease–free Survival in Patients with High Risk Stage II or Stage III Colon Cancer: A Randomised Controlled Trial. (AGITG C0.21) (Walpole, E).

AGITG LAP07 Randomised Multicenter Phase III Study in Patients with Locally Advanced Adenocarcinoma of the Pancreas: Gemcitabine with or without Chemoradiotherapy and with or without Erlotinib. (EudraCT 2007-001174-81) (Atkinson, V).

ALTTO A Randomised, Multi-centre, Open-label, Phase III Study of Adjuvant Lapatinib, Trastuzumab, their Sequence and their Combination in Patients with HER2/Erbb2 Positive Primary Breast Cancer (BIG 2-06). (Atkinson, V).


Aprepitant Study A phase II multi-centre trial of a seven day Aprepitant schedule for the prevention of chemotherapy induced nausea and vomiting in patients receiving five day cisplatin-based chemotherapy for germ cell tumours. “Aprepitant Study (Thomson, D).


AYA PK Pharmacokinetics and Pharmacodynamics of Doxorubicin in Children, Adolescents and young adults with Newly Diagnosed Osteosarcoma, Ewing Family of Tumours and Hodgkin Lymphoma: A Multi-Institutional Cross-Discipline Non-Therapeutic Study (Thomson, D).

ATTACHE A Trial of Timing of Surgery and Adjuvant Chemotherapy for Hepatic Metastases from Colorectal Cancer (Atkinson, V).

BCRG 006 Substudy Multicenter Phase III Randomized Trial comparing Doxorubicin and Cyclophosphamide followed by Docetaxel (AC-T) with Doxorubicin and Cyclophosphamide followed by Docetaxel and Trastuzumab (AC-TH) and with Docetaxel, Platinum salt and Trastuzumab (TCH) in the Adjuvant Treatment of Node Positive and High Risk Node Negative Patients with Operable Breast Cancer containing the Her2neu Alteration. (Walpole, E).

AVAGLIO A Randomized, Double Blind, Placebo Controlled, Multicenter Phase III Trial of Bevacizumab, Temozolomide and Radiotherapy, Followed by Bevacizumab plus Temozolomide versus Placebo, Temozolomide and Radiotherapy followed by Placebo and Temozolomide in Patients with Newly Diagnosed Glioblastoma. (Atkinson, V).

CATNON Phase III Trial on Concurrent and Adjuvant Temozolomide Chemotherapy in Non-1p/19q Deleted Anaplastic Glioma. The CATNON Intergroup trial. (EORTC 26053_22054) (Cuff, K).

MAINSAIL A Phase 3 Study to Evaluate the Efficacy and Safety of Docetaxel and Prednisone with or without Lenalidomide in Subjects with Castrate-Resistant Prostate Cancer (CRPC) (McCaffrey, E).
Eribulin A Randomized, Open-label, Multicenter, Phase 3 Study to Compare the Efficacy and Safety of Eribulin with Dacarbazine in Subjects with Soft Tissue Sarcoma (Joubert, W).

COMPLETE A Randomised, Open Label, Phase III study of Taxane Based Chemotherapy with Lapatinib or Trastuzumab as First Line Therapy for Women with HER2/neu Positive Breast Cancer "COMPLETE" (EGF108919). (Joubert, W).

CA184-029 Adjuvant immunotherapy with anti-CTLA-4 monoclonal antibody (ipilimumab) versus placebo after complete resection of high-risk Stage III melanoma: A randomized, double-blind Phase 3 trial of the EORTC Melanoma Group (Thomson, D).

PETACC-6 Preoperative chemoradiotherapy and postoperative chemotherapy with capcitabine and oxaliplatin vs. capcitabine alone in locally advanced rectal cancer (EORTC protocol 40054-22062). (Walpole, E).

ET743-SAR-3007 / Yondelis A Randomized Controlled Study of YONDELIS (Trabectedin) or Dacarbazine for the Treatment of Advanced Liposarcoma or Leiomyosarcoma Previously Treated With an Anthracycline and Ifosfamide. (Joubert, W).

HT-MC-JVBB / RAISE A Randomized, Double-blind, Multicenter Phase 3 Study of Irinotecan, Folinic Acid, and 5-Fluorouracil (FOLFIRI) Plus Ramucirumab or Placebo in Patients With Metastatic Colorectal Carcinoma Progressive During or Following First-Line Combination Therapy With Bevacizumab, Oxaliplatin, and a Fluoropyrimidine (Atkinson, V).


LUX-Head & Neck 2 A randomised, double-blind, placebo-controlled, phase III study to evaluate the efficacy and safety of afatinib (BBW 2992) as adjuvant therapy after chemo-radiotherapy in primary unresected patients with stage III, IV, or IVb loco-regionally advanced head and neck squamous cell carcinoma (McGrath, M).

MEK113487 A Randomized, Double-Blind Placebo-Controlled Phase II Study of the MEK inhibitor GSK1120212 plus Gemcitabine vs. Placebo plus Gemcitabine in Subjects with Metastatic Pancreatic Carcinoma (Joubert, W).

MEK114267 A Phase III Randomized, Open-label Study Comparing GSK1120212 to Chemotherapy in Subjects with Advanced or Metastatic BRAF V600E/K Mutation-positive Melanoma. (Thomson, D).

MO25515 / EAP BRAF An open-label, multicenter expanded access study of RD05185426 in patients with BRAF V600E mutation – positive metastatic melanoma (Atkinson, V).

MORAb-004-201-Mel A Phase 2 Study of the Efficacy and PK/PD Relationship of Monotherapy MORAb-004 in Subjects with Metastatic Melanoma (Atkinson, V).

NO25026 / BRIM-3 A Multicenter, Randomized, Double-blinded, Controlled, Phase III Study in Previously Untreated Patients With Unresectable Stage IIIc or Stage IV Melanoma with V600E-Positive BRAF Mutation Receiving RD05185426 or Dacarbazine (NO25026) (Atkinson, V).

QUASAR2 Multicentre International Study of Capecitabine +/- Bevacizumab as Adjuvant Treatment of Colon Cancer. (Walpole, E).

An international, open-label randomised, two-arm phase III non-inferiority trial investigating a shortened duration of treatment for patients with high-risk stage III/IIII colorectal cancer. Short Course Oncology Therapy SCOT (Joubert, W).

STX 0206 Randomised comparative study of FOLFOX6m plus SIR-Spheres® versus FOLFOX6m alone as first line treatment in patients with non-resectable liver metastases from primary colorectal carcinoma. (Walpole, E).

Other Research
Geriatric-Oncology Study (Thomson, D, McCarthy, A)
Nurse-led model of assessment and care for older people with cancer.
Blinded comparison of Medical assessment of patients over 65 years being considered for chemotherapy, to a nurse led comprehensive geriatric assessment.

Major Grants and Financial Support

Other competitive funding: $62,900
Funding from commercial studies: $443,011
Funding from other sources: $101,992
Mental Health

This year saw the relaunch of research activities in mental health as the Translational Research Integrating Unit in Mental and Public Health (TRIUMPH). This reflects the research profile of the Metro South Mental Health services which is closely linked with the clinical services of the sector with leadership from Professor David Crompton. Others include Professor Steve Kisely who leads research into population health, Dr Dan Siskind with interests in service and clinical research and Dr Frances Dark research examines recovery and mental health rehabilitation evaluating evidenced based psychosocial treatments. In addition, Nathan Pasieczny leads research into dialectical behavioural therapy. TRIUMPH’s focus is on research that can be quickly translated into clinical benefit, promoting improved health outcomes for people with mental illness.

Associate Professor
David Crompton
Executive Director
Mental Health

Research Activities

Evaluation of Supported Accommodation for People with Severe and Persistent Mental Illness at Metro South Division of Mental Health (Siskind D, Whiteford H, Pirkis J). Mental Health Consumers in crisis often become stuck in a revolving door of hospital admissions and discharge to inadequate support networks. Homelessness is common in patients with psychosis and is linked to poorer engagement with mental health services. If the social framework of consumers can be stabilized with accommodation, engagement with mental health services, reconnection to community, living skills and strengthening of personal relationships, this cycle can be broken, and the journey to recovery restarted. Programs that avert excess hospital bed days have the potential to be cost saving for the public mental health system. Using administrative data sets for program participants and matched controls at neighbouring districts without supported accommodation services, we are evaluating the effect of these programs on hospitalisations, illness acuity, ED presentations and contact with community services.

Understanding the relationship between mental illness and offending: Implications for crime prevention and the management of mentally ill offenders. (Stewart A, Allard T, Dennison S, Kisely S) This project adopts a life course criminological framework to investigate links between mental illness and offending. The project will (a) investigate the nature of the dynamic relationships between mental illness and offending; (b) identify interventions to prevent individuals experiencing mental illness from offending and reoffending and (c) identify appropriate strategies to manage and treat mentally ill offenders. This involves the linkage and analysis of multiple databases from Queensland Police Service Department of Communities, Department of Justice, Queensland Corrective Services and Queensland Health. Outcomes of the project will include strategies to translate the research findings into policy and practice.

Evaluation of Drink Safe Precincts (Connor J, White A, Kisely S) Drink Safe Precincts were introduced by the Queensland Government in 2010. Funded by the Department of the Premier and Cabinet (DPC) of the Queensland Government This initiative targets people who are intoxicated or engaged in or experiencing harassment or violence. DSPs have been established in entertainment districts in metropolitan and regional Queensland (Fortitude Valley, Surfers Paradise and Townsville). They are a coordinated approach that includes an increased police presence and augmented police powers to remove and exclude known troublemakers. The evaluation includes six control entertainment precincts in Queensland, that approximate demographics for both metropolitan, (Ipswich), and regional, (Bundaberg, Cairns, Mackay, Rockhampton, and Toowoomba) locations. Analyses will adjust for any systematic demographic differences between active and control regions. This invoices the analysis of linked administrative data from health including ED, hospital morbidity and mental health information systems, as well as data from Queensland Police and the Ambulance Service.

The effect of the increase in ‘alcopops’ tax on psychological and physical alcohol-related harms in young people – a controlled interrupted time series. (Kisely S, Connor J, White A, Lawrence D) This is a study of the impact of the tax on ready-to-drink or pre-mixed beverages on hospital and emergency department presentations. The study is one of the Queensland demonstration project for Australia-wide Population Health Research Network (PHRN). It involves linkage between three databases for ED presentations (EDIS), hospital admissions (QHAPDC), and the trauma registry (QTR). The legislation was based on findings that higher taxes and prices reduce overall consumption of alcohol and, in particular, heavy drinking. However, it is unclear whether tax increases on only one type of drink, as opposed to alcohol in general, are similarly effective. Young people may merely switch
to cheaper, and potentially more potent, forms of alcohol. The project has two stages: 1) Establishing the feasibility of using Emergency Department data from Queensland to measure changes in alcohol-related harm in young people using the Gold Coast as a pilot project. The Gold Coast was chosen as it is a popular tourist destination for young people including end-of-school celebrations (“Schoolies”) every November; 2) Apply the lessons from the pilot to inform a Queensland-wide study linking Emergency Department data to the hospital morbidity system and the Queensland trauma register.

ECT Delivery Frequency: a Systematic Review & Meta-Analysis with Clinical Service Correlates (Siskind D, Lie D, Saraf S, Charlton F, Doli S, Broome A, and McCallum E). Electroconvulsive therapy (ECT) guidelines, across various regulatory bodies, lack consensus as to the optimal frequency of treatment for individual patients. A systematic review and meta-analysis to assess the strength of associations between ECT frequency and depression scores, duration of treatment, number of ECTs, and remission rates was undertaken by the group. The group concluded that twice weekly ECT is associated with similar efficacy to thrice weekly ECT, may require fewer treatments and may be associated with longer treatment duration when compared to thrice weekly. Using retrospective administrative datasets from the Princess Alexandra Hospital the group examined the outcomes for consumers receiving ECT twice weekly vs thrice weekly in a naturalistic study before and after a policy change suggesting consultants review ECT prescribing. Outcomes showed twice weekly ECT is associated with similar efficacy to thrice weekly ECT.

Improving the physical and oral health of people with severe mental illness: using Normalisation Process Theory to support new practices (Kendall E, Kisely S, Ehrlich C, Crowe E, Crompton D, Armstrong K). This project is an evaluation of a Queensland wide intervention to increase the physical health of Mental Health patients, the Activate: mind and body project. This is a mixed-methods study involving the qualitative and quantitative evaluation of the process and predictors of the uptake of management guidelines by clinicians using Normalisation Process Theory to support new practices. The effect of the use of these guidelines will be studied quantitatively and qualitatively. The qualitative evaluation will be through key informant interviews and focus groups of general practitioners and mental health clinicians. The quantitative evaluation will consist of assessments of the confidence of general practitioners and mental health clinicians in the management of physical health of psychiatric patients through the use of standardized instruments. Additional outcomes will be through the linkage and analysis of administrative health data to see if the uptake of guidelines measures as above lead to a decrease in preventable admissions for physical illnesses among psychiatric patients. These will be analysed through Cox regression analyses to calculate hazard ratios. This project will involve linkage between the hospital admissions, ED and the Registrar general’s death data. The project is a venture involving researchers and health practitioners from Griffith University, University of Queensland, General Practice Queensland and Queensland Health.

Applying recovery theory to the experience of involuntary mental health treatments: Understanding the experiences of consumers, their families and service providers. (M. Wyder, R. Bland, D. Crompton). Recovery (to live well in the presence or absence of one’s mental health symptoms) has emerged as central concept for mental health and has now been explicitly adopted as the guiding principle for the provision of mental services in Australia and internationally. The concept of recovery includes internal conditions such as empowerment, self-determination, hope, healing and connection and external conditions such as human rights, a positive culture of healing, and recovery oriented services.

Involuntary admissions, at face value, are at distinct contradiction to the concept of recovery, as mental health crises that lead to the legal provision of involuntary treatment would appear to challenge the very principles of recovery. Involuntary treatment can, by definition, be a denial of agency and citizenship, a destruction of hope as well as reinforcing stigma associated with a mental illness. Yet involuntary treatment can also be a point from which the recovery journey can gain direction and momentum. Little is known about how the recovery framework applies to the experience of involuntary treatment.

We are currently investigating the lived experience of an involuntary mental health admission. Consumers who have been admitted to a psychiatric ward on an involuntary basis, family members and health care professionals involved in their care are currently being interviewed about their experiences of receiving or providing care. These qualitative interviews focus on the
experiences of seeking/providing care during an involuntary mental health admission and explore different dimensions of the recovery process. This presentation will present the preliminary framework used for this study.

**Assessment of the health effect of the 2011 floods in southeast Queensland and the Northern Territory** (D. Crompton, S, Tong, G, FitzGerald).

In light of the devastation caused by recent floods in southeast Queensland, and the Northern Territory and the climate projections of more such events occurring in the near future, research on the impacts of floods on the health of the population of Australia is urgently needed. Floods are associated with deaths as well as with a range of non-fatal injuries and medical conditions. Population displacement, economic losses and disruptions of health services are also linked to psychological stress on those affected by floods, leading to mental health problems such as depression and post traumatic stress disorder.

Effective policies to reduce and prevent flood-related morbidity and mortality are contingent upon a comprehensive needs assessment in the affected population. In particular, policies will have a greater reach and effectiveness if they are informed by the localized data. Given the scarcity of available information on health impacts of floods in general and in southeast Queensland and the Northern Territory in particular, the proposed study will produce much needed information that can be readily used by appropriate decision.

**Other Research**

Currently at the Early Psychosis service we have 2 research projects underway and other projects are in the early stages of design.

**The prevalence of childhood trauma in patients with first episode psychosis and its impact on presentation and clinical outcomes** (Scott, J, Foley, S, Dark). This is a multi-site prospective study examining the impact of childhood trauma on both first presentation and follow up outcomes in young people with a first episode psychosis. Studies show that there is a strong association between childhood trauma and development of psychotic illnesses in young adulthood, and this study aims to more closely examine that association in a first episode population.

**Recovery from psychosis: learning from lived experience** (Connell, M, Foley S). This qualitative study involves the exploration of various areas involved in the recovery process, such as the experience of treatment, the return to the community and family, the revision of the sense of self and strategies used to regain identity and hope for the future. This is a longitudinal study which will seek to explore and compare the above themes between those who have attained remission/recovery and those who have not.

