Centres for Health Research
Princess Alexandra Hospital

2010 Annual Research Report

‘translating science into better health’
Translating discoveries to 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 17)

T3 – Translation to clinical practice (refer page 23)

T4 – Translation to population health (refer page 134)
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Message from the District CEO and the PAH Executive Director

It is with great pleasure that we present the Princess Alexandra Hospital (PAH) Centres for Health Research Annual Research Report for 2010. We are delighted to reflect on another year of outstanding achievements. The year has been productive for researchers on the campus with a large proportion of translational research undertaken.

This translation of research into better patient health is what we are all aspiring to and, indeed, expecting. We are committed to continuing to achieve this by working in partnership with our universities and in collaboration securing and growing a critical mass of high-calibre scientists and clinicians, and contributing to state-of-the-art infrastructure.

All achievements in research should be celebrated. This report showcases the breadth of achievements and commitment of researchers on this campus. These are evidenced by prestigious grants, research breakthroughs and awards. The benefits of our academic health partners are becoming evident and will be further amplified with the opening of the Translational Research Institute in 2012.

In this annual report, we are delighted to reflect on the extraordinary success and achievements of our research scientists and clinicians.

Increase in Research Performance
As highlighted in this report our research performance on campus continues to increase. The NHMRC awarded grants totalling over $8.8M to twelve chief investigators based at the PAH. In addition, eight PAH Private Practice Grants; four Smart State Grants and four Health Research Fellowships were awarded. This funding is vital for our investigators to continue their valuable research. The number of world-class publications featured in high calibre journals such as Nature Genetics also increased.
Professor Ken Ho has been appointed as the new Chair of the Centres for Health Research. He will join us full-time from St. Vincent’s Hospital and the Garvan Institute in Sydney in early 2011. As a successful and influential clinical researcher, he will make a strong contribution to the research efforts at the PAH. We look forward to his leadership.

Awards and Recognition
Awards and recognition for researchers based at the hospital is reflected throughout this report. Professor Ian Frazer, Director, University of Queensland Diamantina Institute, was awarded the 2010 Ernst & Young Champion of Entrepreneurship (Northern Region) Award in recognition of his discoveries that led to the development of the world’s first cervical cancer vaccine. With immunisation programs initiated across the world, this is a true indicator of translating scientific discoveries to the patient.

Professor Matt Brown from the University of Queensland’s Diamantina Institute was awarded the prestigious 2010 Parr Prize from The Australian Rheumatology Association recognises outstanding achievement in rheumatologic research. Matt’s research concentrates on identifying the genetic causes of common forms of arthritis, osteoporosis and multiple sclerosis, providing avenues for future treatment options.

Another highlight was the Australian Society of Medical Research awarding Dr Maher Gandhi, Clinician Researcher of the Year for his work on understanding the biological features of lymphoma.

Increase in Collaborations
It is truly pleasing to see the number of examples of our researchers collaborating with local, national and international experts to achieve world-class research outcomes.

PAH Week – Leading Health in a Changing World
The Princess Alexandra Hospital has been in existence for 54 years and during this time has reached international stature in many areas, including liver and kidney transplantation, melanoma treatment, laparoscopic surgery, gout research and treatment, cardiovascular disease management and the development of the vaccine for cervical cancer.

In 2010, the hospital successfully hosted PAH Week bringing together experts from all manner of clinical professions to present their knowledge and experience thereby promoting quality care for patients and improved staff training. Additionally, PA Week showcased the considerable achievements of research conducted on campus.

Centres for Health Research
The PAH Centres for Health Research, established by the Princess Alexandra Hospital in 1998, is a vital part of the commitment of the hospital to further strengthen and facilitate the integration of research and teaching with clinical care through our partnership in the academic health centre.

Professor David Theile
CEO, Metro South Health Service District

AO, PhD (Hon), MBBS (Hons) (Qld), MS, FRACS, FRCS (Eng), FRCS (Ed) (Hon), FANZCA (Hon)

Dr Richard Ashby
Executive Director, Princess Alexandra Hospital

AM, MBBS (Qld), BHA (NSW), FRACGP, FRACMA, FACEM, FIFEM
Message from the Director
Research Development & Ethics

2010 has been an outstanding year noteworthy on a number of fronts. We have continued to build on growing achievements in parallel with major developments on the PAH campus. The new Translational Research Institute (TRI) building is emerging from the ground and is on schedule for occupancy in late 2012. A forum held in September provided an update on the plans of the development. The TRI is a joint venture between The University of Queensland, Queensland University of Technology, Mater Medical Research Institute and the Princess Alexandra Hospital (Queensland Health). We are poised to leverage the many opportunities of our partnerships within the TRI.

The Princess Alexandra Hospital is committed to excellence in patient care supported by world’s best research practice led by the world’s best researchers. This is truly an exciting time for us working here in an environment of strengthening of academic health partnerships.

The research groups at the hospital garnered greater success in securing competitive peer review grant funding (see Group Reports section) in particular NHMRC funded fellowships and project grants. The PA Research Foundation and Private Practice boosted their support of research to $900,000 in 2010 for research (in 2011), again ensuring that high quality research is supported. In addition, over $200,000 was provided to current research projects through direct appeals to ensure their continuation. We congratulate all our researchers and wish and thank the dedicated work of the foundation and funding team.

We have also been very encouraged that the estimated total research income for 2010 has increased by over 30%.

Publications are vital for research to be translated into improved health outcomes for our community. Our researchers published over 590 papers and book chapters, representing about a 25% increase to the 2009 output. The publication profile is likely to continue to increase based on a 25% increase in investigator initiated applications to our Human Research Ethics Committee this year.
This year has also seen an increase in the number of postgraduate students totalling 220 students on campus from our local and other collaborating universities.

A significant achievement for Allied Health was the founding of the Centre for Functioning and Health Research in mid-2010 and the launch in October of the Health Practitioner Research Collaborative (formerly the Allied Health Research Collaborative) which should be a further stimulus to enhance research activities across the district.

There were a number of achievements in Nursing including Professor Leanne Aitken’s membership to the team who gained Australia’s first nursing-focused NHMRC Centre of Research Excellence. The NHMRC Centre of Research Excellence in Nursing Interventions for Hospitalised Patients (NCREN) will focus on generating and implementing evidence into clinical practice. In addition the nursing team is leading a randomised-control trial (RCT) on the management of skin grafts and will commence a second RCT on the management of facial suture lines.

We thank the Human Research Ethics Committee (HREC), for their tireless efforts in reviewing the large load of research applications. Under the leadership of Dr Jennifer Fleming, the HREC was certified by the NHMRC to conduct single ethical reviews of multi-centre research. Jennifer stepped down as Chair in July 2010 to take up a post-doctoral appointment at the University of Sydney. We wish her all the best with her academic career. We express our appreciation to Associate Professor Carl Kirkpatrick, Dr Eleanor Milligan, Dr Scott Campbell and Associate Professor Richard Roylance for assisting with the Chairing of the HREC meetings following Dr Fleming’s departure.

Our appreciation to all those who helped to enhance the research performance on the campus 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. We look forward to working with our academic, research and health care partners in 2011.

We look forward to Professor Ho’s leadership and experience when he moves to Brisbane to take on the leadership role of Chair of the Centres for Health Research in early 2011.

It gives me great pleasure to present this thirteenth Annual Research Report, which is a summary of what has been achieved in 2010 through a wealth of partnerships and collaborations.

Ms Areti Gavrilidis
MBA, Grad Dip Bus Admin, BSc, BAppSc, Churchill Fellow
Vaccination to prevent cervical cancer has now become public health policy in at least 20 countries world-wide with over 70 million doses of vaccine delivered to date.

By 1995 clinical trials of vaccines based on HPV Virus like particles in human subjects were showing immunogenicity and safety. These findings lead to larger scale vaccine trials over the next 8 years to prove efficacy and safety, conducted by the pharmaceutical companies who were developing the commercial vaccines. Positive findings from these studies were presented to the US and Australian regulatory authorities in 2005, resulting in release of a licenced vaccine in 2006. Since then we have been conducting studies in Vanuatu of uptake and field efficacy of the vaccines in the developing world, and programs of education on vaccine use.

Vaccination to prevent cervical cancer has now become public health policy in at least 20 countries world-wide with over 70 million doses of vaccine delivered to date. Large scale studies to measure the impact of the vaccine programs on cervical cancer and genital wart incidence in Australia and elsewhere are now underway.

Professor Ian Frazer
Director, University of Queensland Diamantina Institute

Vaccine development leading to public health policy

HPV vaccine development started with basic research on how HPV works as a virus to cause cervical cancer, undertaken by Professor Harald zur Hausen and his colleagues in the early 1980s. Discovery of the technology for HPV virus like particle production by Jian Zhou and myself in 1991, which arose from studies on how the virus assembled itself, lead to preclinical studies of their immunogenicity in animals, to see if they might form the basis of a vaccine to protect against cervical cancer.

Ian Frazer
Measuring activity of older patients to reduce cost of hospitalisation

Older patients in hospital quickly become deconditioned when they spend long periods of inactivity. A common strategy to “prevent” and “treat” this deconditioning is to encourage regular sitting out of bed and walking throughout the day. Even though this activity is often “prescribed”, no one can be sure that anything actually happens. At the Centre for Research in Geriatric Medicine, we are using accelerometers to monitor patients’ daily activities. First we needed to demonstrate that these devices actually measure activity accurately (lying, sitting, standing, walking) in older patients, with abnormal gait patterns (T2 translation). We also demonstrated that clinicians have little idea about the level of activity of their patients, most often over-estimating by 100%.

With the support of an NHMRC Project Grant, we are conducting a study to investigate if accurate activity information about activity (derived from accelerometers) is offered daily to patients and their treatment team together with daily targets, then the level of activity increases (T3 translation). We plan larger scale studies to examine whether this intervention might either improve patient outcomes or reduce the cost of hospitalisation (T4 translation).

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

Genetics of common and rare human diseases

We research genetics of common and rare human diseases, and investigate the mechanisms by which genes associated with disease operate in those conditions. We have a particular focus on bone and joint diseases, but research quite a diverse range of conditions including neurological diseases such as multiple sclerosis, schizophrenia, intracranial haemorrhage and motor neurone disease, ocular diseases, and asthma.

Our main research interest for the past 15 years has been the genetics of ankylosing spondylitis, where I have led the gene-mapping programs that have identified all 13 non-MHC genes thus far robustly associated with the disease. My group have been at the forefront of development of new methods for mapping human diseases including during the genomewide association study era, and more recently with the advent of sequencing based gene-mapping approaches.

Professor Matthew Brown
Research Leader Musculoskeletal Genetics Group, Diamantina Institute

“we plan larger scale studies to examine whether an activity intervention might either improve the patient outcomes or reduce the cost of hospitalisation”
Detection of primary aldosteronism

With hypertension being the commonest chronic condition affecting Western countries and usually requiring lifelong medications to prevent complications such as stroke, heart and kidney disease, detection of underlying causes such as primary aldosteronism (PA) can be a major breakthrough for patients, bringing with it the chance of more effective, specific treatment and even cure.

Our work demonstrated a previously unrecognised, high prevalence of PA of up to 5-10% among hypertensive patients, and its efforts to raise awareness of this nationally and internationally, have had major and widespread clinical impacts, with thousands of patients (who would otherwise have been missed) being diagnosed among dozens of centres around the world. Not only has this meant improved health outcomes for those patients, but it has facilitated a flurry of clinical research studies assessing causes and effects of PA. Examples are work by our Centre and of others demonstrating that aldosterone excess has harmful effects that go beyond just raising blood pressure, but which are ameliorated by specific surgical and medical treatments targeting excessive aldosterone action. These findings have “closed the circle” so that those found to have this important condition can benefit from the effects of specific, optimal treatment approaches.

Professor Michael Stowasser
Director, Endocrine Hypertension Research Center

Asthma and other chronic lung diseases

Our ultimate goal is to improve the existing influenza vaccines and to develop a new vaccine for rhinoviruses that could be used in people with lung diseases.

People with asthma and other chronic lung diseases can become very unwell when they develop infections caused by rhinoviruses (the common cold virus) and influenza. We think this happens because the immune system does not function as well as it should. We are performing a detailed study of the workings of the immune system in people with asthma and other chronic lung diseases. Understanding what is going wrong is a first step to keeping people well and avoiding the need to spend time in hospital. Our ultimate goal is to improve the existing influenza vaccines and to develop a new vaccine for rhinoviruses that could be used in people with lung diseases.” (T1 translation)

Professor John Upham
Director, Lung and Allergy Research Centre

Excessive aldosterone (PA) findings in hypertensive patients have “closed the circle” in supporting our recommendation that all hypertensive patients should be screened for PA, so that those found to have this important condition can benefit from the effects of specific, optimal treatment approaches.
Understanding and Reducing the Burden of Kidney Disease

Kidney disease contributes directly or indirectly to at least 10% of deaths in Australia. Despite a rapid improvement in treatment options during the last 20 years, the mortality rate remains high in end-stage kidney disease patients. We are currently undertaking clinical studies examining interventions to improve outcomes in chronic kidney disease patients (T2 translational research). Our researchers are identifying molecular biomarkers to aid in improved diagnosis for kidney disease with the ultimate goal of improved prognosis. The CKDR is actively involved in understanding the clinical implications of the higher risk of cardiovascular disease for patients with chronic kidney disease (CKD). Our investigators are examining the prevalence, severity and relationship between bone disease and vascular disease in early CKD aimed at earlier detection of abnormalities to ensure better treatment.

The Department of Transplant Surgery at Princess Alexandra Hospital has recently become the first transplant unit in Australia to use a machine perfusion organ preservation system. This system has the potential to lead to a reduction in tissue damage caused by lack of blood supply before transplantation.

Our researchers are examining the clinical outcomes of kidney damage between kidneys which were placed on ice prior to transplantation and kidneys that were machine perfused. This clinical trial will enhance the understanding of the risk factors and health cost benefit of machine perfusion and may aid in clinical decision making regarding organ perfusion and allocation.

Associate Professor Carmel Hawley
Centre for Kidney Disease Research
The University of Queensland at the Princess Alexandra Hospital

Faculty of Health Sciences, UQ

Many schools and centres within the Faculty of Health Sciences have a long history of collaborative research with the Princess Alexandra Hospital. The sustained impact of outcomes obtained from projects conducted by School of Medicine research groups with the Princess Alexandra Hospital is a reflection of this illustrious history.

In addition to the growing research links with other units within the Faculty of Health Sciences such as the School of Health and Rehabilitation Sciences and the School of Population Health, new opportunities are now emerging. The opening of the Pharmacy Australia Centre of Excellence (PACE) which houses the UQ School of Pharmacy and the soon to be completed Translational Research Institute will see a further strengthening of research links between the University of Queensland and Princess Alexandra Hospital. The 2010 Excellence in Research for Australia (ERA) initiative saw the University of Queensland ranked at the highest level (well above world standard) for Biomedical and Clinical Health Sciences. The quality of research conducted at Princess Alexandra Hospital across a diverse array of fields (from liver disease to e-health delivery and occupational therapy to cardiovascular disease) was a contributor to this excellent result.

Associate Professor Gregory Monteith
Associate Dean (Research)
School of Medicine

As Australia’s global medical school, The University of Queensland’s School of Medicine offers a variety of clinical and research training experiences within Australia and internationally, and the research activity at PAH campus is a critical element in our success and our international reputation for excellence and quality in medical research and education.

The School of Medicine operates over a number of different sites including Queensland Health and private hospitals. There are 10 Clinical schools, including schools in Brunei and New Orleans, and 11 Academic disciplines that have an overarching role in promoting and supporting teaching and research in the Clinical Schools: Anaesthesiology & Critical Care, General Practice, Medical Imaging, Medical Education, Molecular & Cellular Pathology, Obstetrics & Gynaecology, Medicine, Paediatrics & Child Health, Rural & Remote Medicine, Psychiatry and Surgery.

The School of Medicine offers opportunities and encouragement for staff members to engage in research projects that meets local, national and global needs and to disseminate the results through prestigious peer-reviewed journals. The School’s close integration into the hospital community means that our research is relevant and the outcomes of that research is swiftly translated into improved health practices and real clinical outcomes. Our clinical and research academics’ engagement in research means that the education our medical students receive is absolutely up to date and inspires research curiosity and endeavour in the next generation of the medical workforce. In 2010, nearly 500 of our year 2, 3 or 4 medical students spent some of their placements at the research-rich PAH campus.

The School of Medicine research activity at PAH has major focus in ten research centres, which in 2010 include the Centre for Research in Geriatric Medicine, Dermatology Research Centre, Centre for Liver Disease Research, and a node of the Liver Research Centre (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.

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

The end of 2010 brought outstanding success with NHMRC funding, with School of Medicine researchers being awarded nine project grants totalling over $4.75 million to commence in 2011, along with two prestigious fellowships with many of these based at PAH. Our largest grant was awarded to a team led by Associate Professors Andrew Barbour and Mark Smithers, in the Discipline of Surgery at PA-Southside. Their team have been awarded nearly $792,000 over 5 years for their appropriately named DOCTOR trial, studying DOCetaxel with or without radiation therapy for resectable oesophageal adenocarcinoma. Other NHMRC grants to commence at PAH were awarded to Professor Len Gray, Director of the Centre for Research in Geriatric Medicine and Acting Director of the Centre for Online Health; Professor Peter Soyer, Director of the Dermatology Research Centre; Associate Professors Elizabeth Powell, Julie Jonsson and Andrew Clouston of the Liver Disease Research Centre; Dr Tarl Prow and Professor Michael Roberts of the Therapeutics Research Centre; and Professor David Johnson of the Centre for Kidney Disease Research. A prestigious NHMRC Practitioner Fellowship was also awarded to the Centre for Liver Disease Research’s Associate Professor Elizabeth Powell adding to the outstanding list of successes by groups at the PA-Southside Clinical School in 2010.

Professor David Wilkinson
Head School of Medicine
The Institute of Health and Biomedical Innovation (IHBI) is a collaborative institute based at QUT, devoted to improving the health of individuals through research innovation. 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. We also apply our solutions to real world experiences to make sure that they are effective. Through our work, we seek to improve the health of individuals and of communities.

IHBI’s researchers focus on three broad health areas - prevention; mind and body health; and recovery. IHBI’s researchers are clustered into five flexible research domains that emphasise multidisciplinary collaboration:

- Cells & Tissue
- Human Health & Wellbeing
- Injury Prevention & Rehabilitation
- Medical Device
- Vision Improvement

Cooperation between researchers from the Queensland University of Technology’s Institute of Health and Biomedical Innovation (IHBI) and the Princess Alexandra Hospital contributes to IHBI’s goal of relevant, high priority research to benefit patients in the near future.

QUT researchers are active members of the PAH, with trauma, prostate cancer, and nursing practice research being conducted at the PAH campus.

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. This 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.

Strategic planning in early this year defined the group’s research strengths and the group was structured around the themes of:

- Complications in fracture healing, incorporating infection/inflammation; soft tissue trauma; and bone nutrition
- Improvement of fracture healing, including mechanobiology; biomechanics; and biology of fracture healing
- Optimisation of implant design, incorporating musculoskeletal imaging; variability in bone shapes; implant fit assessment/optimisation

In August, the Trauma Research Group held a successful showcase of their research at the PAH, providing an overview of current projects. The showcase targeted medical students and doctors in training who were interested in participating in clinical and experimental research projects. There was a strong show of interest from third year medical students with several now participating on research projects.
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:

- Prevalence and determinants of health promotion and risk reduction of younger female cancer survivors
- Identifying the relationship between biochemical markers and healing in chronic leg ulcers treated with compression
- Evaluating novel methods for delivering non-pharmacological interventions for dyspnoea in cancer patients
- Evaluating a prescribed exercise intervention for patients with venous leg ulcers
- Cryotherapy for docetaxel-induced nail toxicities: Case control study
- Health promotion and risk-reduction behaviours of younger female survivors of breast and haematological cancers

This year, the group received an Australian Government Department of Health and Ageing grant to develop and trial cancer survivorship plans. Dr McCarthy was awarded PAH Private Practice Funding to evaluate a cryotherapy intervention for docetaxel-induced hand and nail toxicities.

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.

The program is working collaboratively with commercial partners in the US and UK, and has established the national Australian Prostate Cancer Bio-resource. This year saw the recruitment of Dr Derek Richard, an ARC Future Fellow, and his team to IHBI at Kelvin Grove, to continue their successful research into on the interactions between genes and proteins and their effect on prostate cancer. Program senior researcher, Professor Pamela Russell was awarded the Prostate Cancer Foundation of Australia Researcher of the Year award.