**Prospective follow up study of First Episode Psychosis patients engaging in the Early Psychosis service aiming to examine outcomes (functional and symptom based) 6-12 months post discharge from our service** (Foley, S.). The literature is showing evidence for deterioration in functional and symptom domains on cessation of early psychosis services. Our aim will be to map outcomes from commencement at our EP team through to closure (up to 24 months later) and then 6-12 months following closure, with view to clarifying the effectiveness of the EP model of service in the PA district. We will also examine and compare outcomes of our CALD (culturally and linguistically diverse) consumers compared to non-CALD consumers, given our current CALD rate at EP is particularly high at 45%.

**Social Cognition and Interaction Training: assessment of the transferability to a community setting** (Dark, Parker S.). Deficits in social cognition are associated with poor outcomes in patients with psychosis. This study evaluates a program shown to be effective in addressing these deficits and address the real world feasibility of applying this intervention in routine mental health settings.

**Dialectical behaviour therapy (DBT) informed therapy for Deaf people seeking help from the Statewide Deafness and Mental Health team** (Dark). Deaf people often experience invalidating developmental environments. DBT is a therapy developed for the emotional and behavioural consequences in adulthood of some people who have grown up in such environments. This study evaluates DBT adapted for an Australian Deaf community.

**Evaluation of the use of group based cognitive remediation (CRT) for people with psychosis** (Dark, Hodgson A., McPhail S.). Neuro-cognitive and social cognitive impairment are separate domains of impairment in psychosis. This study examines the use of a new computer based CRT program, CirCuits.

**A comparison study of stat/PRN psychotropic medication in psychogeriatric inpatient units** (Weigang P., Peixin M., Lifeng C, Haigh C., Baker F., Krout R.). This research examines an under investigated area of potential risk in the inpatient management of elderly mental health patients. The research is in collaboration with Beijing Anding Hospital, Southern Methodist University, Dallas, Texas and The University of Queensland.

This project trials an interactive music therapy environment whereby music therapy clinicians engage adults with acquired brain injury (ABI) in a therapeutic songwriting experience in a face to face and online context. Music therapy songwriting is an established therapeutic technique traditionally delivered in a face-to-face setting to address issues including emotional adjustment to the life-changing consequences of ABI. The emergence of so called ‘e-health’ solutions across the health sector is opening up new points of access to health care, particularly in rural and remote areas. Many people with ABI live in regional and rural communities.
and have difficulty accessing music therapy services. This study addresses the potential to deliver improved access and outcomes for these people through the use of video-conferencing technology to conduct music therapy interventions.

Participants in this study participate in six video-taped therapy sessions – three face to face and three over video-conferencing. The video material, song lyrics and interviews with the therapist and client are independently analysed to tease out the potential as well as pitfalls of online service delivery to assist clients with ABI to manage their emotional adjustment to disability and reintegration into the community.

Data collection to date has revealed distinct differences in the client experience between the two contexts. As the study continues with more participants in 2012 further valuable insights into individual differences and similarities of experience are

Field placements are central to professional training in psychology. (Elphinston R.). While psychology field placements have been longstanding in areas of the Queensland public health sector, a recent focus on clinical education initiatives in the community has broadened the scope of placements now offered. This movement has resulted in an increase in demand for field placements and thus field placement supervisors.

There is also a need to explore the supervisor perspective on field placements given the attention in the literature to the experiences of supervisors of internal University placements (e.g., Robiner, Saltzman, Hoberman, & Schirvar, 1997) and postgraduate students (e.g., Gross, 2005). To address this gap and work towards building placement capacity, we aimed to understand the benefits and challenges of field placements from a supervisor perspective.

Five supervisors across three different work sites participated in-depth interviews. Supervisors were asked to identify aspects of postgraduate placements that worked well, as well as current challenges, and future opportunities. Qualitative data analysis involved classifying the data to identify key themes and a frequency tally.

Benefits and challenges of postgraduate placements were categorised into three broad levels: individual, organisation, and external. Sub-themes were also identified, with key words and phrases generated for each sub-theme. Organisational challenges were reported the most, followed by organisational benefits and benefits to the individual. If we are to build field placement capacity, we must work towards addressing the organisational challenges whilst promoting the benefits to the organisation. Future work needs to focus on enhancing supervisor and student support.

Awards and Prizes

Dr Dan Siskind
- Young Psychiatrist 2011, Royal Australian and New Zealand College of Psychiatrists (RANZCP)
- Finalist, Early Career Research Awards, Princess Alexandra Hospital Research Week 2011, PAH

Major Grants and Financial Support

Other competitive funding: $619,644
Funding from other sources: $771,061

National and International Presentations

Dr Dan Siskind
- Psychiatric Association 15th World Congress, Buenos Aires
- Menzies Memorial Scholars Association, Annual Meeting, Melbourne
Research within the department is directed at optimising service delivery in support of the department service plan and CASS business focus. By optimising service provision this facilitates return for research investment for Queensland Health. Research activities promote enhancement of staff skills and professional development. Furthermore, collaboration with external stakeholders has provided opportunities for professional development and enhancement of knowledge and skills of department employees.

Improvement of turnaround times for microbiology results (VRE, MSSA and MRSA detection) was realised by trialling various chromogenic media and different molecular platforms. Rapid detection of resistance in organisms has resulted in more appropriate antimicrobial therapy and ultimately better patient outcomes. Direct detection of methicillin sensitive and resistant staphylococci from positive blood cultures using PCR has enabled the department to provide earlier and more precise advice to treating clinicians. Participation of the laboratory in national monitoring programmes has resulted in data collections that are able to recognise and predict emerging trends in antibiotic resistance amongst different cohort groups.

Professor Joan Faoagali
Director

Research Activities

Other Research

Detection of MRSA from blood cultures using PCR (Faoagali J, Kleinschmidt S, Griffin P and Looke D). This study is still being completed and so far results show a 100% correlation of mec detection with flucloxacillin resistance and also 100% correlation for detection of Staphylococcus aureus. The proportion of S. aureus in the 71 positive blood cultures tested so far has been high at 31%, comprising 8% MRSA and 23% MSSA. This test means that patients can be treated with a more specific antimicrobial in a timelier manner.

COODEE study (Paterson D, Runniger N, Sidjabat H and Faoagali J). This study is examining the epidemiology of extended spectrum beta-lactamase Escherichia coli strains from cases of bacteraemia and urinary tract infections.

Vanessa Study (Munckhof W, Johnson B and Faoagali J). This study aims to assess vancomycin efficacy in staphylococcal sepsis in Australasia.

AMAZES study (Kleinschmidt S, Towers M and Faoagali J). Multi-centre study of the effect of long term use of oral low dose azithromycin on asthmatic patients. Analyses of isolates have detected altered respiratory flora patients on the AMAZES trial with organisms exhibiting resistance to azithromycin.

The effect of a fluoroquinolone on the enteric flora of sheep (Mahmood A, Nessen S and Faoagali J). The aim of this project is to see if fluoroquinolone resistance of bacteria can be induced by fluoroquinolone treatment of sheep. This is in collaboration with University of Queensland Doctorate of Philosophy student Adnan Mahmood. Simone Nessen has been assisting Adnan with culture, identification and susceptibility testing of bacterial isolates.

Honeypot Trial (Lye G and Faoagali J) Treatment of staphylococcal wound infections with honey.

Australian Enterococcal Sepsis Outcome Programme. (Nessen S) This is a central coordination by the AGAR group for data collection of Enterococcus bacteraemia cases.

Australian Co-operation on Staphylococcal Sepsis (Hay J). This is an Australian Group of Antimicrobial Resistance.

National and International Presentations

Ms Lyndal Coleman
- Australian Society of Microbiology, Special Interest Group, PA Hospital

Ms Papiya Kundu
- Australian Society of Microbiology, Special Interest Group, PA Hospital

Mr Chris Lidstone
- Australian Society of Microbiology, Special Interest Group, PA Hospital
- Australian Infection Management Course, PA Hospital
Neurosurgery

The Department of Neurosurgery has expanded its Brain Tumour Service. Multiple studies are now done on brain mapping in conjunction with the University, Radiology, Speech Therapy and Neuropsychology. The acquisition of PET scanning should see us be able to merge scans for better resection and biopsies of tumours. It may also help better define pseudoprogression. We are still working to merge perfusion and permeability scans with Magnetic Resonance Imaging (MRI) to enable improved resection. We have applied for Gliolan a substance that will allow greater tumour resection as it is makes tumour cells fluorescent under the microscope.

Small ports have been purchased that will allow us to access through a minimally invasive approach deep tumours in the brain with minimal morbidity.

A new instrument that removes tumour has become available to help us remove intraventricular tumours through an endoscope.

The Anterior Skull Base surgeons are approaching larger and more challenging tumours through the nose in a minimally invasive fashion with great success where previously these tumours have been resected through a cranial approach.

We have done more challenging Deep Brain Stimulation (DBS) cases including Tourette’s and Lubag disease with excellent results. The improvement in imaging in conjunction with the Department of Radiology has enabled targets to be located with excellent accuracy. We will move in future to try to merge Positron Emission Technology (PET)and Magnetic Resonance Imaging (MRI)for other targets.

A Prospective Study of of Magnetic Resonance Imaging (MRI) in Assessing Memory (Olson S, Oram J, Foote M, Davis B).

A Prospective Study of Neuropsychological Outcomes after Transsphenoidal Surgery (Olson J, Garcia-Redmond J, Oram J).

The use of Perfusion and Permeability in Delineating Higher Grade Tumour and Pseudoprogression (Olson S, Ong B, Xia M).

Has having a Multidisciplinary Brain Tumour Clinic Changed Patient Outcomes (Nichols P, Olson S).

Brain Regions Underlying Repetition and Comprehension Deficits in Aphasia Evidence from voxel-based lesion symptom mapping: (Olson S, de Zubicaray G, Ong B).

An investigation into communication outcomes following brain tumour surgery (Speech Pathology).

Clinical Trials

Elderly GBM study TROG 08.02, patients older than 65ys getting radiotherapy, randomised to TMZ or no TMZ (Olson S, Pullar A, Lwin Z, Foote M).

Whole Brain Melanoma Trial TROG 08.05, patients with resected solitary melanoma brain met, randomised to up front XRT or XRT at relapse (Olson S, Pullar A, Lwin Z, Foote M).

CATNON, trial for Anaplastic gliomas (1p 19q not deleted), 2 by 2 randomisation where all get XRT but initial randomisation to concurrent TMZ or not. Second randomisation to adjuvant TMZ or not. (Olson S, Pullar A, Lwin Z, Foote M).

Other Research

The Outcomes of Thalamotomy and Pallidotomy in Movement Disorders a Retrospective Study: RACS Meeting 2011 (Olson S, Hall B, Boyle B, Seow H).

Awards and Prizes

People’s Choice Award PA Week 2011.

Major Grants and Financial Support

Other competitive funding: $50,000

Centres for Health Research 2011 Annual Research Report
With a focus on improving patient care, research within nursing has had some great success. The clinical setting is focusing on basic nursing care and research was developed to examine basic cares and how to improve them. Professor Henderson has had some great outcomes with the translation of research findings from past research being used within the clinical setting to improve education for staff. Finally, as part of the National Health and Medical Research Council Centre of Research Excellence in Nursing Interventions for Hospitalised Patients (NCREN) we expect an additional Research Fellow to commence in 2012.

Ms Kerri Holzhauser
Director Research

Research Activities

Clinical Trials

Nursing Time Associated with Patient Care Analgesia (PCA) and Ketamine Infusion Preparation and Maintenance in the Orthopaedic Unit (Lyons N, Gosson S, Burmeister E). The aim of the study was to examine the efficiency and safety of using non-premixed PCA bags (current practice) compared to using premixed Morphine and Fentanyl PCA bags. The project was completed in 2011 with recommendation for use of premixed Morphine and Fentanyl PCA bags for use in PCA infusions.

Chloramphenicol or Paraffin as an emollient for suture lines? (Atkinson C, Thiele D, Auditore A, Burmeister E, Holzhauser K, Burgan S). This study will investigate whether cleaning a suture line and applying paraffin as an emollient will have the same effect as applying Chloramphenicol ointment. The project has received ethics approval. Double blinded treatments are currently being made. An application for funding through the 2012 PA Research Foundation and Private Practice Trust Fund Grants is being prepared.

In hospital continence management - attitudes and practices (Draper M, Varghese P, Carter L, Burmeister E, Marsh C, Pimm B). The main aim of the study is to improve the continence management of hospitalised patients, specifically to investigate the over use of incontinence aids in otherwise continent adult patients. A initial audit was completed to quantify the extent of the practice. This was followed up with the current research. The project team are currently putting together the ethics approval documentation.

Randomised controlled trial of early discharge versus conservative treatment for patients with lower leg wounds managed with negative pressure wound therapy. (Gordon L, Rowe A, Burmeister E, Brunelli V, Waugh R). The aim is to evaluate the effects of early discharge of patients with lower leg skin grafts dressed with negative pressure wound therapy. The research has been completed and the findings will be presented at conferences in Japan and USA in 2012.

Impaired Cognition Project – Orthopaedic Unit. (Lovings K, Watkins L, Brunelli V). The purpose of this project is to provide improved care and management of patients with impaired cognition in the orthopaedic unit by introducing a staff education program. To date the education package and survey questions have been completed and ethics approval sought.
In-Hospital Cardiac Arrest: Effect of amended Australian Resuscitation Council 2006 guidelines (Boyde M, Padget M, Burmeister E, Aitken L). The aim of the study was to evaluate cardiac arrest outcomes following the introduction of the Australian Resuscitation Council (ARC) 2006 amended guidelines for Basic and Advanced Life Support. Research completed and manuscript prepared for publication.

St George Hospital Trauma – Evaluation of a guideline change: nursing roles in ED trauma resuscitation (Alana Clements, Kate Curtis, Kerri Holzhauser). To assess the impact of allocating the most senior nurse to the scribe role on communication, documentation and perceptions of leadership in major trauma resuscitations. The study is currently ongoing.

The Road Ambulance Matters to Patients experiencing delayed off-loading (RAMPing) study. (Ting J, Holzhauser K, Shaban R, Crilly J, Tippett V, Fitzgerald G, Khutun M, O’Dwyer J, O’Dwyer M, Hammond E, Eeles D, Finucane J, Melton N, Melki K). To assess the differences between ramped and non-ramped patients. Which patients are ramped and any effect ramping has on patient outcomes and cost differentials. The current research has received ethics approval.

Mater Pain Management (Williams S, Bonney D, Gilhotra Y, Pitt R). Improving pain management of abdominal pain in Paediatric Emergency patients using a pre-post: interventional study. The project has ethics approval and the study is ongoing.

Other Research
An Exploratory Study to Examine the Phenomenon and Practice of Ambulance Ramping at Hospitals within the Queensland Health Southern Districts and the Queensland Ambulance Service. (Hammond E, Shaban RZ, Holzhauser K, Crilly J, Melton M, Tippet V, FitzGerald GJ, Eeles D, Collier J, Finucane J). This study aimed to develop a consistent definition of Ambulance Ramping for use throughout the Queensland Health Southern Districts in both health and ambulance services. It also aimed to identify how Ambulance Ramping is practised and documented, and the effects it has on how emergency health services function. The study has been completed and has led to the commencement of further research in the area.

Patient Assessment Project (Ray-Barruel G, Howarth S, Holzhauser K, Casey V, Massey D, Tomlinson V). This project aims to improve patient assessment, documentation and outcomes for patients through an evidence-based practice improvement including systematic format of patient assessment by nurses, and standardised tools to improve documentation of nursing admission, shift assessment risk assessment, care planning activities and patient outcomes.

Major Grants and Financial Support
Other competitive funding: $888,000
The Department of Nutrition and Dietetics has a strong research culture and actively participates in research across the Princess Alexandra Hospital campus with a particularly strong track record in the fields of Metabolism, Renal Disease and Oncology. The department published 21 manuscripts, over half of which had a Dietitian as a first or senior author, indicating the success of projects that are driven by dietetic staff. The Department is committed to disseminating results from research activities with presentations at eight international and seven national conferences in 2011. The investment in three research fellow positions, Dr Ingrid Hickman, Dr Liz Isenring and Dr Katrina Campbell, has resulted in eight research higher degree students linking with the department and over $300,000 in competitively secured research funds internally administered by Nutrition and Dietetics. In addition, two NHMRC project grants of a combined worth of >$1.8 million have been awarded to our collaborative projects to investigate nutritional outcomes and treatment options for obesity-related chronic disease burden.

Dr Maree Ferguson
Director

Research Activities

Clinical Trials

Substrate utilisation in obesity-related chronic disease (Croci I, Byrne N, Macdonald G, Prins J, Hickman I). Metabolic stress is a key component of obesity-related disease. Our study aims to measure substrate utilisation pathways such as fat oxidation and carbohydrate oxidation uses indirect calorimetry in states of fasting, hyperinsulinemia and acute exercise, in order to understand the mechanisms of disease progression.

Vitamin D and metabolic function in obesity (Wright O, O’Moore-Sullivan T, Whitehead J, Hickman I). This study aims to identify mechanistic links between vitamin D and metabolic function in obesity such as insulin resistance, adiponectin and lipid metabolism. Cross-sectional analysis of large cohorts of obese patients highlight the complex relationship between vitamin status and metabolic health.

Drivers of weight gain in liver transplant recipients (McCoy S, Campbell K, Ali A, Macdonald G, Jarrett M, Hickman I). Weight gain in liver transplant recipients is common and most rapid in the first 6 months after transplant. This study aims to identify the drivers of weight gain after transplant and investigates hedonic factors such as emotional eating, health beliefs, taste function, stress and physical activity levels on dietary intake in transplant recipients.

Vitamin D and carnitine deficiencies in medical oncology patients receiving chemotherapy (Teleni L, Walpole E, Kimlin M, Davidson W, Ferguson M, Koczwar B, Isenring L). Preliminary results show that approximately two thirds of oncology patients receiving chemotherapy have low levels of vitamin D. These results were presented at the Multinational Association for Supportive Care in Cancer in Greece, June 2011.

Sodium intake and taste sensitivity in primary aldosteronism trial (Campbell K, Pimenta E, Stowasser M). This is a prospective observational study is investigating change in dietary intake and taste sensitivity in patients with primary aldosteronism, following adrenalectomy or spironolactone treatment. This is part of a larger study investigating effects on obstructive sleep apnoea.

CKD.QLD Nutrition Study: Nutrition status and outcome in CKD (Campbell K, B Morey, M Manafi, A Campbell, K Boyce). To determine the influence of nutrition status on clinical outcome in CKD patients, this study will characterise potentially-modifiable dietary factors from early CKD, map change over time and identify how these factors relate to patient outcomes. This is a multi-site, prospective observational study, undertaken in five sites across metropolitan, regional and remote areas of Queensland.

Validating a scored salt questionnaire against urinary sodium excretion in patients with chronic kidney disease (Morey B, Campbell C, Jeffs P, Ross L, Gill E, Kirk A, Healy H, Fassett R). Traditional quantitative methods of assessing sodium intake are time consuming and rarely done in clinical practice and no validated tool is currently available for use. The purpose of this research is to validate a Scored Sodium Questionnaire (SSQ) as a quick and easy clinical and research tool for assessing salt intake in renal patients.

Obesity-related inflammation and insulin resistance in chronic liver disease: Exercise and Diet as treatment options (Hickman I, Prins J, O’Moore-Sullivan T, Byrne N, Hills A, Clouston A, Croci I, Chachay V, Macdonald G). This study investigates the role of diet and exercise as treatment options for non-alcoholic fatty liver disease. The randomised controlled trial investigates the effect of weight loss or exercise on insulin resistance, body composition and liver histology and aims to identify mechanisms whereby lifestyle intervention may benefit chronic liver disease.
Resveratrol: Polyphenols for treatment of non-alcoholic fatty liver disease
(Chachay V, O’Moore-Sullivan T, Franklin M, Whitehead J, Cowin G, Ferguson M, Macdonald G, Fitzpatrick K, Martin J, Hickman I). This study investigates the effect of resveratrol, a plant derived antioxidant, on factors associated with severity of fatty liver disease such as insulin resistance, visceral adiposity and hepatic steatosis. This randomised placebo controlled trial will assess the effectiveness of daily supplements as a treatment option for patients with fatty liver disease.

Pre-liver transplant nutrition status and impact on post-liver transplant outcomes (Murray E, McCoy S, Macdonald G, Campbell K, Hickman I). This study aims to identify the dietary priority areas for liver transplant recipients and the effect of nutritional status on outcomes in this unique patient population.

Vitamin D supplementation trial (Teleni L, Walpole E, Kimlin M, Davidson W, Ferguson M, Isenring L). This study investigates supplementing vitamin D deficient or insufficient patients undergoing chemotherapy improves their serum vitamin D levels and leads to improved quality of life and physical function outcomes. Recruitment has commenced.

Comparison of pre- and perioperative immunonutrition in patients undergoing surgical resection of oesophageal cancer (Teleni L, Smithers M, Jamieson G, Watson D, Ferguson M, Isenring L). This project aims to investigate whether a specialist nutrition supplement is better than a traditional supplement in patients with oesophageal cancer undergoing surgical resection in terms of minimising complications and length of stay. Data collection commenced at the PAH last year. PAH has been a leading site in this multi-state NHMRC funded trial and assisting other sites in effective data collection procedures. Data collection will continue for two years.

Malnutrition screening in daycare (Abbott J, Teleni L, Isenring L). This study aims to investigate if an automated screening system is effective for identifying patients at nutritional risk. Investigators have developed protocols and are awaiting the results of the HP grants scheme.

Is ginger effective for control of chemotherapy induced nausea and vomiting (CINV) (Teleni L, Vittetti L, Thompson D, Isenring L). This study aims to investigate if ginger with current antiemetic regimens improves the control of chemotherapy induced nausea and vomiting more than standard antiemetic therapy alone. A literature review has been conducted and a manuscript drafted for submission in 2012.

LowSalt CKD: The effect of sodium intake on blood pressure and cardiovascular risk in patients with chronic kidney disease: a blinded randomised crossover trial and six month follow up. (Campbell K, Hall E, Johnson DW, Bauer J, Hawley C, Isbel N, Stowasser M, Plimenta E). This project aims to investigate the effect of a high versus low sodium diet on blood pressure (BP), cardiovascular risk factors, risk factors for kidney function decline and taste sensitivity in participants with moderate kidney disease.

LM3 (LandMark 3): A randomised controlled trial comparing the impact of aggressive risk factor and lifestyle modification to limit the progression of Cardiovascular Disease in patients with CKD (Chronic Kidney Disease). (PI: Isbel N, Team: Douglas B, Howden E, Strand H, Marwick T, Coombs J. Dietary intervention: Orazio L, Campbell K) Co-ordinated care clinics utilising a case management approach and a multidisciplinary team have been demonstrated to optimise CKD care. This study is aims to investigate the impact of aggressive risk factor and lifestyle modification utilising nurse led co-ordinated care with standard care to limit the progression of cardiovascular disease in patients with chronic kidney disease.

Overcoming barriers to accessing obesity management expertise through innovative telemedicine service delivery. (Whelan M, Reeves M, Eakin E, Davis, A, Guizid M, Cooney L, Power E, Honeyball S, Hickman I). Innovative dietetic service delivery approaches are being trialled in this study to assess the feasibility of introducing telephone based weight management counselling into a real world setting.

Guidelines for nutrition in kidney transplant recipients: are they translating to quality care and improved clinical outcomes? (Orazio L, Murray E, Campbell K). The aim of this study is to evaluate the implementation of evidence into practice, including a new dietetics clinic and implementation of key service recommendations from new Evidence Based Practice (EBP) Guidelines for Nutrition in Kidney Transplant Recipients, targeting lifestyle behaviours and changes post transplant.

Nutrition in peritoneal dialysis: Barriers for adequate protein intake (Young V, Orazio L, D Johnson, S Badve, Bates A, K Campbell). Peritoneal Dialysis (PD) patients are often malnourished, with established barriers to adequate protein intake being gastrointestinal symptoms, medications, restrictive diets and infections. The aim of this project is to identify the medical, nutritional and social factors which relate to inadequate protein intake in PD patients.

Evaluation of the implementation of an information technology system for capturing the nutrition care process on patient outcomes (M Ferguson, M Rossi, D Johnson, S Capra, J Hulcombe, M Lees, K Campbell). The aim of this study is to compare use of an innovative electronic vs current manual system for capturing the nutrition care process (ie nutrition screening, assessment, intervention, monitoring and evaluation) on patient outcomes such as weight, nutritional status, dietary intake, nutrition impact symptoms, quality of life and treatment compliance.
A randomised control trial assessing outcomes of two service models providing nutritional support to older people presenting to Emergency Department (Vivanti A, Ferguson M, Powrie D, O’Neill M, Isenring L.). The purpose of this study is to determine the optimum model of care to deliver nutrition services to older adults admitted to the Emergency Department and identified at risk of malnutrition. This investigation will assess the impact of the service provided on nutritional status and other outcomes including frail mechanical falls, hospital admission and quality of life.

Assessing the sensitivity and specificity of screening questions for referral and prioritisation in a Medical Assessment and Planning Unit (MAPU). (Vivanti, A, McPhail S, Aggarwal L, Robinson K, O’Neill M). This study is designed to assess the ability of 3 screening tools to identify re-presentation to Emergency departments or admission to hospital at 14, 30 and 90 days post presentation, and to assess the relative additional risk of readmission in those who are screened at risk of malnutrition.

Awards and Prizes

Maree Ferguson, K. Campbell, L. Webb, A Vivanti, L.Young
- Margaret Dulcie Simko Award for Excellence at a Clinical Poster Session, American Dietetic Association.

Major Grants and Financial Support

| Total NHMRC Funding: | $1,816,710 |
| Other competitive funding: | $170,000 |

National and International Presentations

Katrina Campbell
- Dietitians Association of Australia, Adelaide
- American Dietetic Association, SanDiego USA
- Aust NZ Society of Nephrology, Adelaide

Ingrid Hickman
- International Conference of mechanisms of action of neutraceuticals, Brisbane Australia
- European Congress of Obesity, Istanbul Turkey

Elisabeth Isenring
- Dietitians Association of Australia, Adelaide

Maree Ferguson
- American Dietetic Association, SanDiego USA
- Multinational Association for Supportive Care in Cancer, Athens Greece
- International Conference of mechanisms of action of neutraceuticals, Brisbane Australia

Linda Ozario
- Aust NZ Society of Nephrology, Adelaide

Angela Vivanti
- Dietitians Association of Australia, Adelaide
PAH occupational therapists are health professionals who work in partnership with adults to overcome factors which limit their ability to function in their chosen ‘occupational roles’ and impact on their quality of life. Injury or illness, environmental, psychological or emotional difficulties, or the effects of aging can cause these limiting factors. Through developing research capacity and strength in a variety of clinical areas, PAH occupational therapists are a major contributor to the Occupational Therapy clinical knowledge base, creating a strong research profile nationally and internationally, and enhancing evidenced based clinical decision making locally.

Research activity in the Occupational Therapy Department was concentrated in the areas of brain injury acute care and rehabilitation, cancer services, spinal cord injury research, aged care assessment and management, lymphodema management, and hand and upper limb rehabilitation. The department is involved in two ARC Linkage grants for multidisciplinary research projects in the field of acquired disability. In 2011, the Department contributed a Chief and Associate Investigator to a successful application for a NH&MRC Centre of Research Excellence on traumatic brain injury rehabilitation. Occupational Therapy staff disseminated their research outcomes through publication in peer-reviewed journals and books and by presentation at many national conferences throughout the year. The Occupational Therapy Department supported 10 postgraduate research students conducting research in the fields of brain injury, aged care, disability, and hand therapy.

Mrs Mary Whitehead
Director

Mrs Ruth Cox
Acting Director

Associate Professor
Jennifer Fleming

Research Activities

Clinical Trials

Skill mix in an aged care rehabilitation setting: Trial of an advanced scope of practice Occupational Therapy Assistant role at the Princess Alexandra Hospital, Demonstration Project. (Cox R, Mills V, Wood A, Wiemers A, Clements L, Fleming J.) This project aims to compare the efficacy of occupational therapy groups led by occupational therapists and occupational therapy assistants. The project was completed in 2011, and found no significant differences in patient outcomes or satisfaction when groups were led by an assistant.

Community based rehabilitation after traumatic brain injury: a comparison of home and hospital based outpatient intervention. (Doig E, Fleming J, Kuipers P, Cornwell, P). The aim of this PhD research was to determine the effectiveness of a goal-based environment-focused intervention delivered in home/community settings compared to hospital. In 2011, the study was completed and findings disseminated in 2 journal articles.

A randomised control trial investigating the effects of group education and support in reducing cancer-related fatigue and improving quality of life in patients undergoing radiotherapy. (Purcell A, Fleming J, Bennett S, Haines T, Burmeister, B.). This trial which formed part of a PhD project investigated the effectiveness and timing of an education and support group aimed at fatigue management in patients with cancer undergoing radiotherapy. The findings were published in 2011.

Rehabilitation of prospective memory following traumatic brain injury. (Fleming J, Shum D, Strong J). This NHMRC funded randomised controlled trial compared two different approaches to prospective memory rehabilitation (compensatory and remedial) for outpatients with traumatic brain injury. The results were published in the Journal of Rehabilitation Medicine in 2011.

Other Research

Determinants of successful transition from hospital to home for individuals with acquired brain injury and their family caregivers. (Fleming J, Nalder E, Turner B, Cornwell P, Worrall L, Haines T, Kendall M.) Funded by an ARC-Linkage Project Grant, this project is mixed methods investigation of sentinel events during the period of transition home for people with brain injury. The project involved two PhD students, one who graduated and one who submitted in 2011. Five papers published in 2011.

Facilitation of self management of the upper limb following a stroke (Bower K, Hoffmann T, Gustafsson L.). This program of research aims to develop and evaluate resources for occupational therapists and physiotherapists to use in subacute stroke rehabilitation. The resources will aim to foster self-management skills for the ongoing recovery of the stroke-affected upper limb.

Evaluation of a telephone screening tool for the presence of post-concussive symptoms. (Wright S, Prescott C, Fleming J.). The aim of this study is to compare the use of a telephone screening tool to a face to face clinical assessment for patients presenting to the Emergency Department with a mild traumatic brain injury. In 2011, the project received funding from a HP Research grant.
Financing and management of lifetime care for adults with acquired disabilities and high care needs. Foster M, Henman P, Fleming J, Tilse C. This ARC-Linkage project examines the funding, service system, and policies associated with the lifetime care and support and young adults with high care needs due to acquired disabilities such as brain injury, spinal cord injury, or progressive neurological diseases. Data collection using a qualitative approach was completed in 2011.

Does individualised hand splinting reduce spasticity after traumatic brain injury. (Copley J, Kuipers K, Fleming J, Griffin J.). This study uses a series of single case studies to demonstrate the effectiveness of an individualised approach to splinting of the hypertonic upper limb.

Goal setting and attainment by individuals in spinal cord injury rehabilitation using the Canadian Occupational Performance Measure. (Mitchell G, Gustafsson L, Fleming J, Price G.). An honours student project which aims to examine the use of client-centred goal setting in the spinal injury unit, this study was accepted for publication in 2011.

Past and current leisure activities of individuals in a brain injury rehabilitation unit. (Braithwaite H, Fleming J, Gustafsson L, Griffin J.). A survey of inpatients and outpatients with acquired brain injury about their leisure activities demonstrated a significant reduction in engagement in active and social pursuits following brain injury. The findings were published in the journal Brain Injury in 2011.


Improving MDT care for post-coma unresponsive and minimally responsive state patients in the acute care setting. (Seeto T, Griffin E, Budden C.). The project objectives are to determine the feasibility and effect of a twice-weekly multi-disciplinary early intervention group on patients in a minimally responsive state, and to investigate the clinical changes in group participants.

Comparison of two methods of measuring for compression arm sleeves for lymphoedema. (Nixon J, Purcell A.). This industry supported project aims to determine which approach to measurement of the upper limb results in the prescription of the most effective compression garments for patients with lymphoedema.

Clinical utility, reliability and validity of the Self-Perceptions in Rehabilitation Questionnaire (SPRQ) in brain injury rehabilitation. (Oxsworth T, Fleming J, Ross J, Collier AM, Stewart E). This aim of this project is to develop a new standardised questionnaire to evaluate patients’ perceptions of the rehabilitation process following acquired brain injury. Data collection was completed in 2011 and a paper submitted for publication.

Helping people with traumatic brain injury and their families adjust to driving cessation. (McKenna K, Fleming J, Liddle J, Turpin M, Weir N, Whitelaw P). The aim of this qualitative research was to understand the experiences of individuals with brain injury who do not have medical clearance to return to drive and the impact of the loss of the driving role on them and their families. One paper published and another accepted in 2011.