The program has a significant presence on the PAH campus, and aspires to trial new potential prognostic biomarkers and therapeutics at PAH. The group continues to create and evaluate new methods for more effective diagnosis and treatment of prostate cancer.

Preparations for the move into the TRI in 2012 will intensify during 2011.

Professor Ross Young
Executive Director IHBI
Prostate cancer is the third most common cancer and the second leading cause of male cancer deaths in Western countries. With an aging population, prostate cancer incidence continues to rise. More research is needed, to develop accurate early detection assays, and to successfully treat patients suffering from advanced castrate-resistant disease.

The androgen receptor is an integral protein in the development and maintenance of the prostate and prostate cancer. Blocking androgen receptor activity causes atrophy of both the prostate and prostate cancer. The androgen receptor is activated by the steroids, testosterone and dihydrotestosterone. Its activity is further modulated by co-regulators, proteins that directly interact with the androgen receptor. Nigel’s PhD project investigated the relationship between caveolin-1, a membrane bound protein that is reported to have androgen receptor co- regulator functions, and the steroidogenic potential of prostate tissue for synthesising the activating steroids of the androgen receptor.

The group have already had two invited review articles published (IUBMB Life and Int J Biochem Cell Biol).

Nigel Bennett

Nigel completed his PhD “Androgen receptor, caveolin-1 and androgen self-sufficiency in prostate cancer” at The University of Queensland, supervised by Associate Professor Glenda Gobe.
Adam is completing his PhD as part of his training in General Surgery under the supervision of Associate Professor Andrew Barbour and Dr Derek Nancarrow, investigating “Genome-wide analysis of oesophageal cancer towards biomarkers of response and outcomes of therapy”. Adam recognised early on that the academic side of medicine is the means by which the profession advances, and wanted to be part of that evolution. He also thinks a clinical/academic mix will bring better long term job satisfaction.

Oesophageal adenocarcinoma, a cancer of the food pipe, has the fastest rising incidence of any malignancy in the western world. Survival rates are dismal, and many patients are not suitable for an attempt at curative treatment. For those who are, treatment is very invasive and aggressive, usually involving chemo- and radiotherapy, as well as surgery. Adam is investigating whether molecular markers in the DNA of these patients can help to determine who will receive a long term benefit from such treatment. His research is generously supported by the Paul Mackay Bolton Scholarship (Royal Australasian College of Surgeons).

In November he presented a poster at the Surgical Research Society meeting in Adelaide “Copy number in stage III oesophageal adenocarcinoma – towards biomarkers for staging and prognostication”.

Amy started prostate cancer research because her father is a prostate cancer survivor, and she wanted to make a difference with her career. She worked under Professor Colleen Nelson in Canada before commencing her PhD with the Australian Prostate Cancer Research Centre-Queensland investigating “The Role of Insulin and IGF2 Signalling on Metabolic Pathways in Prostate Cancer Progression” at QUT and supervised by Professors Colleen Nelson and Adrian Herington. The project investigates the extremely important interaction between metabolic syndrome and prostate cancer progression.

Androgen deprivation therapy is the most widely used treatment for advanced prostate cancer (CaP), which is initially successful, but most often gives way to recurrent disease. There are many side effects including metabolic syndrome/hyperinsulinemia onsets rapidly in 55% of men. The group hypothesized that this metabolic syndrome/hyperinsulinemia may exacerbate CaP progression by initiating cancer survival pathways, specifically steroidogenesis and lipogenesis. Possible suppression of these pathways by metabolic syndrome drugs, metformin and simvastatin, is also being investigated. Insulin-like growth factor 2 is highly upregulated in CaP during progression, and the group have shown that it upregulates steroidogenesis.

This project has fostered much international collaboration. Posters have been presented at four conferences, and a presentation was given at one conference.
Matthew commenced his PhD investigating “Novel approaches to the self detection of melanoma: the role of dermoscopy” at The University of Queensland under the supervision of Professor Peter Soyer.

Matthew has been interested in dermatology since he was 12, when he visited a specialist with a funny looking mole. Melanoma is a serious disease which is curable if detected early. This research aims to give people a tool for identifying moles which need to be shown to a doctor.

Matthew has been investigating a new technology called dermoscopy. This is a handheld device which creates a magnified image with surface glare eliminated. It allows us to view colours and structures within a mole which are not visible to the naked eye. Dermoscopy is currently being used by GPs and dermatologists to identify moles which are suspicious for melanoma. It has recently been incorporated into mobile phone technology, such that images can be captured and sent to a specialist (teledermoscopy). This research aims to see whether dermoscopy can be used by people without a medical background to identify early melanomas.

Matthew has published the results of his honours study, the AC Rule for Melanoma, as a research letter in the Journal of the American Academy of Dermatology.

Dr Skoien is undertaking his PhD at The University of Queensland supervised by Associate Professors Andrew Clouston, Julie Jonsson and Elizabeth Powell

Non-alcoholic fatty liver disease (NAFLD) is increasingly common and patients are at risk of progression to cirrhosis, liver failure and death. The development of fibrosis, particularly portal fibrosis, is more complex than previously thought and the mechanisms that mediate its progression are incompletely understood.

Fibrosis patterns in NAFLD are heterogeneous. Fibrosis in different areas, such as portal tracts, and their histological associations are being examined to investigate whether multiple fibrogenic pathways may exist. Cellular senescence, a permanent replicative arrest where cells still secrete pro-inflammatory factors, may represent a key mechanism in disease progression and is being studied using an in vitro model of hepatocyte senescence and findings validated in vivo. Using liver biopsy specimens from NAFLD patients, the portal inflammatory response and its relationship to hepatic progenitor cell expansion and an associated ductular reaction are also being investigated for potential roles in mediating fibrogenesis.

An abstract on heterogeneity fibrosis patterns and their associations was presented at the 2010 AASLD Liver Meeting in Boston. Dr Skoien was awarded the best abstract submitted by a Research Fellow. His presentation of the in vitro hepatocyte senescence model won the Young Investigator Award at the 2010 Queensland Gastroenterology Society Update.
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 Metro South Health Service District encompasses Redland and Wynnum Hospital, Logan and Beaudesert Hospitals, Queen Elizabeth II Jubilee Hospital and Princess Alexandra Hospital as well as various Community, Oral and Mental Health facilities.

The work of the Human Research Ethics Committee continued to be significant even with the introduction of the Queensland Health single ethical review of multi-centre research in July. The Committee reviewed 263 new ethics applications in 2010. Investigator-led research applications increased by 25% whilst pharmaceutical sponsored trials decreased by the same proportion.

Dr Jennifer Fleming, Chair, HREC
Dr Eleanor Milligan, Acting Chair

Certification

The Metro South Health Service District’s ethical review processes were assessed in June and certified by the NHMRC National Certification Scheme for single ethical review for multi-centre research under the Harmonisation of Multi Centre Ethical Review (HoMER) Scheme. The Ethics Committee is now certified to undertake single ethical review for multi-centre that can be conducted anywhere in Australia for the following categories: Clinical trials Phase I, II, III & IV; Clinical interventional studies other than clinical trials; Population and/or public health; Qualitative health research; Mental health; Paediatric research

This initiative is expected to significantly reduce the work loads of researchers who under HoMER will need to receive one ethics approval by a certified committee to conduct the research in any number of sites across Australia. HoMER is expected to begin in January 2012.
Monitoring Program

The implementation of a pilot monitoring program allowed the successful monitoring of a number of research projects on site. The program has been established to enhance current monitoring activities. Researchers are still required to submit Annual Progress Reports, Final Reports, Serious Adverse Event Reports and reports from independent agencies (such as a data and safety monitoring board) for all ongoing approved research activities. As part of the certification process a new Monitoring Officer position was established to assist with the institutional compliance requirements for both single and multi site research. The gradual roll out of the program, the appointment of a Monitoring Officer and the introduction of the self-audit tool designed to help researchers reflect on their research conduct will further enhance the ongoing success of the program.

Professional 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 Trials Network - Implement and Monitor Compliance with Legal and Ethical Requirements
- Intensive Bioethics Course (IBC) at Stonelea Estate Alexandra, Victoria, organised by Monash University, Centres for Human Bioethics 3 December 2010
- Queensland Health Research Ethics Governance Unit, Chairs’ and HREC Member Forums, facilitated by Professor Colin Thomson, February and July 2010.

Communication Development

To assist researchers navigate through the application process a number of web site updates occurred during the year. The Committee under the leadership of Dr Milligan developed and published “Submission Tips” in the December Centres for Health Research Newsletter http://www.health.qld.gov.au/pahospital/research/publ/newsletters.asp

Committee Members

The Committee welcomed Dr Sean Hatherill (psychiatry representative) and Dr Adam La-Gaze (toxicology/pharmacology representative) who joined as members during the year.

After two and half years of service, Dr Jennifer Fleming resigned as Chair of the HREC in July 2010 to take up a postdoctoral research position within the Sydney Medical School, University of Sydney. Associate Professor Carl Kirkpatrick, Deputy Chair resigned in September to take an academic position at the University of Melbourne.

Dr Eleanor Milligan was appointed to the position of Acting Chair during the year.

There is sincere appreciation to all of the committee members for their selfless contribution.
The Health Practitioner Research Collaborative (HPRC-formerly the Allied Health Research Collaborative) became a Metro South Health Service District wide group late in the year. The group includes researchers and health practitioners providing diagnostic, rehabilitative and clinical support to hospitals and the community through specialised services. The purpose of the Health Practitioner Research Collaborative 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.

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 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 endeavours.
- ensure health practitioner research needs were represented and considered in strategic planning at facility, district and state levels.
- encourage networking and collaborations with nursing and medical researchers and universities.
- liaise with Evidence Based Practice Networks to 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 the Allied Health Clinical Education and Training Unit – Research Team regarding research resources and processes.
Achievements

A significant achievement for the year was the establishment of the Centre for Functioning and Health Research (CFaHR) in the Metro South Health Service District. The CFaHR strives to generate and translate research evidence in order to strengthen the delivery of health care, at all time points along the health care continuum. The research focus is underpinned by the International Classification of Functioning, Disability and Health. Early in the year, Steven McPhail was appointed as the conjoint Senior Research Fellow with the School of Public Health and Institute of Health and Biomedical Innovation, QUT; and Pim Kuipers was appointed as the conjoint Principal Research Fellow with the Griffith Health Institute, Griffith University. Mid year, Elizabeth Ward was appointed as conjoint Professor with the School of Health and Rehabilitation Sciences, The University of Queensland. This team of researchers together with existing discipline specific conjoint researchers will contribute significantly to building health practitioner research productivity and capacity, and the translation of evidence into clinical practice across the district.