Brain injury rehabilitation: The lived experience of inpatients and their family caregivers. (Fleming J, Sampson J, Cornwell P, Turner B, Knill J, Griffin J). This study employed qualitative interviews to understand the inside experience of being an inpatient or the family member of an inpatient in brain injury rehabilitation. The findings were published in 2011, and contributed to changes incorporated into staffing, resources and services in the brain injury rehabilitation unit.

The effect of environmental barriers on community integration following traumatic brain injury. (Fleming J, Nalder E, Alves-Stein S). This prospective longitudinal study aims to determine the extent to which environmental barriers including physical, social, service and attitudinal barriers impact upon functional outcomes in the first 6 months following discharge from hospital after traumatic brain injury.
The transition experiences of stroke patients and their carers. (Worrall L, Fleming J, Grohn B, Naelder E, Hall A). This study used qualitative interviews with stroke patients and their family caregivers to examine their experiences over the first six months following discharge from hospital. Paper accepted for publication in 2011.

Compression therapy oedema of the stroke-affected upper limb. (Gustafsson L, Bower K, Slaughter A, Walter A). This study aims to establish clinical evidence for the use of compression therapy in stroke rehabilitation. It examines whether low stretch or high stretch bandaging is more effective in reducing oedema in the hemiplegic upper limb. Data collection was competed in 2011.

Evaluation of the utility of a newly developed virtual reality prospective memory task for individuals with traumatic brain injury. (Shum D, Fleming J, Munn D, Griffin J, Patterson F, Canty A). This study aims to establish the clinical utility of a computerised shopping task in a ‘virtual mall’ for the assessment and rehabilitation of forgetfulness in adults with traumatic brain injury. Funding from the PA Research Foundation was received in 2011.

A pilot study of error-based versus errorless learning in traumatic brain injury rehabilitation. (Ownsworth T, Fleming J, Beadle L, Patterson F). This series of single case study participants were randomly allocated to either an error-based or errorless learning approach that was applied during the practice of functional activities. Pilot data was used in a NHMRC project grant application.

Developing an objective circumferential measurement tool for head and neck lymphoedema. (Nixon J, Purcell A). Currently there is no objective clinical method for measuring oedema in patients with head and neck cancer. This study examined the reliability and validity of a circumferential measurement protocol in a pilot study of 10 participants.

Prospective study of omission of an elective neck dissection in metastatic squamous cell carcinoma of the skin to the parotid gland in patients requiring post-operative radiotherapy the parotid bed. (Porceddu S, Nixon J). The occupational therapy contribution to this larger trial involves examination of the quality of life/late effects of omitting neck dissection to this patient group.

Implementation and evaluation of an inpatient multi-disciplinary upper limb group based on the principles of the ‘Drive Your Own Recovery’ (DYOR) course. (Hayward K, Mitchell J, Ninnes E, Barker R). The aim is to pilot an inpatient multi-disciplinary upper limb stroke therapy group, based on the DYOR course delivered in the Geriatric Assessment and Rehabilitation Unit. The study evaluates the effect of the group on functional outcomes, self-efficacy of patients, family members and staff.

Exploring barriers to optimal utilization of allied health assistants – a clinician focussed study of allied health assistants and allied health professionals. (Amsters D, Kuipers P, Cox R.). The aims are to: 1) determine the barriers to full utilization of allied health assistants in a selection of physiotherapy and occupational therapy settings in Queensland, 2) explore barriers with emphasis on professional and workplace cultural aspects, 3) develop hypotheses about the generality of barriers, and strategies to mitigate them.

Major Grants and Financial Support

Other competitive funding: $216,006

National and International Presentations

Dr Amanda Purcell
- Statewide Lymphoedema Professional Support Program videoconference, Queensland
- National Occupational Therapy Conference, Gold Coast
- Australasian Lymphology Association Symposium, Brisbane

Ms Jodie Nixon
- Cancer Council Queensland Oncology Nurses Conference, Brisbane
- OT Australia 24th National Conference and Exhibition, Gold Coast

Ms Margo Coffey
- Australian Hand Therapy Association conference, Sydney

Ms Sybil McGuire
- Bariatrics and the Family Conference, Brisbane
- ANZSCOS/AFRM Conference, Brisbane

Ms Glenda Price
- MASS Living with Equipment Symposium, Brisbane
- ANZSCOS/AFRM Conference, Brisbane

Ms Nicole Coffey
- Cardiology Nursing Workshop, Brisbane
- Queensland Heart Failure Management Conference
A number of strong working relationships have allowed a very active research year for the Service.

Involvement of students has been a very satisfying component. The Service hosted UQ Medical Student, Emily McCallum (summer 2009-10) who carried out a structured literature search to help improve local provision of Electroconvulsive Therapy (ECT). Thanks to this work a meta-analysis and systematic review recently published in the Journal of Affective Disorders (2011), the department wishes Dr McCallum the best in her medical career.

This encouraged the hosting of a second “Summer” Research Intern for 2011-12, Ms Georgina Parker from Bond University. Georgie is conducting a systematic review of the literature on the mental health outcomes of older people affected by Natural Disasters, in collaboration with the (Metro South) Centre for Trauma, Loss and Disaster Recovery and the UQ Centre for Research in Geriatric Medicine (CRGM). The work will inform Queensland and National disaster preparedness.

The department would like to thank Mr Mark Rozario (CRGM) who provided research assistance for a number of projects through 2011.

Older Person Mental Health

Dr David Lie
Clinical Director

Research Activities

Grevillea B12 and Folate Study (Abbott W, Hokin B, Schilling K, Dark F, Lie D). Aims to discover nutritional biomarker profiles of patients admitted to an Older Persons Mental Health ward and examine the relationship with diagnostic and other variables. Findings will inform statewide practice. Supported from the Psychogeriatric Research Trust Fund (PAH).

Dementia and Population Health: a Needs Evaluation (DAPHNE) (Lie D, Travers C, Martin-Khan M, Halliday L.) This DoHa funded literature review and consensus development study examines prevention, promotion and early intervention options for the next national dementia strategy in collaboration with Alzheimers Australia Victoria, Mental Health Alcohol and Other Drugs Directorate.

Hospital Employees Awareness and Attitudes to Dementia Study (Travers C, Lie D).

Awards and Prizes

Dr David Lie
- Queensland Mental Health Achievement Award, 2011, PAH

National and International Presentations

Dr David Lie
- RANZCP Faculty of Psychiatry of Old Age Annual Scientific Meeting, Brisbane
- 5th National Dementia Research Forum, Sydney
- Alzheimers Australia 14th National Conference, Brisbane
- Australian Health Promotion Association 20th National Conference, Cairns
- Mental Health Week, Charters Towers
- Old Residential Care DONS Conference, Moreton Bay Nursing Care Unit
Based at the Princess Alexandra Hospital (PAH), the Molecular and Clinical Pathology Research Laboratory (MaCH R) is a unique research facility dedicated to providing downstream research and development to enable translation of basic biomedical research from existing research facilities into effective clinical treatments to improve cancer patient outcomes. Dr Glenn Francis, Director leads a team with a strong focus on molecular profiling in breast cancer with application of immunohistochemistry and tissue microarrays, applications of next generation sequencing in diagnostic pathology and the application of neural networks in classification of disease and prediction of patient outcomes.

Dr Glenn Francis
Director

Research Activities

Improved treatment outcomes for breast cancer patients with IGF family biomarkers (Francis, G).

SNAC trial; sentinel node biopsies in breast carcinoma (Shen, L)
Non-Hodgkin lymphoma study on CD163+ histiocytes; in conjunction with haematology department (Shen, L).

Amyloid mass spectrometry, Chronic lymphocytic leukaemia microenvironment (Renaut P).

Renal transplant, Review of deceased cardiac donor biopsies, Fibrillary glomerulonephritis in Queensland, Polyoma virus and Merkel cell carcinoma (Oliver K).

Major Grants and Financial Support

Other competitive funding: $131,300
Funding from other sources: $550,000

National and International Presentations

Dr Glenn Francis

- Workshop in Diagnostic Immunohistochemistry
- RCPA Pathology Update
- PacRim Breast and Prostate Cancer Meeting, Kingscliffe
- ANZBCTG 30th Annual Scientific Meeting
- AIMS NZIMLS South Pacific Congress
Pharmacy

The Pharmacy Departments research output has focused heavily on prescribing and administration of medicine on 2011. As well as this we have seen some of our staff initiate their PhD, and have seen the installation of dispensing robotics in 2011, being the first hospital pharmacy department in Australia to have this.

The department has led multidisciplinary collaborative randomised controlled trials to evaluate current practice and new service models. The key areas have been within the preadmission clinic, and cancer services.

The department has also had a focus on looking at what happens with regards to prescribing and administration of medications after patient discharge, including a large randomised controlled trial to assess a novel technique to improve patient adherence.

Patients in residential care facilities have also been included in the departments research in 2011, with a focus on improve communication between hospital and nursing homes, and improving prescribing in nursing homes.

The department has also continues to support other research by dispensing medications for over one hundred clinical trials lead by other researchers within the hospital.

Ms Lynette Loy
Director

Research Activities

Clinical Trials

The Department of Pharmacy was involved dispensing for in 100-120 trials in 2011.

Involved in trials in infectious diseases (new antifungals, new vaccines, new monoclonal antibodies, new antibiotics) (Unwin S).

An evaluation of methotrexate in obesity, and development of a model to predict optimal dosing. (Sandhu G). The aim of the study is to determine the pharmacokinetics of methotrexate in obesity and to develop a pharmacokinetic model to assist in dosing methotrexate in this population. The study has just started.

A Randomised Clinical Trial to improve adherence to medication in 200 post Myocardial Infarctus patients after discharge from hospital. (Winckel K. Gujral G). The aim of the trial is to evaluate whether identified patients beliefs via the repertory grid method and providing this information to community pharmacists to actively address concerns and reinforce positive beliefs can improve adherence to medicines for acute coronary syndrome.

200 patients were recruited and randomised. The results suggested that overall this intervention was not effective. However subgroup analysis suggests that some cohorts of patients may benefit from this. Further research to assess this is required.

Adherence to discharge medication plan in 120 patients post discharge: an evaluation and analysis for risk factors for non-adherence. (Winckel K. Wu X). The aim is to assess the adherence to the discharge medication plan 1 month after discharge and identify any risk factors for poor adherence to the plan. Analysis of the results suggests that overall adherence to the discharge medication plan is poor, mainly due to started complementary (herbal, or over the counter) medications. Significant non-adherence issues likely to put the patient at risk of harm occurred in roughly 10% of patients. The absence of a discharge medication record (DMR) increased this risk roughly 3 fold. The benefit of a DMR was highlighted to the department and the production of this for all relevant patients will be a priority for the department in 2012.

A collaborative prescribing model in the preadmission clinic. (Hale H) The project is a randomised controlled trial aims to assess whether a collaborative prescribing model between a pharmacist and a doctor in the pre-admission clinic is at least as safe and effective as a traditional medical prescribing model.

Progress: Results of this randomised controlled trial suggest that the pharmacist-doctor collaborative prescribing model was at least as effective as a traditional prescribing model with regards to safety and accuracy of medication charts produced, appropriateness of prescribing and appropriateness of venous thromboembolism (VTE) prophylaxis prescribed.
Interface between nursing home and hospital, medication communication
(Coombes J. Pulver L. Smith A) The aim of this project is to assess the communication between hospital and care homes.

 Developing a short screening tool to identify patients for medication review in nursing homes. (Coombes J. Ng M) The aim of the project is to develop a screening tool to identify patients who require medication review in residential care. This tool will help focus and prioritise the limited resource of accredited pharmacists for medication review.

Other Research
Robotics in Pharmacy (Loy L). Evaluation of baseline workload times for the department was conducted in 2011, with the aim to reaudit this after the installation of the robot to assess changes in workload with this.

Cancer Services Outpatient Pharmacist project (McKavanagh D). Moving the cancer services outpatient pharmacist from the dispensary to the clinic, and evaluating reductions in errors and time to delivery of chemotherapy to patients.

Various. 20 Drug Use Evaluation projects to assess the way we use medications within the hospital. Medication and areas evaluated included:

- Antipsychotics in ICU. The aim of the study was to audit the use of antipsychotics (haloperidol, risperidone and olanzapine) in the PAH ICU for the treatment of agitation and delirium, and compare the findings to evidence from the literature and other accepted protocols.
- Factor 7. This study investigates whether the Individual Patient Approval (IPA) guidelines employed in the PA hospital for the off-label use of recombinant factor VIIa are being complied with. Compliance to (IPA) guidelines was found to be suboptimal.
- IV paracetamol. Intravenous paracetamol cost 600 times more than oral paracetamol. The aim of this audit is to assess the usage of intravenous paracetamol and relate it to the hospital guidelines to assess whether it is being used where oral paracetamol could be used.
- Dispensing robot evaluation. To collate baseline data on workload and key performance indicators before the installation of the automated dispensing system (robot) being installed in 2011.
- Warfarin and amiodarone. This study aimed to investigate the drug interaction between warfarin and amiodarone by assessing INR and warfarin dosing at various times, as well as assessing the management of the interaction by hospital staff.
- Antiemetic use in ED. The purpose of this report was to identify the use and effectiveness of antiemetics through a prospective and retrospective audit of antiemetic prescribing and administration for patients presenting to the ED.
- Antibiotic use in ICU. The purpose of this project was to audit the communication procedures for Intensive Care Unit (ICU) patients who have been commenced on antibiotic medication and are to be or have been discharged from the ICU.
- Use of linezolid. To purpose of this study was to assess the usage and tolerability of linezolid at Princess Alexandra Hospital (PAH), with a particular focus on patients with significant renal impairment (eGFR<30mL/min/1.73m2).
- Use of octreotide. Synthetic Somatostatin analogues (Octreotide) are indicated for carcinoid syndrome, VIP secreting tumors and oesophageal variceal bleeding. Recently there has been concerns of its inappropriate usage for unapproved indications both locally and statewide. WE conducted an audit to assess if this was the case at the PA Hospital
- Sodium thiosulphate for calciphylaxis. The aim of this evaluation was to investigate the management of calciphylaxis at PAH and examine the role of Sodium Thiosulphate in its treatment.

Awards and Prizes
Ms Catherine Lynch
- QH Healthcare Improvement Awards, Skilling for the future innovative skills and system development

Mr Andrew Hale and Mr Sean Unwin
- Best paper in session, SHPA Annual conference

National and International Presentations
Ms Elizabeth Currey (Donegan)
- Society of Hospital Pharmacists of Australia, Hobart

Ms Catherine Lynch
- Monash University Prato Conference Italy
- Society of Hospital Pharmacists of Australia, Hobart

Ms Belinda Badman
- Society of Hospital Pharmacists of Australia, Advanced Critical Care Seminar, Melbourne

Ms Julia Bates
- Society of Hospital Pharmacists of Australia, Hobart
- Queensland Oncology Nurses Group
Ms Jess Lloyd
- Society of Hospital Pharmacists of Australia, Hobart

Mr Andrew Hale
- Society of Hospital Pharmacists of Australia (SHPA) Annual Conference

Ms Lynette Loy
- Celgene Hospital Pharmacy Forum
- Amgen Australia Directors of Pharmacy Symposium
- Chinese Health Executives

Mr Dan McKavanagh
- COSA ASM
- COSA Clinical Skills

Mr Karl Winckel
- Monash University Prato Conference, Italy

Ms Nimali Peters
- University of Peradenia, Sri Lanka
- HPA federal conference

Mr Sean Unwin
- SHPA federal conference
- Queensland Antimicrobial Stewardship Forum (CHRISP)
- PSA

Mr David McDougall
- Australian Society for Antimicrobials 2011

Ms Geetpal Sandu
- Intermediate Oncology/Haematology Seminar, Society of Hospital Pharmacists Australia
- Clinical Skills for Cancer Pharmacy Practitioners Seminar, Clinical Oncological Society of Australia Cancer Pharmacists Group
- Haematology Society of Australia & New Zealand Queensland Conference
- Cancer Care and Symptom Control Interest Group
- Post-Graduate Course in Adolescent-young adult Oncology

Ms Judith Coombes
- SHPA federal conference
- University of Peradenia, Sri Lanka
Physiotherapy

The Physiotherapy Department had a productive year during 2011, generating 3 publications in high-quality peer-reviewed journals including BMC Musculoskeletal Disorders and Australian Health Review, and being awarded in excess of AUD$150K research funding from major sources including the Health Practitioner Research Grant Scheme. Research activity within the department continued to increase, with 25 studies in progress, and 4 members of staff enrolled in higher research degrees. Towards the end of the year, Dr Anna Hatton joined the Physiotherapy Department as the new Joint Research Fellow in Physiotherapy, to help facilitate research activity, and continue the work of Dr Suzanne Kuys and Dr Steve McPhail. Our Physiotherapy Research Committee, chaired by Leanne Passier during 2011, continued to generate research interest amongst both senior and junior physiotherapy staff. The Department was also represented by attendance of our staff at Metro South Health Practitioner Research Collaborative meetings.

Kathy Grudzinskas
Director

Research Activities

Clinical Trials

Modified conservative management with external rotation bracing versus early arthroscopic surgical intervention amongst young people with primary anterior shoulder dislocation: a randomised controlled trial (Johnson A, McPhail S, Lam G, McMeniman M, Cockfield A, Bourke M, Siddiqi N, Frederiksen S, Ross M, Potts W, Stankunas P). This multi-centre RCT aims to investigate arthroscopic surgical stabilisation versus conservative external rotation bracing for anterior shoulder dislocation in young people. It is anticipated that this study will continue for up to four years.

Other Research

Reliability, validity and predictive capacity of the Queensland Wheelchair Skills Assessment Tool (QWSAT) (Golland E, Simmons J, McPhail S). The aim of the project is to develop and validate a clinically relevant, client focussed wheelchair skills assessment tool to assess wheelchair skills of people with spinal cord injury. The QWSAT will be used to assist clinical decision making processes with respect to rehabilitation goals and equipment prescription.

Preparation for discharge from a rehabilitation unit: patient perceptions and functional outcomes (Mitchell J, White S, Kuys S, Low Choy N). This study aims to determine: patients’ perception of their readiness to return home from a rehabilitation unit; if routine physiotherapy assessments can determine the types of activities patients can perform at home; if preparations made by the rehabilitation team meet patients’ needs. Preliminary outcomes have been determined. Recruitment is ongoing.

Practice based evidence for geriatric rehabilitation: investigation of 5 years of multi-disciplinary practice data, linking interventions with outcomes (Kuys S, McPhail S, Varghese P, Kuipers P, Fleming J). This study is aims to review the clinical outcomes of patients admitted to The Geriatric and Rehabilitation Unit at PAH over the past 7 years (2005 – 2011) using data collated in a database each admission. Ethics was approved, an HP grant was obtained and preparations for data collection commenced.

Drive Your Own Recovery (DYOR) (Hayward K, Mitchell J, Ninnes E, Barker R). This study aims to assess the feasibility of running the drive your own recovery for the upper limb project in an acute rehabilitation setting.

SMART Arm: The efficacy of a novel, non-robotic intervention to train reaching post stroke (Brauer S, Carson R, Barker R, Cresswell A, Hayward K). The aim of this study is to assess the efficacy of the SMART Arm during the acute/subacute stage of recovery.

The effect of Nintendo Wii-Fit on outcomes in people with lower limb injuries (Kuys S, Tonks P, McPhail, O’Hara M). The Nintendo Wii fit can be used to assist in balance and coordination training. This study aims to examine the effectiveness of this sort of training on outcomes for patients with lower limb injuries. Data collection has been completed and data analysis has commenced.

Does a multidisciplinary group education program influence the outcome in management of patients with non-specific chronic low back pain (Windred T, Matthews L, McPhail S, Kuys S). The study is investigating whether participation in a multi-disciplinary group education program improves outcomes for patients with chronic neck and back pain. Preliminary analysis of 43 subjects shows significant improvement in functional ability and self efficacy and reduction in depression.

The use of spaced retrieval, errorless learning and vanishing cues in retraining sit to stand in patients with dementia during hospitalisation (Dolecka U, Kuys S). The study aims to determine what sit to stand strategies are used by people with dementia and healthy elderly people. An observation tool will be developed and validated to examine use of cognitive methods in re-training of sit to stand in people with dementia.
Prevalence of falls and musculoskeletal conditions in elderly individuals with chronic heart failure: an observational study (Adsett J, Hwang R, Hogden A, Kuys S, Mandrusiak A, Peters R). This project is an observation study which aims to explore the prevalence of falls and musculoskeletal conditions in a community dwelling heart failure population and identify common falls risk factors that differ between fallers and non-fallers with heart failure. Ethics was approved and data collection commenced.

Aquatic versus Land Based Exercise for Patients with Chronic Heart Failure. (Adsett J, Hwang R, Mullins R, Kuys S, Mandrusiak A, Mudge A, Korczyk, Paratz J). The project aims to determine the efficacy of an aquatic exercise programme in people with heart failure, specifically for improving exercise capacity, balance and quality of life for patients with heart failure. Ethics was approved and data collection commenced.

Effectiveness of education on urinary incontinence in people with heart failure: an observational study (Chuan F, Hwang R, Kuys S, Marsh C, Peters RJ). This is an observation study to explore the prevalence of urinary incontinence in people with heart failure after receiving educational materials, and compliance with medication and quality of life in people with urinary incontinence after receiving educational materials. Ethics was approved and data collection commenced.

Gait pattern following femoral to distal artery bypass graft (Lehtonen N, Kuys S). The project attempts to identify presence and duration of gait abnormalities after femoral to distal artery bypass. The results of the project will be used to develop a specific home exercise program. Data collection has been commenced.

Activity levels of elderly patients admitted to the Internal Medicine Unit (Kuys S, Dolecka U, Lehtonen N, Guard A). In this project data was collected on physical activity of patients in Internal Medicine Unit, particularly, time spent out of bed. The project had two phases of data collection: before and after the new hospital bedside chairs were provided. All data has been collected and analysed.

Physiotherapy enhancement of Internal Medicine Unit (Kuys S, Dolecka U, O’Gorman P). This project aims to investigate effects of mobility enhancement program in addition to usual therapy on length of stay and functional outcomes for patients. The project is in the introductory phase with audits completed on use of measure, in preparation for formal data collection.

Prevalence of dizziness, balance disorders and falls in head and neck cancer patients undergoing treatment. (Pinkham L, Nixon J, Wood A, Kuys S). This study aims to investigate whether neck dissection surgery due to cancer
has an effect on balance and sensation of dizziness. If the presence and the nature of the problems are identified, the outcomes will be used to establish a specific physiotherapy program. Data collection is ongoing.

**Lymphoedema in patients following breast surgery.** (Manning S, Kuys S, Pinkham I). This project will collect data on the prevalence of lymphoedema 6, 12 and 24 months following the breast surgery. The results of the project will be used to develop follow up service for this group of patients. One year of two years data collection has been completed.

**Systematic review on axillary web syndrome.** (Yeung I, Kuys S, McPhail S). The aim of this review is to synthesize the evidence on the epidemiology, incidence and prevalence, predisposing factors interventions and outcomes for AWS following axillary lymphadenectomy for breast cancer and melanoma.

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### Major Grants and Financial Support

**Other competitive funding:** $150,121

### Awards

Mitchell J, Kuys S, Choy NL, and White S: Best 5min x 5 slide presentation in the Gerontology stream at the Australian Physiotherapy Association Conference, Brisbane.
The Plastic and Reconstructive Surgery Unit has had ongoing involvement in both clinical and laboratory research throughout the year. Dr Paul Belt was appointed the scientific convener for the biennial Plastic Surgery Congress held at the Gold Coast under the auspices of the Australian Society of Plastic Surgeons and the New Zealand Association of Plastic Surgeons. The Congress featured international speakers from The United Kingdom, Germany, The United States of America and Belgium and hosted 401 delegates. The Department’s research activity was well represented at this Congress.

Dr. David R. Theile (Jnr)
Head of Department

Research Activities

The Use of Frozen Section in the Excision of Cutaneous Malignancy: A Queensland Experience (Castley A., Theile D.).

Waterborne infections in flood affected Queensland. (Castley A., Theile D.).

Use of the ALT free flap in Soft Tissue Reconstruction of the Upper Limb. (Chauhan A, Rowe D.).


Free Jejunal Interposition Reconstruction after Pharyngolaryngectomy: 368 consecutive cases. (Perez-Smith D, Wagels M and Theile D).


Soft Tissue Reconstruction After Trauma to the Lower Limb: The If, When and How (Wagels M, Rowe D, Senewiratne S, Theile D).


Cervical metastasis of squamous cell carcinoma of the maxilla (Mickelburgh M, Potter M).

Major Grants and Financial Support

Total NHMRC Funding: $35,750

National and International Presentations

Dr Michael Wagels
- Registrars’ Conference Sydney
- Annual Scientific Congress, Gold Coast

Dr Ajay Chauhan
- Queensland Hand Society Meeting

Dr Koo Chan
- Annual Scientific Congress, Gold Coast

Dr Scott Allison
- Annual Scientific Congress, Gold Coast

Dr Diana Perez-Smith
- Annual Scientific Congress, Gold Coast

Dr Jennie Gu
- Annual Scientific Congress, Gold Coast

Dr Dan Rowe
- Annual Scientific Congress, Gold Coast
The Queensland Clinical Trials & Biostatistics Centre (QCTBC) has now been established for two years. The centre provides necessary expertise and infrastructure to design, conduct, and facilitate high quality clinical trials, non-trial clinical studies and biostatistical research with both academic and industry collaborators. All professionals of the Centre are GCP trained, and conduct clinical studies strictly following the regulatory requirements (FDA) and pharmaceutical industry standard. The Centre is currently running Phase 1, -2 and -3 clinical trials, leading several clinical studies including evaluation of cardiometabolic effects of new anti-diabetes drug (GLP-1R agonists), proteomics and metabolomics, and methodological studies in Clinical Biostatistics. In addition, the Centre provides high quality consulting services to clinical researchers and bio-pharmaceutical companies.

The Centre has been successful in developing active research collaborations with reputed international and Australian research institutes, and has earned competitive international and national research grants (AUD 1.88 M) to conduct cutting edge exploratory and translational research in the fields of metabolic diseases. The research programmes of QCTBC cover three broad areas: exploratory clinical and clinical epidemiological studies in the fields of diabetes and cardiovascular disease; methodological and applied studies with new biomarkers and the development of proteomics pipeline in the fields of metabolic diseases; and methodological and empirical studies for the analysis of longitudinal data. Apart from leading its own research programmes, QCTBC is actively collaborating with local basic science and clinical research groups in the conduct of pre-clinical studies and clinical trials in various disease fields including oncology, rheumatology, and geriatrics. QCTBC is a member institution of the new Translational Research Institute (TRI) on the Princess Alexandra Hospital campus.

Research Activities

Clinical Trials

Promoting activity for frail aged in post-acute hospital settings: a randomised controlled trial of accelerometer (L Gray). This NHMRC funded trial is in partnership with University of Queensland Centre for Research in Geriatric Medicine.

BLING2 Trial (J Lipman). This NHMRC-funded trial is a multi-centre, double-blinded, phase IIb, randomised, controlled trial of continuous beta-lactam infusion compared with intermittent beta-lactam dosing in critically ill patients and is in partnership with Department of Intensive Care Medicine, Royal Brisbane & Women’s Hospital.

Dose-Dense ABVD Study (Mollee, P, Kennedy, G, Paul S). This Trial is funded by Hospira and is an accelerated delivery of Adriamycin, Bleomycin, Vinblastin and Dacarbazine for patients with Hodgkin Lymphoma. This phase 2 clinical trial is due to commence mid-2012, and will be managed by QCTBC.

ZXP Trial (Ji L). This is a comparative study of Xiao Ke Wan with glibenclamide in Chinese type 2 diabetic patients. This study is funded by Guangzhou Zhongyi Pharmaceutical Co. Ltd., China in collaboration with Peking University, China. The primary trial result was presented at the American Diabetes Association Conference 2011 in San Diego, USA.

Other Research

Therapeutic Innovation Australia – Queensland Node. QCTBC, together with Diamantina Institute, UQ Centre for Clinical Research, TetraQ / CIPDD, and Griffith Health Institute, is a consortium member of the TIA-Queensland Node project. This consortium of research centres was established with funding from the Commonwealth Government’s 2011. Education Investment Fund Initiative, under the auspices of Therapeutic Innovation Australia, for translating university-based life sciences discoveries into high value products for commercialisation.

Research programme with GLP-1 receptor agonists. A major research program, led by QCTBC, was initiated in 2010 with a 3-year programme grant from Amylin Pharmaceuticals Inc., USA, to evaluate the cardiometabolic effects of a new class of anti-diabetes drugs – GLP-1 receptor agonists. The initial findings from this study have already gained attention from the international research community with considerable media coverage, and the Centre Director was invited by the World Diabetes Congress and the Chinese Diabetes Society to present the finding during their annual scientific congresses in 2011. The initial finding is to appear in Diabetes, Obesity & Metabolism.
Research programme in proteomics and metabolomics. QCTBC has initiated its own programme of studies to develop data generation techniques for high-dimensional proteomic and metabolomic biomarkers, and the development of statistical methodologies to identify candidate biomarkers for disease progression in the fields of type 1 and type 2 diabetes, and ovarian cancer. QCTBC has been awarded a UQ Collaboration and Industry Engagement Fund grant and substantial funding commitment from a Chinese pharmaceutical company to initiate these studies.

The Institute of Genomics of the Chinese Academy of Sciences (CAS) and the Department of Diabetes & Endocrinology of Peking University (PKU) have assured complete technical and laboratory support for the serum and urine sample analyses required for this study. QCTBC is leading a UQ Collaboration and Industry Engagement Fund (UQ-CIEF) project to develop a proteomic pipeline in the field of ovarian cancer, in collaboration with UQ Centre for Clinical Research (UQCCR), and Agilent Technologies, USA.

Research project to develop warning systems for patients with diabetes. With initial funding and technical support from Medtronic, USA, QCTBC commenced a research programme to develop methodologies and techniques to analyse continuously monitored blood glucose levels in patients with diabetes, with the aim of developing a system to warn patients about incipient hypoglycaemia or hyperglycaemia. This study has a high translational value, and the University of Oxford, Baker IDI and Medtronic are collaborators in this study.

Studies in clinical epidemiology and longitudinal data. In collaboration with Imperial College London and the University of Leicester, UK, QCTBC is leading a research programme to evaluate the long-term effects of glycaemic and other risk factors on cardiovascular events in patients with diabetes. The centre has obtained the license with the collaborators to use the longitudinal electronic primary care data on about 1.2 million patients with type 2 diabetes registered in the UK General Practice Research Database, with follow up period from 1990 to 2008. The initial exploratory study conducted by the Centre has been published in Diabetologia.

The Centre is leading a methodological research programme in collaboration with the University of Minnesota, USA, and the Imperial College London, to develop robust methodologies for the analysis of longitudinal data.

Major Grants and Financial Support

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National and International Presentations

Associate Professor Paul Sanjoy

- World Diabetes Congress 2011, Dubai, United Arab Emirates
- 15th Scientific Meeting of the Chinese Diabetes Society 2011, Beijing, China
- World Pharma Trials Australia Forum 2011, Melbourne
- Advanced Training Seminars for Registrars, Princess Alexandra Hospital
The year ended 2011 saw the Queensland Liver Transplant Service perform its 1000th liver transplant, in a paediatric patient. There was generally increased clinical activity in the year with nearly 50 new liver transplants undertaken. While having no dedicated research personnel, the service nonetheless provides research support to other units undertaking projects such as the study into long term outcomes in adult liver transplantation being lead by A/Prof Graeme MacDonald and Mrs Geraldine Lipka, for whom the study forms the basis of her PhD doctoral thesis. In October 2012, a new PhD scholar, Dr Janske Reiling will be joining us from Maastricht. She has previously done a clinical attachment with us and will return as a recently graduated doctor who wishes to pursue a career in academic medicine. Janske is interested in the area of organ preservation injury associated with donation after cardiac death. At the Royal Children’s Hospital, Dr Looi Ee, consultant paediatric gastroenterologist, has nearly completed her longitudinal cohort study of paediatric liver transplant patients and progressed through all of the interim checkpoints on her way to completing her PhD doctoral thesis based on her work.