The Department of Nutrition and Dietetics was successful in securing funding for dedicated research positions. Katrina Campbell commenced as a Senior Research Fellow receiving a OHMR Health Research Fellowship and a Lions Senior Medical Research Fellowship. In November, Dr Ingrid Hickman commenced as Health Practitioner Principal Research Fellow, a conjoint appointment with the University of Queensland’s Diamantina Institute. Late in the year, Liz Isenring was appointed as Clinical Academic Fellow (Senior Clinical and Research Dietitian), conjoint with the School of Human Movements, The University of Queensland.

Over two million dollars of competitive funding was awarded to members of the HPRC across diverse areas of health practitioner research including innovations in the use of technology to improve rehabilitation, goal-setting, work-place injuries, life-style diseases, service models, exercise therapy, spinal cord injury, acquired brain injury rehabilitation, ageing, cancer services, indigenous health services, health related quality of life and nutrition. There continues to be a strong health practitioner post-graduate research presence on the campus with more than 20 full-time and part-time higher degree students enrolled. Over 40 refereed journal articles and book chapters have been published this year by the collaborative. Details of funding attained, postgraduate students and publications can be found in the relevant departmental, service or centre reports.

The HPRC participants have contributed to the Queensland Health state-wide research agenda through active involvement in the Health Practitioner Research Advisory Group and the review panel for the Health Practitioner Research Grants. They have taken the leadership of projects determining research capacity in clinical staff and in the development of a Research Capability Framework to engage staff in research and its translation into practice.

An increase in health practitioner research capacity and research evidence translation is anticipated with the significant investment in dedicated research positions; the sharing of resources, training and information; and the collaboration of researchers across the Metro South Health Service District.

Dr Jenny Lethlean
Chair
The PA Research Foundation

Our Mission: To bring research to life

Our Vision: To prevent and cure disease

The PA Research Foundation financially supports and promotes health research conducted on the hospital campus. This includes a research staff in excess of 600 people from Queensland Health, The University of Queensland, Queensland University of Technology and Griffith University.

The foundation’s goal is to develop a philanthropic culture within staff members, former patients, businesses, individuals and external organisations to provide ongoing funds which support research. Grant funding is made on an annual basis to a diverse range of world leading, life saving research projects.

In December the PA Research Foundation announced the successful recipients of grants. This year $900,000 of projects were funded from the PA Research Foundation funds and the Private Practice Trust Fund. In addition over $200,000 was provided to current research projects through direct appeals to ensure their continuation.

I thank all those who generously invested in these projects by making a gift to the PA research Foundation. This is not just an investment in the future health and wellbeing of our families and communities; it is also an investment in Australian industry and ingenuity. In the words of Professor Ian Frazer: “As individuals and as a nation, we need to value ideas. The solution to many of today’s challenges will start with an idea and be driven by a commitment to find that solution.”

Robert Bowen
Chairman, PA Research Foundation
Group Reports

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.
Acquired Brain Injury Outreach Service

The Acquired Brain Injury Outreach Service is a specialist community rehabilitation service for people with acquired brain injury, their carers and service providers. During the year, the unit continued its success in many research arenas. New funding has been received for collaborative research projects with the Brain Injury Rehabilitation Unit and Griffith University looking at efficacy oriented care and family involvement in rehabilitation. The first pilot year has commenced for the Department of Communities funded initiative, exploring self-directed funding support for people with disability. Research continued in the areas of knowledge translation and consultancy within rehabilitation and aged care settings, models of rehabilitation for Aboriginal and Torres Strait Islander communities, transition from hospital to home and parenting following brain injury. New research has been developed in the areas of 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.

Ray Quinn
Manager

Research Activities

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). 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. This project commenced in 2007 and resulted in the submission of a business case during 2009. 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 ARC Linkage funded project involves a collaborative team of researchers from The University of Queensland, Griffith University and Princess Alexandra Hospital. Industry partners include Disability Services and ABIOS. Data analysis has commenced for this multisite project.

Integrating individual parenting support into the community rehabilitation and case management context: A pilot study (Black G, Kendall M, Roser J, Smith S, Wright S, Morriss E). This project was
commenced as a pilot during 2008. The study involved the development and evaluation of a psycho-educational support for parents with acquired brain injury and their partners. An extension of the data collection process has continued.

**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.

**Major Grants & Financial Support**

| Funding from other sources: | $367,000 |

**Awards & Prizes**

Ms Susan Gauld, Ms Sharon Smith, Dr Melissa Kendall
Metro South Health Service District Engagement Competition – First Prize Winner awarded by Queensland Health for research investigating models of service delivery for brain injury rehabilitation within Aboriginal and Torres Strait Islander communities

Runner-up Queensland Healthcare Improvement Awards for research investigating models of service delivery for brain injury rehabilitation within Aboriginal and Torres Strait Islander communities

Finalist- PA Week Poster Presentation Awards for research investigating models of service delivery for brain injury rehabilitation within Aboriginal and Torres Strait Islander communities

**National & International Presentations**

Susan Gauld, Sharon Smith, Dr Melissa Kendall
8th World Congress on Brain Injury, Washington

Dr Melissa Kendall, E. Kendall, H. Muenchberger
Annual Australian Society for the Study of Brain Impairment Conference, Gold Coast

Dr Melissa Kendall, Ray Quinn
Annual Australian Society for the Study of Brain Impairment Conference, Gold Coast

Sharon Smith, Susan Gauld, Dr Melissa Kendall
Joint World Conference on Social Work and Social Development, Hong Kong

Sharon Smith, Susan Gauld
Creating Futures Conference, Cairns

Areti Kennedy, Ben Turner
Services for Australian Rural and Remote Allied Health (SARRAH) Conference, Broome

Mr Ray Quinn
National Disability Services - Communities of Practice Conference, Brisbane
Alcohol and Drug Research

Based within the Division of Medicine, the service provides outpatient treatment for alcohol and other substance use disorders. Investigating methods which improve assessment and treatment outcomes continued to be the focus of clinical research. Patients referred from within the hospital and from the community continued to have access to treatment programs. Disciplines represented within the unit include medicine, nursing, social work and clinical psychology.

Dr Gerald Feeney
Medical Director

Research Activities

Clinical Trials
Clinical Support Decision Making System for Alcohol Dependence Treatment (Symons M, Connor J P, Feeney G FX, Young R McD). A computer based, clinical support decision making system which scores and interprets clinical data, provides a prognosis on likely treatment outcome and identifies key modifiable treatment factors is being trialled. The system is integrated with the existing clinical databases and employs non-linear approaches to model outcomes from 1400 patients previously treated at the service.

Other Research
Treatment Targeting Alcohol-Related Issues in Young Adults (Feeney GFX, Connor JP, Young R McD). Patients under 30 years of age represent one quarter of those treated at the unit. Existing Cognitive-Behavioural Therapy based programs effective in treating alcohol dependence have been modified to target the specific needs of this group. The efficacy of these approaches, tailored to a younger population, is being assessed.

Development of Psychometric Tools for Substance Use Disorder Assessment (Connor JP, Feeney GFX, Young R McD). This includes evaluation of clinical instruments applied in both assessment and treatment. A number of psychometrically valid and reliable instruments are being developed in the areas of alcohol, cannabis and amphetamine use.

Alexithymia and Alcohol Dependence Treatment (Thorberg FA, Young R McD, Connor JP, Feeney GFX). This personality trait characterised by difficulties identifying and describing feelings occurs frequently in alcohol dependence. Assessment and treatment approaches for this group are being developed.
Research in the Anaesthetic Department continued to gain momentum with several new projects. Dr Pal Sivalingam continued as the Department’s Director of Research and the Research Subcommittee (Drs Moran, Burrow McKenzie, Fairweather, Wyssusek, Ferris and Davies) entered its second year. A Hospital Private Practice Fund enabled the employment of a full time Research Nurse in April.

Dr Peter Moran  
Director

Dr Pal Sivalingam  
Director of Research

Research Activities

Clinical Trials
IV Oxycodone: A comparison of IV oxycodone and IV morphine patient controlled analgesia in post laparoscopic nephrectomy patient (Solomos J, Sivalingam P, Breen C)

Gum Elastic Bougie vs. Frova intubating Catheter when using the Glidescope (Sivalingam P, Ariotti G).

Alcohol Rub vs. 3 minute surgical scrub using 4% Chlorhexidine (McKenzie B, Faoagali J, Howard J)

Other Research
Perioperative anaesthetic management of adult patients with diagnosed or suspected Obstructive Sleep Apnoea (Wyssusek K, Breen J)
The Australian Prostate Cancer Research Centre – Queensland (APCRC-Q) experienced several highlights during the year. The Multidisciplinary Team for Advanced Prostate Cancer Clinical Trials Unit was officially launched and is making significant progress to incorporate a multidisciplinary approach to management of these patients. The annual Australian-Canadian Prostate Cancer Research Alliance (ACPCRA) scientific meeting was held in conjunction with the Prostate Cancer Foundation of Australia’s annual conference in June and the ACPCRA website was also officially launched in July (http://www.aus-canprostatealliance.org/).

Members of the Centre received a number of significant research funding awards. Professor Judith Clements received a five-year NHMRC Principal Research Fellowship of $690,000 (2011-2015), and led two successful NHMRC project grants ($1.16 million) for her prostate cancer research awarded. Professors Judith Clements and Colleen Nelson were also awarded significant funding from the PCFA for 2011-2013 ($1 million).

(For further information visit http://www.australianprostatecentre.org/)
Multifocal prostate cancer project (Nelson C, Jovanovic I). 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 have been examined. To date, the majority of specimens have been processed in terms of microdissection and RNA extraction, and tissue sections have also been cut for future DNA extraction. Expression microarray experiments have been successfully conducted.

Insulin C-peptide as a biomarker for androgen deprivation therapy-induced Metabolic Syndrome (McKenzie I). This small pilot study confirms an increase in serum C-peptide levels in men receiving androgen deprivation therapy for advanced prostate cancers and suggests the need for a formal and larger prospective study assessing the effects of hyperinsulinemia on progression to castrate resistance.