Dr Jonathan Fawcett
Director

The service continues to support the work of Professor Elizabeth Powell’s group by providing liver tissue for their work on the isolation, culture and analysis of hepatocytes in vitro. Currently, the service is not involved in any multi-centre trials but has registered an interest in participation in studies of the new generation anti-viral agents for the treatment of recurrent hepatitis C in liver transplant patients. These studies are anticipated to commence in 2014. In conjunction with Dr Katherine Stuart, the service has initiated a prospective database to collate information related to all patients with primary hepatocellular cancer, many of whom come to liver transplantation. This is a complex clinical problem to manage and one that seems to be increasing rapidly in incidence.
The Queensland Melanoma Project was originally established in 1963 by Dr Neville Davis to investigate issues the incidence of the disease and outcomes from treatment. Over the years the project has been involved in a number of international, national and local trials. From the multi-disciplinary clinic involving General Surgeons (Surgical Oncology), Plastic and Reconstructive Surgeons, Medical Oncology, Radiation Oncology and Allied Health patients suitable for research projects are assessed and managed by the team in the QMP. This is the only specialist melanoma clinic in Queensland and offers patient care and advice to clinicians in Queensland and Northern New South Wales.

In 2011, the project was involved in three phase III, one phase II and three phase I clinical trials. In addition the project has an active collaboration with Dermatology at Princess Alexandra Hospital (Peter Soyer) and Queensland Institute of Medical Research (Adele Green). QMP received a project grant from the Queensland Cancer Council. This will help fund a project looking at identify biomarkers in patients with stage III Melanoma. The Project continues to collect prospective data on all patients undergoing sentinel lymph node biopsies, nodal surgery or isolated limb infusions.

Associate Professor
B Mark Smithers
Chairman Queensland

Research Activities

Clinical Trials

Multicenter Selective Lymphadenectomy for Melanoma Trial II: A Phase III Multicenter Randomized Trial of Sentinel Lymphadenectomy and Complete Lymph Node Dissection versus Sentinel Lymphadenectomy Alone in Cutaneous Melanoma Patients with Molecular or Histopathological Evidence of Metastases in the Sentinel Node. (Smithers M, Barbour A, Bayley G, Allan C). The objective of this study is to determine whether LM/SL and CLND in cutaneous melanoma subjects with evidence of SN metastases by histopathologic or molecular evaluation will lead to longer melanoma-specific survival than that observed after LM/SL alone and postoperative observation with serial nodal ultrasound.

A Phase III, randomised trial of surgical resection with or without BCG versus best medical therapy as initial treatment in stage IV melanoma. (Smithers M, Barbour A, Bayley G, Allan C, Walpole E, Atkinson V, Joubert W, Burmiester B). The objective of this study is to examine the impact of surgical resection versus medical therapy as initial treatment therapy for patients with Stage IV melanoma.

A Double blind, randomised, placebo-controlled Phase III study to assess the efficacy of recMAGE-A3 + AS15 ASCI as adjuvant therapy in patients with MAGE-A3 positive resected stage III melanoma. (Smithers M, Barbour A, Bayley G, Allan C, Walpole E, Burmiester B). The objectives of this study are to assess the efficacy in terms of Disease-Free Survival of the recMAGE-A3 + AS15 ASCI in the overall population of patients and to evaluate other indicators of efficacy and safety of recMAGE-A3 + AS15 ASCI such as overall survival, distant metastasis free survival, 1-year, 2-year and 3-year DFS rates and the immune response to the ASCI.

A Phase II open-label, non-comparative study of intralesional (IL) PV-10 and hypofractionated radiotherapy in patients with recurrent and or metastatic malignant melanoma. (Smithers M, Barbour A, Bayley G, Allan C, Foote M, Burmiester B, Pullar A). The primary objective of this study is to investigate the effectiveness of intralesional (IL) PV-10 followed by hypofractionated radiotherapy for the locoregional treatment of metastatic melanoma.

Phase I clinical trial of interferon modified B7 positive melanoma cell vaccine in patients with Stage IV malignant melanoma. (Smithers M, Barbour A, Bayley G, Allan C, Walpole E). The objectives of this study are to test the safety of the vaccine, Genvax, at different dose levels and to see the effect the vaccine has on melanoma cancer.

A Single Dose, Dose-Escalating, Phase I Clinical Trial of PAT-SM6 Monoclonal Antibody in Patients with Recurrent In-Transit Cutaneous Melanoma. (Smithers M, Barbour A, Bayley G, Allan C, Atkinson V, Burmeister B). The primary objective is to establish the safety profile of a single dose of the anti-GRP78 monoclonal antibody PAT-SM6 in patients with recurrent in-transit cutaneous melanoma.
Study of the GSK22416568A Antigen Specific Cancer Immunotherapeutic in patients with unresectable and progressive metastatic cutaneous melanoma. (Smithers M, Barbour A, Bayley G, Allan C, Atkinson V, Burmeister B). The two co-primary objectives of this study are to document and to characterize the severe toxicity and clinical activity of the recNY-ESO-1 + AS15 ASCI in patients with NY-ESO-1-positive metastatic cutaneous melanoma.

Other Research

Medium Risk Primary Melanoma Project – This study is being conducted in conjunction with the Queensland Institute of Medical Research. The objective of this study is to assess whether different personal factors such as age, sex, or specific individual behaviour such as sun exposure, diet and finally your quality of life can influence or predict the spread of melanoma in terms of possible metastasis and death.

Molecular markers of sentinel node invasion in melanoma. This study is being conducted in conjunction with the University of Queensland using the existing database managed through the QMP office. The objective of the study is to look at different markers in the tumour to see if they could predict the invasion of the sentinel node and the severity of the melanoma.

Melanoma Database – Sentinel Node and Nodal Dissection (Smithers M, Barbour A, Bayley G, Allan C). Established in 2004 data has been collected on all patients undergoing a sentinel lymph node dissection or complete lymph node dissection for metastatic melanoma. Retrospective data has been collected since 1997. There are currently 1620 patients.

Melanoma - Isolated Limb Infusion Database (Smithers M, Barbour A, Bayley G, Allan C). Data has been collected on all patients who have undergone an isolated limb infusion at the Princess Alexandra Hospital since 1997. The majority of these procedures have been for metastatic melanoma. There are currently 137 patients.

Biomarkers for Stage III Melanoma Recurrence and Response to Radiotherapy. (Barbour A, Smithers M, Wayte N, Frankel A, Burmeister B, Pavey S, Lampe G). Our overriding aim is to improve the management and treatment outcomes of stage III melanoma patients by identifying low and high risk recurrence groups using biomarkers identified in this study. The aims are to perform global gene expression analyses in stage III melanoma patients treated by surgery alone and to develop gene classifiers of (a) regional recurrence after surgery and (b) disease-free survival and to perform global gene expression analyses in stage III melanoma patients treated by surgery with adjuvant RT and to develop gene classifiers of (a) regional recurrence after treatment with surgery and adjuvant RT and (b) disease-free survival. To validate Aims 1 and 2 in the same cohort of patients using quantitative real-time PCR and immunohistochemistry.

Major Grants and Financial Support

Other competitive funding: $75,000
Funding from commercial studies: $209,591
Funding from other sources: $56,300

National and International Presentations

Associate Professor B Mark Smithers
- University of Queensland, Skin Cancer Congress, Hamilton Island
- International Skin Cancer Research Workshop, Brisbane
Queensland Spinal Cord Injuries Services

The Queensland Spinal Cord Injuries Service (QSCIS) consists of the Spinal Injuries Unit (SIU), the Transitional Rehabilitation Program (TRP) and the Spinal Outreach Team (SPOT). All three services have active research programs.

Spinal Injuries Unit (SIU)

The Queensland Spinal Cord Injuries Service (QSCIS) multidisciplinary team is involved in three international clinical trials. One (SCIPA-Hands on) is comparing the addition of an intensive task specific motor training program to standard rehabilitation so as to improve hand function in people with recent tetraplegia.

The second SCIPA trial called Switch On is a phase 1 multi-centre, randomised controlled assessor-blinded clinical trial (RCT) investigating the relative effectiveness of FES-assisted cycling compared to passive cycling early after spinal cord injury. The study population includes adult participants with a complete or incomplete spinal cord injury above T12 during the acute phase of their injury.

The third trial is looking at the effects of nocturnal nasal continuous positive airway pressure (CPAP) for the treatment of obstructive sleep apnoea on neuropsychological function, quality of life, autonomic dysfunction and breathing in people with acute tetraplegia. The unit also conducted research into managing respiratory dysfunction after SCI with input from our intensive care unit and the Austin spinal unit which should enable us to develop clearer pathways in managing high level tetraplegia as well as ventilator dependent patients at SIU.

Dr Sridhar Atresh
Director

Research Activities

Clinical Trials

SCIPA (Spinal Cord Injury and Physical Activity) Hands-On: Early Intensive Hand Rehabilitation After Spinal Cord Injury. (Chief Investigator: Harvey, L.; Galea, M. & Dunlop, S); QSCIS Staff: Geraghty, T (Principal Investigator); Tsai, P (Co-investigator); Jones, R (Research Nurse); Cullen, C (Intervention Therapist); Wallace, M (Blinded Assessor).

Multi-site, randomised controlled trial to determine the relative effectiveness of an intensive task-specific motor training program and standard rehabilitation compared with standard rehabilitation alone for improving hand function and clinical outcomes in people with recent tetraplegia.

SCIPA Hands-On is funded through The Victorian Neurotrauma Initiative.

SCIPA (Spinal Cord Injury and Physical Activity) Switch-On: Electrical Stimulation: Acute care. (Chief Investigator: Galea, M, Dunlop,S.; Marshall, R & Clark, J, QSCIS Staff: Atresh, Sridhar (Principal-investigator); Jones, Rachel (Research Nurse); Simmons, Joshua (Intervention Therapist); Gollan, Emilie (Intervention Therapist).

Multi-centre, assessor-blinded, randomised controlled Phase 1 trial to determine the relative effectiveness of FES-assisted cycling compared to passive cycling on muscle cross-sectional area of thigh and calf. This study will compare two intervention programs with respect to: neurological function and body composition; and depression and quality of life.

COSAQ: A prospective, randomised controlled trial for auto-titrating Continuous positive airway pressure for Obstructive Sleep Apnoea after Acute Quadriplegia. (Chief Investigator: Berlowitz, David); PAH Staff: Geraghty, Timothy (Principal Investigator); Tsai, Polly (Co-investigator); Deuce, Brett (Co-Investigator); Jones, Rachel (Research Nurse); Lewis, Joanne (Blinded Assessor).

An international, multi-site, randomised controlled trial to determine the effect of nocturnal nasal continuous positive airway pressure (CPAP) treatment for obstructive sleep apnoea (OSA) on neuropsychological function, quality of life, autonomic dysfunction and breathing in people with acute quadriplegia. COSAQ is funded by The Institute for Breathing and Sleep.


"Management of Respiratory dysfunction after acute SCI- ICU to SIU". This project involves a retrospective chart review of 30+charts (with ethic approval), education package to be utilised within Q Health and future collaborative research options with Austin Hospital in Melbourne.

The Transitional Rehabilitation Program (TRP) provides post-primary rehabilitation services for people with spinal cord injuries who have undergone inpatient rehabilitation in the Queensland Spinal Injuries Unit. TRP employs a research officer who assists the team to undertake research to inform clinical practice and service delivery.

During 2011, work has continued on collaborative research being undertaken with the Spinal Outreach Team, the Acquired Brain Injury Outreach Service and the Centre for Remote Health (NT) investigating the efficacy of consultancy as a model for translating clinical evidence in rehabilitation and aged care settings. New research has received funding and commenced, in collaboration with the Acquired Brain Injury Outreach Service, the Spinal Outreach Team and Griffith University exploring the area of psychosocial models of care, in particular identity reconstruction. TRP has continued to collaborate with the Spinal Outreach Team on research exploring long term outcomes among people with spinal cord injury.

Greg Ungerer, Manager

Research Activities

Finding the new ‘me’: An exploration of personal identity following traumatic injury (Kendall, M., Amsters, D., Goddard, K., Smith, S., Kendall, E., Morriss, E., Hinchy, K.). The aim of this project is to investigate personal identity following traumatic injury (spinal cord injury and brain injury) and explore how it differs from those who have not experienced traumatic injury. The project received funding during 2011 and commenced data collection. It is anticipated that the study will inform the development of better models of psychosocial care following injury.

Goal setting and attainment in the community setting: An evaluation of goal content, processes and outcomes (Kendall M, Ungerer G). Developed as a quality improvement initiative, this project has involved the analysis of clinically generated goal content, processes and outcomes prior to and following the implementation of a group goal setting process. Data collection is complete and preparation of publications is underway.

Clinical knowledge translation from specialist health practitioners to general health practitioners - evaluating a consultancy model of service delivery (Amsters D, Kuipers P, Kendall M, Lindeman M). This project, which commenced in 2009, has continued with significant data collection continuing during 2011. A Q-Sort survey was developed and delivered and data from this is currently being analysed. The project aims to explore the efficacy of consultancy as a means of health service delivery and clinical capacity building in rehabilitation and aged care settings.

Professional boundaries: development and evaluation of an intervention to address staff knowledge, comfort, attitudes and ethical decision making (Fronke P, Kendall M, Ungerer G, Malt J, Eugarde E, Geraghty T). This project evaluated an intervention to address professional boundaries in practitioner/client relationships. Data collection and analysis is complete and the measurement tool developed for the study was published during 2011. Ongoing publications are currently in preparation.

Spinal Cord Injury Response (SCIR) home modifications (DiMichele, R.). This project aimed to determine what home modifications were being undertaken as part of the SCIR funding and determine planning and communication between stakeholders regarding home modifications. This project was commenced and completed during 2011, with reports forwarded to Housing and Homelessness Practice Improvement, Department of Communities and QSCIS Management Group.
The Spinal Outreach Team (SPOT) is a community-based allied health and nursing service which provides consultancy for people with spinal cord injury, family and community members as well as other health professionals. SPOT has two embedded research officers who assist the team to undertake research which is geared towards informing practical improvement of service delivery.

Kiley Pershouse
Manager

Awards and Prizes
Ms Brooke Wadsworth

Major Grants and Financial Support
Other competitive funding: $41,262

National and International Presentations
Ms Brooke Wadsworth
- ISCOS Conference, Washington DC, USA
- ANZSCOS Conference, Brisbane

Research Activities
Long term outcomes after spinal cord injury in Queensland. (Amsters D, Pershouse K, Schuurs S, Kendall M, Barker R, Kuipers P). The aim of this project is to document the trajectories of body function/structure, activities, participation and quality of life after spinal cord injury. Data collection has concluded, however analysis and dissemination of results continues.

When do community nurses seek help? Factors influencing consultancy seeking for wound care in spinal cord injury? (Ladhams J, Schuurs S, Amsters D). The aim of this project is to establish the factors which influence nurses to seek help when confronted with a client with spinal cord injury and secondary skin breakdown. An online survey instrument has been developed and will be rolled out across Queensland in 2012.

Clinical knowledge translation from specialist health practitioners to generalist health practitioners – evaluating a consultancy model of service delivery. (Amsters D, Kuipers P, Kendall M, Lindeman M.). The aim of this project is to establish the efficacy of “consultancy” as a vehicle for knowledge translation amongst allied health professionals. After conducting focus groups and key informant interviews a Q-Sort survey was developed which challenged participants to rank various characteristics of allied health consultancy. Data from this Q-Sort is currently being analysed.

Utilisation and impact of environmental control units (ECUs) on quality of life of people with tetraplegia (Myburg M, Schuurs S, Amsters D, Allan E.). The aim of this project is to investigate the long term utilization of ECUs and to investigate the reasons behind success or failure of these devices. A qualitative methodology has been developed and funding obtained. Data collection will commence in 2012.

Major Grants and Financial Support
Other competitive funding: $9,938

National and International Presentations
Ms Delena Amsters
- ANCoS/AFRM Conference 2011, Brisbane

Ms Julie Ladhams
- ANCoS/AFRM Conference 2011, Brisbane
- HACO/MASS Continence Forum, Brisbane
- ARNA National Conference 2011, Gold Coast

Ms Emily Allan
- ANCoS/AFRM Conference 2011, Brisbane
The department continues to be actively involved in clinical trials and in the past year treated 1965 treatment courses which was an increase over the previous year. The research unit is accruing to 16 clinical trials in radiation treatment. Under the guidance of Kacy Baumann, the clinical trial coordinators (Adrienne See and Narelle Wallace) have continued to deliver a high quality service for clinical trials. The most dramatic increase in research activity has occurred within the radiation therapists who are currently involved in 9 research projects and Rebecca Owen is to be commended on her enthusiasm and energy. I would also like to congratulate Dr Tanya Holt for obtaining funding from the Queensland Cancer Council for the SCORAD trial on spinal cord compression treated with radiotherapy.

Associate Professor
Michael Poulsen
Director

Research Activities

Exploration of Lung Imaging in External Beam Radiotherapy (Schloman, T). This study considers the best manner of utilising the newly installed technology, four-dimensional CBCT, with the aim of reducing geometric uncertainties at treatment.

Intra-fractional respiratory motion and its impact on breast Radiotherapy (Fitzgerald, R & Jones, S). Organ motion study with 8 to 10 patients data collected, final two pts consented.

What impact does Magnetic Resonance Imaging (MRI) have on treatment volumes when combined with CT? (Parfitt, M).


Measuring dose delivered by CBCT and kV setup images during radiation therapy treatment to the head and neck (Cronin, B).

Circumventing the infrastructure drain: A comparative study of e-learning as a clinical training method in radiation therapy (Brady, C). A Research dissertation has been submitted for examination.

Investigation to minimise toxicity from paediatric cranio-spinal radiation therapy (Deegan, T) Investigation into various planning techniques to best treat paediatric C-S disease.

MP3 project collaboration comparing IMRT versus 3D conformal therapy for Merkel cell carcinoma of the skin (Guidi, R).

Major Grants and Financial Support

Other competitive funding: $181,800
The Radiation Oncology Department at Princess Alexandra Hospital remains one of the most productive in Australia as far as research is concerned. Over 65 patients were recruited into clinical trials in 2011 and the unit was involved in 19 publications in peer-reviewed journals. Highlights of the year included the promotion of Dr David Pryor to a consultant position. David was formerly a fellow in the department and his research contributed to the reputation of the department as a centre of excellence. As a replacement fellow for David we were fortunate enough to appoint Dr Gerard Adams to our staff. The treatment of lung tumours with stereotactic body radiotherapy commenced in May and abdominal tumours volumetric modulated arc therapy commenced in December. One of the trials was the ANROTAT (Assessment of New Radiation Technologies and Treatments) project which is comparing the efficacy of new technologies such as intensity modulated radiation therapy and image guided radiation therapy with conventional 3D conformal techniques. This project involved 20 institutions across Australia and PAH was not only the highest recruiter but also completed its allocated accrual on time. The department has been heavily involved with commissioning of an additional 2 linear accelerators, the first of which commenced service in December. This machine has stereotactic capabilities at a number of tumour sites which promises to open up opportunities for further research. I am also pleased to see that interest in research has increased among non medical staff such as radiation therapists, physicists and allied health.

Research Activities

Clinical Trials

CT PET (Porceddu, S). Prospective database collection of neck node positive head and neck cancer patients undergoing CT-PET guided management of the neck policy following definitive (chemo)radiotherapy. This study is currently open to accrual.

Pmab / CSCCS (Foote MC, Porceddu, S). Open-Label, Uncontrolled, Phase II Study to Evaluate the Efficacy and Toxicity of Single-Agent Panitumumab in Patients with Incurable Cutaneous Squamous Cell Carcinoma. This study is currently open to accrual.

STARS Pilot (Harvey, J). Pilot for a Randomised Comparison of Anastrozole Commenced Before and Continued During Adjuvant Radiotherapy for Breast Cancer versus Anastrozole and Subsequent Anti-Oestrogen Therapy Delayed Until After Radiotherapy. (Study of Anastrozole and Radiotherapy Sequencing Pilot). This study is currently closed to accrual.

TROG 03.01 / Palliative Oesophageal (Harvey, J). A Randomised Phase III Study in Advanced Oesophageal Cancer to Compare Quality of Life and Palliation of Dysphagia in Patients Treated with Radiotherapy versus Chemoradiotherapy. This study is currently closed to accrual.

TROG 03.06 / TOAD (Lehman, M) A Collaborative Randomised Phase III Trial: The Timing of Intervention with Androgen Deprivation in Prostate Cancer Patients with a Rising PSA. (TOAD). This study is currently open to accrual.

TROG 05.01 / POST (Porceddu, S) Post-Operative Concurrent Chemoradiotherapy versus Post Operative Radiotherapy in High-Risk Cutaneous Squamous Cell Carcinoma of the Head and Neck. This study is currently open to accrual.

TROG 07.01 / DCIS (Harvey, J) A phase III study of radiation dose escalation and fractionation in women with non-low risk ductal carcinoma in situ (DCIS) of the breast. This study is currently open to accrual.

TROG 07.03 / RadioHum (Porceddu, S). Radiotherapy with Humidification in Head and Neck Cancer (RadioHum) : A Randomised Phase III Trial of the Trans Tasman Radiation Oncology Group in Collaboration with Fisher and Paykel Healthcare. This study is currently closed to accrual.

TROG 07.04 / LOUD (Porceddu, S) A Phase II Study of Cetuximab, Carboplatin and Concomitant Boost Radiotherapy for Locally Advanced Head and Neck Squamous Cell Carcinoma. This study is currently open to accrual.

TROG 08.01 / PROFIT (Lehman, M) A Randomised Trial of Shorter Radiation Fractionation Schedule for the Treatment of Localised Prostate Cancer (PROFIT: Prostate Fractionated Irradiation Trial). This study is currently closed to accrual.

TROG 08.02 / Elderly GBM (Foote, M) A Randomized Phase III Study of Temozolomide and Short-course Radiation versus Short-course Radiation Alone in the Treatment of Newly Diagnosed Glioblastoma Multiforme in Elderly Patients. This study is currently open to accrual.
TROG 08.05 / WBRT (Burmeister, B) Whole Brain Radiotherapy following local treatment of intracranial metastases of melanoma. This study is currently open to accrual.

TROG 08.06 / STARS (Pryor, D) A Randomised Comparison of Anastrozole Commenced Before and Continued During Adjuvant Radiotherapy for Breast Cancer versus Anastrozole and Subsequent Anti-Destrogen Therapy Delayed Until After Radiotherapy. (STARS - Study Of Anastrozole And Radiotherapy Sequencing) TROG 08.06. This study is currently open to accrual.

TROG 08.09 / RTN2 (Foote, M) A Randomised Trial of Post-Operative Radiation Therapy following Wide Excision of Neurotropic Melanoma of the Head and Neck.

TROG 09.02 / CHISEL (Mai, T) A randomised phase III trial of highly conformal hypofractionated image guided (“stereotactic”) radiotherapy (HypoRT) versus conventionally fractionated radiotherapy (ConRT) for inoperable early stage I non-small cell lung cancer (CHISEL) TROG 09.02. This study is currently open to accrual.

TROG 09.03 / MP3 (Foote, M) A Phase II Efficacy Study of Chemoradiotherapy in PET Stage II and III Merkel Cell Carcinoma of the Skin. (TROG 09.03). This study is currently Open to Accrual.

TROG 10.01 / BOLART (Lehman, M) A Multi-centre Feasibility Study of Online Adaptive Image Guided Radiotherapy for Muscle Invasive Bladder Cancer. (TROG 10.01), This study is currently open to accrual.

TROG 09.03 / ALLG NHLLOW5 (Porceddu, S) A Randomised Multicentre Trial of Involved Field Radiotherapy versus Involved Field Radiotherapy plus Chemotherapy for Stage I-II Low Grade Follicular Lymphoma. This study is currently open to accrual.

TRP 11.1A / ANROTAT (Burmeister, B) Assessment of new Radiation Oncology Technology and Treatments. TROG Research Project TRP 11.1A This study is currently closed to accrual.

Other Research
Radiotherapy followed by selective nodal dissection for bulky and/or inoperable nodal melanoma. (RM) (Foote MC).

A phase II study of intralesional PV-10 followed by radiotherapy in the treatment of metastatic melanoma (Foote MC).

Major Grants and Financial Support

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Dr Gerard Adams
- Tri-society ANZ/Singapore/Hong Kong Head and Neck Meeting, Singapore
- RANZCR 2011, 62nd ASM Melbourne. Intrinsic Radiosensitivity After Treatment with Stereotactic Radiosurgery (SRS) for an Acoustic Neuroma (AN).
- Neurosurgical Society of Australasia ASM, Fiji
- 7th NCRI Cancer Conference, Liverpool.

Ms Eva Liu
- Engineering and Physical Sciences in Medicine Conference

Ms Peta Hanlon
- Australian Radiation Protection Society (ARPS)

Ms Anna Koch
- Australian Society of Medical Imaging and Radiation Therapy, Adelaide.
The Radiology Department provides diagnostic and interventional services totalling some 200,000 examinations per year. Provision of dedicated specialty radiological services to some thirteen different hospital multidisciplinary clinics allow active support and contribution in clinical trials in both diagnostic evaluation and assessment and treatment options with the Department contribution to some 20 ongoing clinical trials.

The MDT clinics are in addition to radiological and clinico-pathological meetings with many clinical units which are held on a weekly or fortnightly basis.

The last year saw the opening of the long awaited Molecular Imaging Department for PET/CT services. Another new service provision over the year is Cerebral Perfusion Studies for lysis treatment for acute stroke.

Functional Magnetic Resonance Imaging (MRI) brain imaging studies utilised in assessment of the best surgical management for brain tumours has continued this year with in depth Speech Pathology testing and analysis.

Cardiac CTA services have been introduced for assessment of selected acute chest pain presentation.

Dr Susanne Jeavons
Director

Research Activities

Clinical Trials

Coral Study: (Redmond K, Mudge D). Cardiovascular Outcomes with Renal Atherosclerotic Lesions. Randomised and multi-center two-group Clinical Trial to assess the best treatment for patients with high blood pressure and Renal Artery Stenosis: Stenting with anti-hypertensive medical therapy, compared to medical therapy alone.

SIRFLOX Study: (Leggett D, Walpole E), Randomised Comparative Study of FOLFOX6m Plus SIR-Spheres VS FOLFOX6m alone as first line treatment in patients with non-resectable liver metastases from colorectal cancer.

PERI Study: (Benson M, Macdonald G, Soyer P), Prospective non-randomised (pharmacoeconomic) cohort (open-label, multicentre) to assess the magnitude of potential risk with the administration of Primovist/Eovist in patients with moderate to severe renal impairment for the development of nephrogenic systemic fibrosis (NSF) based on diagnostically specific clinical and histopathologic information.


Other Research

Language function following medical/surgical intervention in the neurosurgical population. (Ong B), In conjunction with Speech Pathology, UQ Psychology, Neurosurgery.

Imaging and language testing of tumour resection patients at PAH. (Ong B), In conjunction with Speech Pathology, UQ Psychology, Neurosurgery.

Awards and Prizes

Mr Michael Neep
Published Article Award, Radiography of the acutely injured shoulder, Medical Radiation Technologists Board of Queensland

Major Grants and Financial Support

Other competitive funding: $10,000

National and International Presentations

Dr Sonja Greenslade
The Royal Australian and New Zealand College of Radiologists Annual Scientific Meeting, Melbourne
Dr Jane McEniery
- The Royal Australian and New Zealand College of Radiologists Annual Scientific Meeting, Melbourne

Dr Nivene Saad
- The Royal Australian and New Zealand College of Radiologists Annual Scientific Meeting, Melbourne
- As You See It. An educational seminar for physiotherapists, podcast to national and international audience, Brisbane.
- 7th Data interpretation on acute medicine course 2011, Brisbane
- Critical Care 2011, Kingscliffe

Dr John Earwaker
- The Royal Australian and New Zealand College of Radiologists Annual Scientific Meeting, Melbourne

Mr Mark Howard
- Australian Institute of Radiography Professional Accreditation and Education and Committee Seminar, Mater Hospital, Brisbane
- Country AIR, Sunshine Coast

Mr Scott King
- Australian Sonographers Association Annual National Conference, Brisbane

Mr Michael Neep
- Australian Institute of Radiography Professional Accreditation and Education and Committee Seminar, Mater Hospital, Brisbane
- Inviting Innovation, Brisbane
- Country AIR, Sunshine Coast

Ms Caitlin O’Mara
- Country AIR, Sunshine Coast

Mr Jitendra Pratap
- Country AIR, Sunshine Coast
- RADAIM 2011, Sydney

Dr Amir Rezaee
- The Royal Australian and New Zealand College of Radiologists Annual Scientific Meeting, Melbourne

Dr Arash Dehdari
- The Royal Australian and New Zealand College of Radiologists Annual Scientific Meeting, Melbourne.

Mr Ben Rowney
- Country AIR, Sunshine Coast
- Annual Scientific Meeting of Australasian College of Surgeons

Mr Matthew Simpson
- Country AIR, Sunshine Coast

Ms Debbie Smith
- Country AIR, Sunshine Coast

Mr Thomas Steffens
- Australian Institute of Radiography Professional Accreditation and Education and Committee Seminar, Mater Hospital, Brisbane
- Country AIR, Sunshine Coast

Ms Kathryn Winter
- Australian Institute of Radiography Professional Accreditation and Education and Committee Seminar, Mater Hospital, Brisbane
This department concentrates on Phase 2, 3 and 4 drug trials in inflammatory arthritis. We are a small team, appreciative of the capable assistance of Mr Chris Downey, our Research Nurse. Many of the protocols involve infusion therapies, and are therefore labour-intensive.

For the last 2 years, we have collaborated with the University of Queensland in examining the benefit of Green Lipped Muscle Extract in knee osteoarthritis.

Dr Phillip Vecchio
Director of Rheumatology

Research Activities

Clinical Trials


Knoll/Abbott: Protocol No DE013: Prospective multi centre randomised, double blind, active comparator controlled parallel group study comparing the fully human monoclonal anti-TNFα antibody D2E7 given every second week with Methotrexate given weekly and the combination of D2E7 and Methotrexate administered over 2 years in patients with early rheumatoid arthritis.

Roche Protocol WA 18696. Long-term extension study of safety during treatment with Tocilizumab (MRA) in patients completing treatment in MRA core studies.

Roche Protocol WA20495/ACT3986G. A randomised, double-blind, parallel group, international study to evaluate the safety and efficacy of ocrelizumab compared to placebo in patients with active rheumatoid arthritis who have an inadequate response to at least one anti-TNF alpha therapy.

Other Research

Green-lipped mussel (Perna canaliculus) extract efficacy in knee osteoarthritis and improvement in gastrointestinal dysfunction: a pilot study. S COULSON (University of Queensland), P VECCHIO (PAH), L VITETTA (University of Queensland).

Investigating gastrointestinal function and microbiota profiles in patients with Osteoarthritis – a role for Glucosamine and Green-Lipped Mussel. S COULSON (University of Queensland), P VECCHIO (PAH), L VITETTA (University of Queensland).

Major Grants and Financial Support

Funding from commercial studies: $60,749
The Speech Pathology Department at the Princess Alexandra hospital comprehensively manages patients with communication and swallowing impairments spanning across inpatient and outpatient services in medical, surgical, oncology, rehabilitation and spinal areas. In 2011, the Department continued its contribution to advancing the clinical evidence base of the profession. As per previous years, Head and Neck Cancer and Acquired Brain Injury continued to be strong research areas for the department. Staff members also continued their involvement with a diverse array of multidisciplinary research projects across the hospital, while the department as a whole maintained its strong research ties with the Centre for Functioning and Health Research and University of Queensland.

The Speech Pathology Department’s ongoing dedication to research was evident in the number of staff presentations at conferences throughout the year and publications in international peer-reviewed journals. In December, Bena Cartmill completed her PhD in the area of long term swallowing outcomes for patients with head and neck cancer.

Wendy McCallum
Director

Research Activities


The effects of thrombolysis following ischaemic stroke on communication and swallowing outcomes. (Finch E, Clark K, Short K, Smith L, Antonio M, Atiken P).

ASSIST Swallowing screening tool trial. (Robinson K, Lawson N).

An investigation into communication outcomes following brain tumour surgery. (Finch E, Smith L).


An investigation into the effectiveness of computer-based therapy for aphasia. (Finch E, Hill A, Clark K).

Understanding research experience and interests in Queensland Health speech pathologists: a pathway to enhance research capacity building. (Finch E, Cornwell P, Ward E).


Implementation of 3 Month and 6 Month Post Treatment Review Clinics within a Radiation Oncology Caseload. (Lawlor E, Cartmill B, Lawson N).