Exosomes as a potential biomarker for advanced prostate cancer (Russell P, Soekmadji C). This study involves isolating exosomes from human prostate cancer cell lines that have undergone various treatment regimes and which reflect various stages of prostate cancer in order to analyse any differences in their proteins and microRNA from those isolated from untreated cells.

3D biomaterials to develop biomimetic prostate cancer in vitro and in vivo preclinical models (Hutmacher D, Russell P, Nelson C, Clements J, Soekmadji C, Loessner D). This study is developing 3D synthetic biomaterial models to replicate the tumour microenvironment that prostate cancer cells grow in. Providing these models in the laboratory setting should provide more meaningful molecular data when investigating new drug targets. The analyses currently underway will provide exciting data that may have a major impact on the way laboratory studies are performed on tumour cell biology.

Systemic injection of Mesenchymal Stem Cells to treat prostate cancer (Hutmacher D, Clements J, Russell P, Soekmadji). This project explores the use of new models for studying bony metastasis from prostate cancer and for delivering nanoparticles/therapy to the metastatic sites. It will also investigate whether mesenchymal stem cells can infiltrate tumours in the prostate or those grown subcutaneously in bone scaffolds.

Delineating the role of progesterone in castration-resistant prostate cancer (Sadowski M, McPherson S, Nelson C). This project focuses on cell cycle regulated gene pathways. Several candidate genes with critical roles in the regulation of transcription, proliferation and cell cycle progression have been selected from the phase 2 microarray data set of progesterone-regulated genes. Quantitative RT-PCR has confirmed their up-regulation by progesterone. This project also aims to identify the role of progesterone in regulating gene expression and activity that may control/promote prostate cancer cell survival following androgen deprivation.

Relationship between Serum Insulin Levels and the Progression of Castrate Resistant Prostate Cancer (Gunter J). This project includes examining the stimulatory effects of insulin on intraprostatic steroid (androgen) synthesis and clinically based pilot studies assessing possible correlations between elevated insulin levels and time-to-progression to castrate resistant prostate cancer. These relationships are also being examined in the LNCaP prostate tumour cell line treated with androgens or insulin. A whole genome micro array analysis has been performed.

Inter-relationships between castrate resistant prostate cancer, radiation and chemotherapy (Nelson C, Vasireddy R). 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 apoptosis.

Functional Analyses of Prostate Specific RNA in Prostate Cancer (Nelson C, Lai J). 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 RNA that are specifically expressed in the prostate have been mapped including ‘blocks’ of alternatively spliced, antisense, chimeric, and overlapping transcripts. At present, expression data indicates that prostate specific blocks at 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 using a siRNA approach.

**Tyrosine kinases as therapeutic targets for prostate cancer** (Ling P). 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. These include BRAF and RAF-1, tyrosine kinases known to be important in cancer progression as well as EphA4 and other novel kinases. Further validation and characterization of these protein kinases are in progress.

**Understanding the molecular pathways of the EphB4 tyrosine kinase receptor in controlling cellular function** (Stephenson S-A, Herington A, Mertens-Walker I, Rutkowski R, Lisle J, Gill P). The EphB4 receptor tyrosine kinase is increased in prostate cancer cells and contributes to cancer cell survival and spread. Intriguingly, EphB4 demonstrates dual and opposing roles in a cell- and environment context - tumour suppression, when stimulated by its cognate ligand, ephrin-B2, and tumour promotion via proposed ligand-independent mechanisms. The aim of this project is to characterise ligand-dependent and ligand-independent signalling pathways mediated by EphB4 using cell models with both artificial and endogenous EphB4 over-expression. Role of nuclear-localised EphB4 tyrosine kinase receptor in prostate cancer (Stephenson S-A, Herington A, Mertens-Walker I, Rutkowski R, Lisle J, Gill P). The group have made significant and novel evidence that EphB4 can localise to the nucleus of prostate cancer cell lines and clinical tissue specimens and have found that it can bind directly to DNA. To address the hypothesis that the nuclear presence and action of EphB4 provides new mechanisms of action for this protein in tumour progression the group are currently investigating the role of nuclear localised EphB4 as a direct modulator of gene expression.

**Preclinical proof of principle of therapeutic targets** (Ling P). In collaboration with Davos Life Science in Singapore, this study found that gamma-tocotrienol is a potent killer of prostate cancer stem cells. This small group of cells is responsible for the initiation of prostate cancer and is resistant to conventional chemotherapy drugs. It causes relapses in the cancer by producing new chemo-resistant cancer cells. Gamma tocotrienol is a member of the Vitamin E family and is derived naturally from palm oil. Planning for an international clinical trial is now underway.

**The Role of Kallikrein Gene Variants in Prostate Cancer Etiology, Detection and Disease Progression** (Clements J, Batra J, Spurdle A, Lose F). This study aims to investigate the role of kallikrein genes in prostate cancer development and patient susceptibility. The detection of gene variants associated with prostate cancer will provide the foundation for development of sensitive and readily applicable lab-based screening tools to be used clinically for diagnosis and monitoring of treatment and prognosis.

**Proteolytic and non-proteolytic roles for PSA and related kallikrein serine proteases in prostate cancer progression** (Clements J, Nelson C, Russell P, Hutmacher D, Gorman J, Harris J). PSA is unregulated in prostate cancer and as such is used as a diagnostic biomarker. This study aims to clearly determine the functional role of PSA and KLK4 in prostate cancer progression, and will take a holistic approach to investigating the role of Kallikreins in prostate cancer. Using novel proteomic techniques a comprehensive analysis of KLK substrates and binding partners will be undertaken.

**Evaluation of the Therapeutic Potential of SFTI-FCQR, a Novel Kallikrein 4-Specific Protease Inhibitor** (Harris J, Clements J, Russell P). This project aims to complete a full pharmacokinetic analysis of the KLK4 inhibitor compound SFTI-FCQR. Preliminary studies will determine factors such as toxicity and bioavailability of SFTI-FCQR. Later studies will use sophisticated imaging techniques to monitor the metastatic potential of prostate tumours in the presence and absence of SFTI-FCQR. At its completion, this study will have extended proof of concept studies on the inhibition of KLK4 by SFTI-FCQR to the pre-commercialisation stage.

**Applying a Novel Bone Tissue Engineering Platform to Study Prostate Cancer Metastasis to Bone** (Hutmacher DW, Clements J, Nelson C). This study utilises novel bio-mimetic model systems to investigate the role of PSA and KLK4 in prostate cancer bone metastasis. Tissue engineered bone scaffolds can be used in vivo and in vitro to allow in depth analysis of the
interaction between bone scaffolds and prostate cancer cells. This work will yield research results with greater clinical relevance and aid in therapeutic developments.

Awards & Prizes

Professor Pamela Russell
Outstanding Researcher, Prostate Cancer Foundation of Australia

National & International Presentations

Professor Judith Clements
Advanced Prostate Cancer Seminar, Brisbane

Gordon Research Conference - Plasminogen Activation & Extracellular Proteolysis, Ventura, USA

Winter School in Tiers - Proteinases and Their Inhibitors - Recent Developments, Germany

IMPACT & COGS meetings, Cambridge, UK

PRACTICAL Consortium, Cambridge, UK

Gordon Research Conference - Proteolytic Enzymes & Their Inhibitors, Italy

International Society for Biological and Environmental Repositories Conference, The Netherlands

11th National Prostate Cancer Symposium, Melbourne

Australian-Canadian Prostate Cancer Research Alliance Symposium, Gold Coast

Genitourinary Cancers Symposium, San Diego, USA

NZ BIoTech, Auckland, NZ

BIO, Chicago, USA

ENDO, San Diego, USA

SPORE Meeting, Toronto, Canada

11th National Prostate Cancer Symposium, Melbourne

Australian-Canadian Prostate Cancer Research Alliance Symposium, Gold Coast

Endocrine Society of Australia, Sydney

Cancer Conference, Sydney

Translational Research Excellence, Brisbane

1st International Conference on Translational Medicine, Canberra

Professor Colleen Nelson
Genitourinary Cancers Symposium, San Diego, USA

3rd Novartis Research & Development Symposium, Melbourne

11th International Symposium on the Genetics of Industrial Microorganisms, Melbourne

Australian-Canadian Prostate Cancer Research Alliance Symposium, Gold Coast

Genetics in Industrial Microorganisms International Meeting, Melbourne

National Prostate Cancer Symposium, Melbourne

Prostate Cancer Foundation of Australia Conference, Gold Coast

TERMIS meeting, Sydney

Australian Health & Medical Research Congress, Melbourne

Major Grants & Financial Support

<table>
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<tr>
<th>Total NHMRC funding:</th>
<th>$734,000</th>
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<tr>
<td>Other competitive funding:</td>
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Hormones in Health & Disease: 50 years of Endocrine Research at Prince Henry’s Institute, Melbourne
The Brain Injury Rehabilitation Unit accepts referrals for those in the broad working age group with an acquired brain injury. Referrals from Queensland and Northern New South Wales as well as other Australian states and overseas are also accepted.

The Brain Injury Rehabilitation Unit is co-located with all allied health professional services. The rehabilitation team is involved in collaborative research in many areas of injury management. Research includes all professional disciplines in the management of acquired brain injury. Research highlights included: piloting and researching clinical programs to improve the management of hypertonicity (spasticity); improved management of recreation for those with acquired brain injury; and utilising diffusion tensor imaging as a surrogate marker of recovery following traumatic brain injury.

**Dr Ron A Hazelton**  
**Medical Director**

**Research Activities**

**Clinical Trials**

*Management of the Painful Hemiplegic Shoulder* (Kuipers K, Cave C, Nascimento M, Hazelton R). Pain and restricted active and passive movement of the shoulder affects about 60% of post stroke cases and results in disability and prolongs hospital stay. The development of a clinical pathway with active management of the hemiplegic shoulder has been developed and is being trialled.

*Abnormal Gait in association with the hemiplegic upper limb* (Nascimento M, Cave C, Kuipers K, Hazelton R). Gait and balance are adversely affected by the hypertonic (spastic) upper limb. This research aims to investigate the mechanism of this association and to develop clinical guidelines for management.

*Trialling Models and Assessing Efficacy of the Hypertonicity Service* (Cave C, Kuipers K, Nascimento M, Hazelton R). A model for the service has been developed and is being assessed for efficacy in a prospective study.

*Clinical research on recreational opportunities for inpatients in BIRU* (The BIRU Team).