Clinical Trials

Randomized controlled cross-over Phase 3 trial comparing the new indwelling Provox Vega voice prosthesis with the currently used Blom-Singer Classic Indwelling voice prosthesis for voice rehabilitation after total laryngectomy. (Hancock K, Ward E, Lawson N). In 2011, data collection for the project finished. The project has results in 2 published papers and 2 papers under development. The research team were invited to present at 2 international forums; the Pan European Voice Conference and a German ENT conference.

Long-term swallowing outcomes in head and neck cancer patients: comparing non-surgical treatment regimens. (Riddle B, Cornwell P, Porceddu S, Stuckey S, Ward, E, Davidson W). The major achievements of this study in 2011 were the publication of 6 papers, 2 international conference presentations, and the awarding of a PhD to Bena Cartmill.
Improving communication between health practitioners, students and patients with Aphasia. (Finch E, Lethlean J, Fleming J, McPhail S, Brown K, Cameron A, Mc Govern D). This project aims to investigate the effects of introducing a communication partner training program on communication between people with aphasia, health professionals and health professional students. In 2011 the project was awarded a Queensland Health AHMACU Health Practitioner Research Grant.

An investigation into the effectiveness of computer-based therapy for aphasia. (Finch E, Hill A, Clark K). This project aims to investigate the effectiveness of computer-based therapy as an adjunct to traditional speech pathology intervention for patients who experience naming difficulties after stroke. This project was awarded a Queensland Health Rural Stroke Outreach Service Grant in 2011.

The effects of thrombolysis following ischaemic stroke on communication and swallowing outcomes. (Finch E, Clark K, Short K, Smith L, Antonio M, Alkens P). This pilot study aims to investigate the communication and swallowing outcomes of patients who receive thrombolysis for acute ischaemic stroke. It is anticipated that the pilot data will be used to source funding for a larger study.

Major Grants and Financial Support

Other competitive funding: $65,701

National and International Presentations

Dr Jenny Lethlean
- The 7th Australasian Nursing and Allied Health Conference, Gold Coast

Ms Kelli Hancock
- Tri-Society Head and Neck Oncology Meeting, Singapore

Dr Bena Cartmill
- Tri-Society Head and Neck Oncology Meeting, Singapore
- Dysphagia Research Society, USA
- Speech Pathology Australia Conference, Darwin

Ms Nadine Lawson
- Netherlands Cancer Institute
In 2011, the Therapeutics Research Centre (TRC) continued to build on its solid foundation, with strong collaboration between the units based at the University of Queensland and the University of South Australia.

The Centre studied basic and clinical therapeutics, ranging from theoretical mathematical modelling of drug disposition, to practical aspects such as pesticide poisoning and the controversial area of nanoparticle toxicology.

Targeted topical delivery, focussing mainly on advanced multiphoton and confocal imaging in skin, microneedles for vaccines and nanoparticle delivery continued to be a major interest, with 14 papers published and a number of invitations to speak at major international conferences.

The liver / pharmacokinetics and the clinical research areas were also productive, with 13 publications. Professor Vania Leite returned from Brazil in late 2011 to complete work on zinc oxide penetration in human skin and to continue with her valuable mentoring of students. We farewelled Dr Yuri Dancik and Dr Washington Sanchez Jr, wishing them well in their future careers. Two aspects were particularly satisfying in 2011; firstly, the strong intake of new students and secondly, the continuing development of Dr Xin Liu into a skilful and experienced researcher. 2011 also brought great sadness, with the unexpected passing of a great friend and research collaborator, Professor Johann Wiechers. Johann held an Honorary Academic position in the School of Medicine and was an inspiration to his many friends around the world. 2012 will bring new challenges, with the increasing scarcity of research funds and the planned completion of the TRI building. One of my chief goals in the coming year will be to continue to help in developing the careers of the people in my Centre.

Some major highlights includes the completion of our part of the OECD-sponsored investigation into nanoparticle properties, actions and toxicity, with a final wrap-up in Sydney in November and an Increasing student numbers, including overseas elective students; PhD students Adnan Mahmood, Klintean Wunnapuk, Camilla Thorling published their first papers.
Major Grants and Financial Support

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National and International Presentations

**Professor Michael Roberts**
- Skin Trail Blazer 2nd Workshop
- Gordon Conference, Barrier Function of Mammalian Skin
- FLIM 2011
- Brazilian Congress of Cosmetology
- First Research Conference on Modelling Barrier Membranes, Saarbrücken, Germany
- 8th Advanced Imaging Methods Workshop, Berkeley, USA
- Australasian Pharmaceutical Science Association (APSA) Meeting, Adelaide
- Australian Pesticides and Veterinary Medicines Authority (APVMA) & National Industrial Chemicals Notification and Assessment Scheme (NICNAS) 2011 International Symposium on Nanotechnology Regulation, Sydney

**Dr Jeff Grice**
- Skin Trail Blazer 2nd Workshop Boston, USA
- Gordon Conference, Barrier Function of Mammalian Skin Waterville Valley, NH, USA
- Australian Pesticides and Veterinary Medicines Authority (APVMA) & National Industrial Chemicals Notification and Assessment Scheme (NICNAS) 2011 International Symposium on Nanotechnology Regulation, Sydney

**Dr Xin Liu**
- 2011 AAPS Annual Meeting and Exposition, Washington DC, USA

**Ms Camilla Thorling**
- 62nd Annual Meeting, American Association for the Study of Liver Diseases, San Francisco, USA

**Dr Vania Leite**
- Australasian Pharmaceutical Science Association (APSA) Meeting, Adelaide
After several years of solid growth in basic research, the Trauma Research Group has extended the focus to clinical research. In January 2011, Dr Joost van Middendorp joined the Trauma Research Group as a post-doctoral Spinal Research Fellow. Dr Van Middendorp is responsible for the newly established field of clinical research within the group ‘Outcomes in Musculoskeletal Trauma’. Dr Van Middendorp is currently involved in the first roll-out of the renowned International ‘Rick Hansen Registry’ in the southern hemisphere. This registry focuses on the quality of care and patient outcomes after traumatic spinal cord injury. In collaboration with the clinical spine fellows, Dr Van Middendorp also designed a prospective framework for the evaluation of spinal trauma patients treated in the Princess Alexandra Hospital. In recognition of his efforts, Dr Van Middendorp won the award for best oral presentation at the AOA Queensland Scientific Meeting in June 2011.

**Professor Michael Schuetz**
Chair in Trauma

**Research Activities**

**Other Research**

Understanding the biomechanical effects of fixation strategies to improve the technology of fracture management (Chen G, Mishra S, Schuetz MA, Perren S). The aim of this project is to understand the mechanical behaviour of implants used to stabilize the fracture fragments. Results from laboratory testing have enabled us to generate more realistic computer models that will aid in determining the appropriate use of implants for different fracture scenarios.

Inter-fragmentary movement in callus formation in the early phase of fracture healing (Pettet G, Epari D, Steck R, Gregory L, Schuetz MA). Fracture healing is complex process and the controlling mechanisms are still not well understood. This project applies computer simulation and mathematical modelling to investigate the mechanisms of bone repair. Computer models have been established to simulate individual processes during repair. The next step will be to link the processes together to simulate fracture healing as whole.

Development and characterization of a technology platform to study the mechanisms of scaffold/BMP augmented large segmental bone healing (Hutmacher DW, Schuetz MA, Epari DR, Saifzadeh S, Knackstedt MA). Large segmental bone defects represent a significant challenge to orthopaedic and trauma surgeons. The aim of this project is to develop a suitable experimental model to study the effectiveness of tissue engineering approaches to repair. An experimental model that represents the challenging clinical scenario has been established and used to test therapies consisting of scaffold in combination with bone growth stimulating chemicals. Early results have been promising.

**Awards and Prizes**

Dr Joost van Middendorp
- Best presentation, Australian Orthopaedic Association

**Major Grants and Financial Support**

- Other competitive funding: $2,062,840
- Funding from commercial studies: $200,000
- Funding from other sources: $932,511

**National and International Presentations**

Professor Michael Schuetz
- AOA Continuing Orthopaedic Education Meeting for 2011, Sydney
- PA Week, Princess Alexandra Hospital, Brisbane
- AOANZOA Annual Scientific Meeting 2011, Rotorua, New Zealand

Ms Hazreen Harith
- ANZORS - 17th ASM, Brisbane

Dr Kanchana Rathnayaka
- ANZORS - 17th ASM, Brisbane

Dr Beat Schmutz
- AOCMF 1st Workshop Clinical Priority Program, Freiburg, Germany
- 2nd Bolzano Mummy Congress, Bolzano, Italy
The Upper Gastro-intestinal/Soft Tissue unit treats patients with oesophagogastric disease both malignant and benign as well as soft tissue and skin tumours requiring major abdominal surgery. The Unit is the largest referral base for oesophagogastric cancer in Australia. A special interest of the Unit is minimally invasive surgery, and as a consequence the Unit has a large experience of minimally invasive oesophagectomy with over 600 cases. The unit participates in a multi-disciplinary meeting and clinic for patients with gastric and oesophageal malignancy with Medical Oncology, Radiation Oncology and Allied Health. All data on these patients are collected in a prospective database. The Unit is involved in local, national and international clinical trials.

Associate Professor
B Mark Smithers
Chairman

Research Activities

Clinical Trials

Intermediate and high risk localized, completely resected, gastro-intestinal stromal tumours (GIST) expressing KIT receptor: a controlled randomized trial on adjuvant Imatinib mesylate (Glivec) versus no further therapy after complete surgery: Intergroup study (EORTC 62024) Smithers BM, Gotley D, Barbour A, Walpole E, Thomson D, Woodward N, Joubert W, Atkinson V. Protocol Number: 2005/108. (T2) The aim of the study is to see whether taking Imatinib delays or stops the disease returning. This study is an international study. Recruitment has been completed and patients remain in follow-up.

A randomised Phase II trial of pre-operative Cisplatin, 5 Fluorouracil and Docetaxel ± radiotherapy based on poor early response to standard Chemotherapy for resectable adenocarcinoma of the oesophagus and/or OG Junction. Barbour A, Walpole E, Mai T, Smithers BM, Gotley D, Martin I, Thomson D, Woodward N, Joubert W, Atkinson V, Burmeister B, Harvey J. Protocol 2008/148. (T2) The general aim of this study is to improve outcomes for patients that fail to respond to standard neoadjuvant chemotherapy and to evaluate toxicity. The study is designed as two single-arm phase II trials for patients that are PET-non-responders to induction chemotherapy (standard treatment). Patients enrolled in the study will receive a course of standard 5-FU + cisplatin chemotherapy. A PET scan is then performed at day 15. If a response of ≥35% is detected patients will proceed to a second cycle of the same chemotherapy and then to surgery. If a PET response of <35% is detected the patients will be randomised equally to the two treatment arms: Docetaxel, 5-FU + Cisplatin or Docetaxel, 5FU, Cisplatin + Radiation.

A randomised phase II/III trial of preoperative chemoradiotherapy versus preoperative chemotherapy for resectable gastric cancer. (Smithers BM, Walpole E, Burmeister B, Barbour A, Gotley D, Martin I, Thomson I, Thomson D, Joubert W, Atkinson V, Harvey J). The aim of this study is to investigate whether the addition of chemoradiotherapy to chemotherapy is superior to chemotherapy alone in the neoadjuvant setting by improving pathological complete response (pCR) rates in the first instance, and subsequently overall survival, in patients undergoing adequate surgery (D1 dissection) for resectable gastric cancer.

Comparison of pre and peri-operative immunonutrition to standard formula in patients undergoing surgical resection for oesophageal cancer. (Smithers BM, Gotley DC, Barbour AP, Martin I). The aim of this study is to evaluate the effect of pre and perioperative use of an immunonutrition product versus an isocaloric/isonitrogenous control on the incidence of infective and non-infective complications during hospital admission in patients undergoing oesophagectomy or oesophago-gastrectomy for resection of cancer.

The effect of neoadjuvant therapy on cardiopulmonary function in patients undergoing Oesophagectomy (Smithers BM, Ferris R, Hall A, Lee A). The primary objective of this study is to determine the effect of neoadjuvant therapy on cardiopulmonary function in patients undergoing oesophagectomy.

Other Research

Genome-wide analysis of oesophageal cancer: towards biomarkers of response and outcomes of therapy. (Barbour A, Gotley D, Smithers BM, Wayte N). The aims of this study are to determine the genetic heterogeneity of oesophageal adenocarcinoma, to determine the best molecular motif for detecting prognostic difference amongst patients treated with surgery alone, to determine and validate biomarkers of response to pre-operative therapy.
Lymph nodes with metastatic oesophageal adenocarcinoma. (Barbour A, Frankel A, Wayne N, Nancarrow D). The aims of this study are to determine genetic heterogeneity between primary and secondary tumour sources, to determine biomarkers of prognosis and treatment response including high resolution DNA copy number changes, mRNA expression and methylation profiling and to identify genetic changes associated with cancer spread.

Preliminary investigation into DOCTOR trial OAC patient tumour samples: genetic investigation into PET response and biomarkers of CTX/CRT response. (Barbour A, Frankel A, Wayne N). The aims of the study are to determine a molecular signature for PET response, to determine if there is a biological difference in tumours that underpin response to therapy and to determine the effect therapy has on the gene expression of tumours.

Oesophageal Cancer Database and Quality of Life (Smithers BM, Gotley D, Martin I, Barbour A, Thomson I). Established in 1997 data is collected on all patients who have been diagnosed with cancer of the oesophagus or OG Junction. The data includes symptoms at presentation, investigations, pathology, management and follow-up. There is currently 1980 patients on the database. Quality of Life has been conducted on all curative intent patients at baseline, 3, 6, 9, 12, 18, 24, 36, 48 & 60 months.

Gastric Cancer Database (Barbour A, Smithers BM, Gotley D, Martin I, Thomson I). Established in 2006 data has been collected both retrospectively and prospectively since 2000. Data includes symptoms at presentation, investigations, pathology, treatment and follow-up. The database currently has 514 patients who have been diagnosed with gastric cancer.

Gastro-intestinal Stromal Tumour Database (Smithers BM, Gotley D, Martin I, Barbour A, Thomson I). Established in 2006 data has been collected both retrospectively and prospectively since 2000. Data includes symptoms at presentation, investigations, pathology, treatment and follow-up. The database currently has 120 patients diagnosed with GISTs.

High Grade Dysplasia Database (Smithers BM, Gotley D, Martin I, Barbour A, Thomson I). Established in 2006 data has been collected both retrospectively and prospectively since 2000. The database currently has 100 patients diagnosed with HGD.

Laparoscopic Fundoplication Database. (Gotley D, Smithers BM, Martin I, Barbour A, Thomson I). Established in 1991 data has been collected prospectively on all patients undergoing a Laparoscopic Fundoplication. The database currently has 4800 patients with quality of life on approximately 88% of patients.

Para-oesophageal Hernia Repair Database (Gotley D, Smithers BM, Martin I, Barbour A, Thomson I). Established in 1991 data has been collected prospectively on all patients who have undergone a repair of a para-oesophageal hernia. The database currently has over 800 patients with quality of life in over 88% of patients.

Redo Hiatal Surgery Database (Gotley D, Smithers BM, Martin I, Barbour A, Thomson I). Established in 1991 data has been collected prospectively on all patients who have undergone a redo hiatus hernia repair. The database currently has over 600 patients with quality of life in over 85% of patients.

Major Grants and Financial Support

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National and International Presentations

**Associate Professor Mark B Smithers**

- South African Society of Endoscopic Surgeons Annual Scientific Meeting, South Africa
- Combined meeting Australasian Gastro-intestinal Trials Group annual scientific meeting and New Zealand Gastro-Oesophageal Surgeons Association, Melbourne
- ANZGOSA/ANZHPBA Trainees Weekend, Kingscliff
- Developing a Career in Academic Surgery Course, Adelaide

**Professor David Gotley**

- Combined meeting Australasian Gastro-intestinal Trials Group annual scientific meeting and New Zealand Gastro-Oesophageal Surgeons Association, Melbourne
- Annual Scientific Congress, Royal Australasian College of Surgeons, Adelaide
- International Society for Diseases of the Oesophagus, Australasian Arm, Hobart

**Associate Professor Andrew Barbour**

- Combined meeting Australasian Gastro-intestinal Trials Group annual scientific meeting and New Zealand Gastro-Oesophageal Surgeons Association, Melbourne
- Australian Pancreatic Cancer Genome Initiative (APGi) Meeting, Sydney.
- Annual Scientific Congress, Royal Australasian College of Surgeons, Adelaide