A common challenge following an acquired brain injury is to assist the injured person to become aware of how the injury has affected social skills and function generally. Group and one on one activities that are unstructured and relevant to the patient can be undertaken and are valuable in assisting with recovery. Recreational activities post discharge are identified whilst awaiting further recovery to return to usual lifestyle.

**Other Research**

A wide variety of collaborative studies are listed in other areas of this report under the appropriate allied health professional grouping.

**Major Grants & Financial Support**

| Total funding received: | $65,000 |
Breast & Endocrine Surgery Unit

The Breast and Endocrine Surgical Unit provides a comprehensive world-class tertiary surgical service for the management of breast and endocrine surgical conditions within a multi-disciplinary setting. Over 250 newly diagnosed breast cancers are treated within the unit each year. Breast cancer is managed in conjunction with the Medical Oncology and Radiation Oncology units. Surgeons meet on a weekly basis with clinicians from the other disciplines in a combined breast oncologic multi-disciplinary clinic to ensure that ‘state of the art’ breast cancer treatment is provided in keeping with nationally accepted best practice guidelines. A multidisciplinary Endocrine meeting is also conducted monthly between surgeons, endocrinologists and radiologists to discuss and streamline management of patients with endocrine disorders.

The respective surgeons work closely with the Breast Screen Queensland Brisbane South Service so that surgical expertise is provided for screening, assessment and diagnosis of early stage breast cancer to facilitate and integrate with definitive management. The unit is involved in collection of data for the RACS National Breast Cancer Audit of all breast cancers treated at the Princess Alexandra Hospital.

Members of the unit have excellent collaborative working relationships with scientists from The University of Queensland’s Diamantina Institute for the conduct of clinically relevant research, particularly in the field of breast cancer. The unit continues to play a role in both undergraduate and post-graduate teaching of breast and endocrine surgical conditions.

Associate Professor Ian Bennett
Chairman

Research Activities

Clinical Trials


This conjoint project received research grant funding from the National Breast and Ovarian Cancer Centre of Australia. (Members of the research teams are from: Queensland Institute of Medical Research; The University of Queensland’s Institute of Molecular Biosciences, Diamantina Institute Centre for Clinical Research and School of Chemistry and Molecular Biosciences; Pathology Queensland and Princess Alexandra Hospital).

National & International Presentations
Associate Professor Ian Bennett
79th Annual Scientific Congress Royal Australasian College of Surgeons Annual Scientific Congress, Perth
Applied Ultrasound for Breast & Endocrine Surgeons Workshop, GSA Annual Scientific Meeting, Gold Coast

L-R: Dr David Wilkinson, Dr Neil Wetzig, Associate Professor Ian Bennett, Dr Petar Vujovic
Cardiology

The department has led 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 department has the highest number of participants recruited worldwide.

Additional achievements have included the clinical investigation of: echocardiographic optimisation of pacing cycle durations at rest and on exercise in cardiac resynchronisation therapy; the effect of atrial fibrillation, and ablation of atrial fibrillation, on cardiac neurohormonal response and atrial remodelling, and correlation of electrical and mechanical activity in the left ventricle using sophisticated mapping and imaging techniques.

The broad expertise the department offers has secured a large number of clinical trials from a variety of commercial companies, the National Health and Medical Research Council, the National Institutes of Health and investigator-driven research over the past year. Also collaboration with The University of Queensland’s Cardiovascular Imaging Research Centre has ensured an even broader range of cardiology modalities on offer to enhance research within the department. 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 and cardiac surgery.

*Dr Paul Garrahy*
*Director*

**Research Activities**

**Clinical Trials**

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

*Alphee Study* (Hill J). Anti-arrhythmic study drug vs. amiodarone vs. placebo as a calibrator for the prevention of ICD interventions or death.


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

*dalHeart Study* (Garrahy P). Lipid medication vs. placebo on cardiovascular risk in stable coronary disease patients with a documented recent Acute Coronary Syndrome.

*Echo-CRT Study* (Marwick T, Korczyk D). Heart failure subjects outside the standard ICD insertion guidelines parameters.
Freedom Study (Garrahy P).
Percutaneous transluminal coronary angioplasty vs. coronary artery bypass grafting in diabetic subjects with multi-vessel disease.

Heart Failure Study (Korczyk D).
Study drug vs. Placebo in patients with chronic heart failure at risk for ventricular arrhythmia.

Rhythm AF Study (Gould P).
International Registry of atrial fibrillation.

ZoMaxx II Study (Garrahy P).
Comparison of new drug-eluting stent vs. TAXUS™ Express²™ Paclitaxel-Eluting Coronary Stent System in de novo coronary artery lesions.

Other Research

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

Protect-Pace Study (Kaye G). The protection of left ventricular function during right ventricular pacing.

Awards & Prizes

Cindy Hall
Best Speaker National (Research Employment), ARCS Australia

National & International Presentations

Dr Dariusz Korczyk
4th Australasian Cardiovascular Nurses College (ACNC) National Conference, Brisbane

Heart Failure Association Conference for the European Society of Cardiology, Berlin

Dr Sudhir Wahi
14th World Congress of Echocardiography and Vascular Ultrasound and Allied Techniques, Manila, Philippines

14th Annual Scientific Meeting National Heart Association of Malaysia, Kuala Lumpur, Malaysia

Cindy Hall
ARCs Scientific Congress, Sydney

Heart Failure and Palliative Care Practitioners

4th Australasian Cardiovascular Nurses College (ACNC) National Conference, Brisbane

Heart Foundation Queensland Conference, Brisbane

Centre for Palliative Care Research and Education Conference, Brisbane
The department was involved in nine research projects. This increased activity allowed for the appointment of a new part-time research nurse and greater opportunity for trials to be undertaken. The department collaborated with Hamilton Health Sciences, McMaster University in Canada in the international “Steroids in Cardiac Surgery Trial”. Highlights during the year included: Dr Shah’s investigator-initiated prospective randomised controlled aortic valve study that is now also conducted nationally with the inclusion of the Prince of Wales Hospital in NSW, and Dr Shah’s commencement of a Doctor of Medicine at The University of Queensland.

The group had three publications in reputed journals with six other papers under review. Six papers were presented at the National Cardiothoracic meeting and Cardiac Society meeting, and three papers were accepted for the Tyco prize during the Princess Alexandra Hospital Research Week. The eight registrars, two residents and one intern contributed to the department’s research activity.

Associate Professor Julie Mundy
Director

Research Activities

Clinical Trials

Prospective randomised study to determine the clinical outcomes of tissue and mechanical aortic valve replacement in patients aged 55-70 yrs (Shah, P). At present, every surgeon/patient has their own valve preference, but there is no evidence base to make a strong recommendation regarding the optimal valve in 55-70 year-old patients undergoing aortic valve replacement (AVR).

This is the first study of its kind in literature and the hypothesis addressed is that: tissue valves have fewer major adverse postoperative events (MAPE: reoperation, endocarditis, major bleeding or thromboembolism, valve failure), better long term survival and quality of life as compared to mechanical valves in the aortic position in age group 55-70 yrs.

The Expression of Genes in Epicardial Adipose Tissue Involved in Fat Mobilization: Comparison to Subcutaneous Abdominal Fat (Shah P, Kostner K). Epicardial adipose tissue (EAT) mass correlates with Metabolic Syndrome and coronary artery diseases (CAD). In addition, the expression of inflammatory cytokines and of genes involved in oxidative stress in EAT contribute significantly to the risk of CAD. Little is known however, about the expression of genes involved in triglyceride (TG) storage and mobilization in EAT.

There were three primary objectives to this phase of the study: 1). Analysis of the mRNA expression of perilipin (PLIN1), lipoprotein lipase (LPL), hormone sensitive lipase (HSL), adipose triglyceride lipase (ATGL) and of comparative gene identification-58 (CIG-58) in EAT of patients who underwent cardiac surgery; 2). Comparison of the expression of these genes between EAT and subcutaneous abdominal adipose tissue (AAT); 3). Comparison of the expression of these genes in adipose tissues of patients with angiographically proven CAD with non-CAD patients undergoing primary cardiac surgery. Samples taken are being analysed for lipid specific genes and omega 3 fatty
acids in the Department of Molecular Biology and Biochemistry, University of Graz, Austria

SIRS trial “Steroids in cardiac surgery” (Shah P, Whitlock R). The objective of this study is to determine whether high-risk patients undergoing cardiac surgery requiring CPB derive benefit from perioperative steroids

This is a multicentre, international, randomized, double-blind placebo-controlled trial of high-risk adult patients undergoing cardiopulmonary bypass. Patients will be randomly allocated to receive 500 mg of methylprednisolone divided into two intravenous doses of 250 mg each, one during anaesthetic induction and the other on CPB initiation, or matching placebo

Other Research

Cardiac surgical outcomes in Jehovah witness patients (Marshall L, Shah P). Minimising blood transfusion has a number of medical and logistical benefits in cardiac surgery and since the introduction of the blood ban in 1945, is particularly important for followers of the Jehovah's Witness (JW) faith. The short-term outcomes in JW patients based on the institutional practice over the past decade are being examined.

Cardiac surgical outcomes in patients with solid organ transplants (Renal and Hepatic): A case matched study (Sharma R, Shah P). Involves the studying of the long-term outcomes of patients who have undergone cardiac surgery in presence of prior solid organ transplant (hepatic and renal). Comparison of outcomes with a case matched population of patients who did not have prior transplant is also conducted.

Factors affecting return to work and quality of life after primary coronary artery bypass grafting in patients operated at age less than 50 years (Pinto N, Shah P). Important predictors studied included: work status prior to operation, effect of level of education, type of occupation (blue or white collar), place of residence, ethnic origin, effect of cardiac rehabilitation, effect of recurrence of symptoms. Two-hundred and fourteen patients were enrolled from 2000 to 2006. All patients were followed for a minimum of five years. The quality of life of patients who returned and those who did not return to work were also compared using a questionnaire.

Major Grants & Financial Support

| Total competitive funding: | $30,000 |
| Funding from other sources: | $25,000 |
Cardiovascular Imaging Research Centre

The 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 the research echo/stress area in the main hospital and image processing area in the Department of Medicine.

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

The academic supervisor is Dr. Sudhir Wahi, senior lecturer with The University of Queensland and a consultant cardiologist with Queensland Health. Dr. Brian Haluska holds a position as a research fellow and general manager of the group. There is close collaboration with Adjunct Professor Tom Marwick, who founded the group in 1998 and who is currently the Section Head of Cardiovascular Imaging at the Cleveland Clinic, Cleveland, Ohio, USA.

(For further information visit http://www.som.uq.edu.au/research/cig/default.asp)

Dr Sudhir Wahi
Academic Supervisor

Dr Brian Haluska
General Manager

Research Activities

The research 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, the group 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. 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. A team of highly qualified research nurses 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. It is the belief of the group 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. The group have been using high resolution ultrasound imaging of large arteries to measure intima-media thickness (IMT) which is a measure of atherosclerotic burden. In patients with increased age-corrected increased IMT, early treatment and risk factor modification will probably decrease future cardiovascular events. Work 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 the group 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.

**Awards & Prizes**

Dr Brian Haluska
Affiliate’s Abstract Prize winner, The Cardiac Society of Australia and New Zealand Scientific Sessions, Adelaide, SA

Julian Sacre
Best Paper Award, Exercise and Sports Science Australia, Gold Coast Qld

Erin Howden
Best Paper Award Finalist, Exercise and Sports Science Australia, Gold Coast Qld

**Major Grants & Financial Support**

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Centre for Functioning and Health Research

The Centre for Functioning and Health Research was founded mid-2010 within the Metro South Health Service District of Queensland Health with partnership support from The University of Queensland, Griffith University and the Queensland University of Technology. The research agenda of centre is underpinned by the International Classification of Functioning, Disability and Health model. Team members include leading researchers across a range of allied health disciplines. The centre’s main research objective is to conduct and facilitate high quality research that will strengthen the delivery of health care to all people, at all time points along the health care continuum. The centre leads a number of international level research projects as well as local clinical and service research initiatives within Queensland Health. It has a strong focus on building the research workforce of the future and assists in mentoring, training and supervising health practitioners to do research.

(For more information visit www.health.qld.gov.au/cfahr)

Professor Liz Ward
Head of Research Unit

Research Activities

Clinical Trials

Randomized 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)

Evaluation of the use of group based cognitive remediation therapy for people with Psychosis (Hodgson A, Dark F, McPhail S)

Effectiveness of an enhanced multidisciplinary community based group program for Parkinson’s disease (Peters C, Rogers A, Currim M, Tyson S, Comans T, Healy S, Heathcote K, McPhail S, Brauer S)

Evidence of disagreement between patient-perceived change and conventional longitudinal evaluation of change in health-related quality of life among older adults (McPhail S, Comans T, Haines T)

Patient Education to Prevent Falls Among Older Hospital Inpatients: A Randomized Controlled Trial (Haines T, Hill A M, McPhail S, Hill K D, Oliver D, Brauer S, Hoffmann T, Beer C)

The effect of Nintendo Wii-Fit on outcomes in people with lower limb injuries (Kuys S, Tonks P, Toon M, McPhail S).

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)

Other Research

Swallowing, nutrition and patient-rated function in patients with oropharyngeal SCC treated curatively with altered fractionation radiotherapy with concomitant boost or chemoradiation
Can impaired swallow function (dysphagia) be accurately assessed online: A telehealth feasibility study (Ward E, Sharma S, Burns C, Theodoros D, Russell T)

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)

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

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

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

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

Food services in residential aged care: financial, personnel and service delivery factors (Wilson JE, Wright O, Hagney DG, Ward EC)

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


Clinical knowledge translation from specialist health practitioners to generalist health practitioners - evaluating a consultancy model of service delivery (Amstrens D, Kendall M, Kuipers P, Lindeman M, Schuurs S)

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

Supporting Allied Health Professionals - evaluating a Peer Group Supervision model for Queensland (Hall K, Pager S, Kuipers P, Bell K)

Investigation of the 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, Ownsworth T, Haines T, Kendall M, Chenoweth L)

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

Does individualised hand splinting reduce spasticity after traumatic brain injury (Copley J, Kuipers K, Fleming J, Griffin J)

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

Investigations of care requirements of people with brain tumour (Haines T, Cornwell P, Fleming J, Olsen S, Omerod A, Dicks B)

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

Clinical utility, reliability and validity of the Self-Perceptions in Rehabilitation Questionnaire (SPIRQ) in brain injury rehabilitation (Ownsworth T, Fleming J, Ross J, Collier AM, Stewart E)

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)

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

Brain injury rehabilitation: The lived experience of inpatients and their family caregivers (Fleming J, Sampson J, Cornwell P, Turner B, Knill J, Griffin J)

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

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

Early active motion of distal radius fractures post open reduction internal fixation improves patient outcomes (Driessens S, Diserens-Chew T, McPhail S + Logan Interdisciplinary upper limb team)

Comparison of Transitional Housing Team data with the Transitional Housing Model of Service Delivery to identify a strategic plan to respond to service gaps and recognise resource implications (Gordon S, McPhail S)

Integrating remote access physical activity behaviour change programs into outpatient clinics: An investigation of patient and staff perceptions (McPhail S)
Response shift, recall bias and their effect on measuring change in health-related quality of life amongst older hospital patients (McPhail S, Haines T)


Measuring falls events in acute hospitals—a comparison of three reporting methods to identify missing data in the hospital reporting system (Haines T, Hill AM, McPhail S, Hill KD, Oliver D, Brauer S, Hoffmann T, Beer C).

Review of outcomes of people with lower limb amputations (Batten H, McPhail S, Kuys S, Varghese P).


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


Evaluation of a settings-based approach to research capacity building in primary health care (Holden L, Pager S, Golenko X).

Major Grants & Financial Support

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National & International Presentations

Associate Professor Jennifer Fleming
OT Australia NSW Cognitive Rehabilitation Workshop, Sydney

Dr Steven McPhail
Joint Relations, Brisbane

Sue Pager
GP & Primary Health Care, Darwin

Professor Elizabeth Ward
Prosthetic voice rehabilitation: a randomised control trial, Amsterdam

New issues in laryngectomy care, Horby Sweden

MS Nurses Education Day, Brisbane

Dysphagia Research Society, San Diego USA

Tracheostomy Special Interest Group, London

H&N Special Interest Group, London

Australian and New Zealand Head and Neck Cancer Society: Pre-conference workshop for Speech Pathologists in H&N Cancer Management, Melbourne

Australia and New Zealand Head and Neck Society, Melbourne

Australian and New Zealand Burn Association, Darwin
The Centre includes laboratory, clinical research and teaching, specifically focused on the integration of Complementary and Alternative Medicines within the conventional model. The aim of the centre is to focus on evidence-based research on the mechanisms and actions of nutraceuticals and natural compounds. The centre continued to build research human capacity by supporting new MPhil and PhD post graduate programs, fostering excellence and attracting increased investment in research in integrative and complementary medicines.

The venomics research programme, partly funded by QRx Pharma Ltd/ Venomics Ltd (with teams led by Professor. Martin Lavin in UQCCR and Associate Professor Luke Guddat in SMMS) has continued the Australian venom-derived drug development programme. QRx Pharma Ltd has successfully entered into a joint venture in China with Nuokong Biopharmaceuticals, China; establishing a new company in Hong Kong called Venomics, Hong Kong Ltd to bring to the China market the Textilin and Haempatch products.

A new provisional patent entitled Serum Preparation was lodged at the APO on 20th September. Research towards the Patent Cooperation Treaty document for this invention has also become a primary focus of the group’s research. Several other patentable concepts led by Dr Kong-Nan Zhao are also in progress with invention disclosure documents submitted to Uniquest for a patenting decision.

The centre endeavours to articulate national priorities in basic and translational research and promote national and international collaborations to support beneficial connections with conventional medicine.

Associate Professor Luis Vitetta
Director

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, Vitetta L, Kostner K, Crompton D)

To Evaluate the Safety and Efficacy of GlycOmega Green Shell Mussel Powder on Osteoarthritis of the Knee in Males and Females 40 Years of Age or Older (Vitetta L, Coulson S, Vecchio P, Masci P).

Selected Micronutrients Absorption Studies (Vitetta L, Coulson S)

B group vitamins and chemotherapy induced peripheral neuropathy (Vitetta L – CIA, Schloss J)

Marine lipids, Leptin, Adiponectin levels and inflammatory markers in obese individuals (Vitetta L, Gray B)

Other Research

National Institute Complementary Medicine [NICM] Collaborative Centre for Transitional Preclinical and Clinical Research in Nutraceuticals and Herbal Medicine
Centres for Health Research 2010 Annual Research Report


Ascorbate as a Treatment for Cancer (Vitetta L, Linnane AW, Chen CF)

Probiotic Supplementation as an Intervention against the Inflammatory Effects of Gluten and Irritable Bowel Syndrome (Vitetta L, Briskey D)

Pharmacodynamics in Liver Disease and in Liver Surgery (Roberts M, Weiss M, McDonald G, Fawcett J, Vitetta L, Fletcher L)

Provisional patent entitled “Serum Preparation” research to prepare PCT document assist Uniquest in a commercialization strategy (Masci P, Dimeski G)

Uses of protease inhibitors to stimulate wound healing (Zhao KN, Masci P)

QRx Pharma Ltd/venomics Ltd/Nuekong Biopharmaceutical Ltd product development for China (Masci P)

Platelet microparticle Fibrin diagnostic development with Q Health (Masci P, Bird R, Saal R)

Development of novel oral-deliverable anticoagulant with Dr Simone Osborne, CSIRO St Lucia (Masci P)

Studies of Platelet-associated resistant fibrin in Obese individuals using Thromboelastography (Hickma I, Masci P)

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**Major Grants & Financial Support**

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**National & International Presentations**

**Chenfeng Chen**

16th International Holistic Health Conference, Sunshine Coast

**Samantha Coulson**

16th International Holistic Health Conference, Sunshine Coast

**Belinda Gray**

19th Annual RBWH Health Care Symposium, Brisbane

**Janet Schloss**

16th International Holistic Health Conference, Sunshine Coast

**Niikee Schoendorfer**

Nutrition Society of Australia 34th Annual Scientific Meeting, Perth

**Dr Manuela Trabi**

2nd Australasian Symposium on Metabolomics, Melbourne

**Associate Professor Luis Vitetta**

General Practitioner Conference and Exhibition, Sydney
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. The centre consists of the Translational Research Laboratories at Princess Alexandra Hospital (PAH) and the Royal Brisbane and Women’s Hospital (RBWH), the PAH Nephrology Clinical Research Group, the RBWH Clinical Research Group, and the Australasian Kidney Trials Network. Researchers 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 centre has particular expertise in translating results from laboratory and clinical sciences for application to improve public health outcomes.

The centre continues to strengthen its international collaborations. These help to enhance the profile of the School of Medicine and The University of Queensland at an international level and help maintain the CKDR as a leading research centre. International projects that were initiated during the year include the Chronic Kidney Disease of unknown etiology (CKDu) consortium with groups in Sri Lanka and Japan. The objective of the consortium is to carry out investigations into the pathogenesis, etiology and preventive measures of an epidemic of CKDu in a specific province of Sri Lanka. Members of the consortium include: Ministry of Health and Nutrition of Sri Lanka- General Hospital Kandy; University of Peradeniya, Sri Lanka; Kyoto University, Japan; Kitano Hospital, Japan; Daiichi Pharmaceutical University, Japan; and the CKDR and the Centre for Chronic Disease at The University of Queensland.

One of the aims of the centre was to promote collaboration between nephrology clinical research centres at RBWH and PAH. The success of CKD.QLD a multidisciplinary research and practice network founded by Professors Hoy and Fassett has lead to an NHMRC Centre of Research Excellence application for studying chronic kidney disease in Queensland. The application is lead by Professor Robert Fassett and has included as CIs many of the members of the CKDR.

The year was extremely productive with major research highlights and achievements including: the publication of the IDEAL trial (a randomised controlled trial of early versus late dialysis) in the New England Journal of Medicine; three NHMRC project grants awarded for funding starting in 2011; a second five-year renewal of the Centre of Research Excellence NHMRC Enabling Grant; and a Queensland Government Health Research Fellowship award to Professor David Johnson.

Associate Professor Glenda Gobe
Administrative Co-Director

Professor David Johnson
Co-Director

Professor Robert Fassett
Co-Director
Research Activities

Clinical Trials

The CKDR clinical groups are involved in several multi-centre randomised controlled trials (HONEYPOT, HERO, FAVOURED, PEXIVAS, BLOCADE, IMPROVE-CKD, ACTIVE Dialysis, IDEAL, SHARP, CORAL, baLANZ). Outlined below are summaries of three of the trials.

HONEYPOT Trial: This randomized, controlled trial of exit site application of Medihoney™ is designed for the prevention of catheter-associated infections in peritoneal dialysis patients. The study aims to determine whether daily exit site application of standardised antibacterial honey (Medihoney™), effectively prevents exit site infections, tunnel infections and peritonitis in peritoneal dialysis patients, compared with standard topical mupirocin prophylaxis of nasal staphylococcal carriers.

FAVOURED trial: (Fish oil and Aspirin in Vascular access Outcomes in Renal Disease) This study aims to determine whether the use of the anti-platelet agents aspirin and fish oil, either alone or in combination, in a factorial design, will effectively reduce the risk of early thrombosis in de novo arterio-venous fistulae (AVF). The study population is patients with stage IV or V chronic kidney disease who require or will require haemodialysis, are scheduled to undergo creation of an AVF and are not currently taking anti-platelet agents. The primary outcome is patency of the AVF at three months after randomisation. Other outcomes include functional patency at six months, primary patency time, secondary (assisted) patency time, and adverse events, particularly bleeding.

HERO Trial: This is a randomised, placebo-controlled trial of expentifyline on haemoglobin levels in patients with erythropoietin-resistant anaemia. The study aims to determine if expentifyline administration will effectively treat erythropoietin or darbepoietin-resistant anaemia in chronic kidney disease patients. The study population is adult patients with stage IV or V chronic kidney disease (CKD) (including patients on dialysis) with significant anaemia (Hb =110 g/L) for at least 3 months that is unresponsive to large doses of either erythropoietin (=200 IU/kg/week) or darbepoietin (=1μg/kg/week) and for which there is no clear identifiable cause. The primary outcome is haemoglobin level at four months after randomisation. Other outcomes include changes to the dosage of erythropoietic stimulatory proteins, changes to Key’s index, changes to blood transfusion requirements and adverse events.

Peritoneal Dialysis

The baLANZ trial – A multicentre randomised controlled trial of Balance®, in Australian and New Zealand PD patients (Johnson DW, Coburn A, Ranganathan D). Aims to compare the effects of a novel, neutral pH, low glucose-degradation product dialysis fluids with conventional dialysis fluid on remaining kidney function in peritoneal dialysis patients.

Predictors and outcomes of peritonitis in Australian and New Zealand PD patient populations (Johnson DW).

The effect of dialysis modality on decline of residual renal function (Hawley CM, Petrie J, Johnson DW).

Encapsulating peritoneal sclerosis in Australian and New Zealand Peritoneal Dialysis Patients – Incidence, predictors and outcomes (Johnson DW, Cho Y).

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, Ranganathan D). A controlled clinical trial evaluating the effects of sugar-free dialysis on blood sugar control and other metabolic parameters in diabetic peritoneal dialysis patients.

The impact of APD versus CAPD on survival of Australian and New Zealand peritoneal dialysis patients (Johnson DW, Badve S).

Predictors of recovery (and time to recovery) of dialysis-independent renal function in scleroderma renal crisis patients commencing PD or HD in Australia and New Zealand (Johnson DW).

A systematic review of the effects of biocompatible peritoneal dialysis solutions on patient outcomes (Johnson DW).

Microbiology and outcomes of peritonitis in Australian peritoneal dialysis patients (Johnson DW).


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).
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) (Johnson DW, Hawley CM).

Predictors of residual renal function recovery in Australian and New Zealand peritoneal dialysis patients (Johnson DW, McDonald S, Macdonald J).

Microbiology and outcomes of peritonitis in Australian paediatric peritoneal dialysis patients (Bordador E, McTaggart S, Johnson DW).

Peritoneal dialysis outcomes after temporary haemodialysis transfer for severe peritonitis (Badve S, Johnson DW).

Predictors, treatments and outcomes of relapsing versus recurrent peritonitis (Burke M, Johnson DW).

Predictors, treatments and outcomes of relapsing versus recurrent peritonitis (Thirugnasambathan T, Johnson DW).

Effect of aminoglycosides on residual renal function decline in peritoneal dialysis (Badve S, Johnson DW).

Adherence to Guideline Recommendations for Infection Prophylaxis in Peritoneal Dialysis Patients (Badve S, Hawley CM, Johnson DW).

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).

Remote Indigenous Peritoneal Dialysis Patients Have Higher Risk Of Peritonitis, Technique Failure, All-Cause and Peritonitis-Related Mortality (Johnson DW).

Effect of seasonal variation on peritonitis incidence in Australia and New Zealand (Cho Y, Johnson DW).

Effect of regional variation on peritonitis incidence in Australia and New Zealand (Cho Y, Johnson DW).

TUMMIE Trial (Ranganathan D). Comparing the topical use of medihoney with mupiracin in the management of PD exit site infection.

Timely PD trial (Ranganathan D).

GIPD Gentamicin in peritoneal dialysis Trial (Ranganathan D). Investigating the pharmacokinetics and pharmacodynamics of gentamycin administration in peritoneal dialysis.

COMIVID Comparison of markers of oxidative stress and inflammation and myocardial and vascular structure and function in incident peritoneal and haemodialysis patients Trial (Fassett RG, Coombes JS, Ranganathan D, Ratanjee S, Healy H).

Harmodialysis Ethanol lock therapy for the prevention of tunneled catheter-related bacteraemia in haemodialysis patients (Broom J, Playford G, Johnson DW, Hawley CM). Single centre, controlled clinical trial examining the effect of once-weekly alcohol lock treatment versus conventional heparin locking on catheter-associated bloodstream infection in haemodialysis patients.

The HERO trial: A randomised, placebo-controlled trial of oxpentifylline on haemoglobin levels in patients with erythropoietin-resistant anaemia (Johnson DW, Hawley CM, Fassett RG, Leary D).

The impact of nocturnal home haemodialysis on patient outcomes (van Eps C, Hawley C, Isbel N, Campbell SB, Johnson DW).

Effects of Alternate Night Nocturnal Hemodialysis on Oxidative Stress and Antioxidant Enzymes (Van Eps C, Hawley C, Jeffries J).

SHARP trial: 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 (Johnson DW, Sudak J).

The initiating dialysis early and late (IDEAL) study (Johnson DW, Leary D, Fassett RG, Healy H). An Australasian, multi-centre, controlled clinical trial of early versus late commencement of dialysis in end-stage kidney failure patients.

Evaluation of Cinacalcet HCl Therapy to Lower Cardiovascular Events (EVALVE) (Hawley, C, Sudak, J, Kark A and Fassett RG). A multi-centre, controlled clinical trial of cinacalcet versus placebo in haemodialysis patients. The primary outcome measure is a composite cardiovascular end point.

Quality of Life and alternate nightly nocturnal home haemodialysis (van Eps CL, Jeffries J, Johnson DW, Campbell S, Isbel N, Mudge D, Hawley CM).

C.E.DOSE trial: 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 (Johnson DW, Strippoli GFM).
The Impact of extended hours home hemodialysis and buttonhole cannulation technique on hospitalization rates for septic events related to dialysis access (van Eps CL, Jones M, Ng T, Johnson DW, Campbell SB, Isbel NM, Mudge DW, Beller E, Hawley CM).


FAVoured: 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 arteriovenous fistulae in patients with Stage IV or V chronic kidney disease requiring haemodialysis (Hawley C, Mudge D, Coburn A).

Time course and dose study of vitamin E and oxidative stress in haemodialysis patients (Fassett RG, Coombes JS).

DOPPS IV (Kark A and Ratanjee S). Dialysis Outcomes and Practice Patterns Study

EXTEND study (Healy H).

Transplantation

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

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).

The role of tumouresectomised kidneys as a potential source of allografts for renal transplantation (Brook N, Nicol DL, Johnson DW, Campbell SB, Isbel N, Hawley C).

Polycystic kidneys as a potential source of allografts for renal transplantation (Nicol DL, Johnson DW, Campbell SB, Isbel N, Hawley C).

Adiponectin in renal transplant recipients (Kaisar MO, Armstrong K, Prins J, Johnson DW, Isbel N).

Impact of aggressive intervention in renal transplant recipients with impaired glucose tolerance on insulin resistance and atheroma burden (Kaisar MO, Armstrong K, Prins J, Johnson DW, Isbel N).

Higher Levels of Physical Activity are Associated with a Lower Risk of Abnormal Glucose Tolerance in Renal Transplant Recipients (Orazio L, Isbel NM, Johnson DW).

A partially blinded, prospective, randomized multicentre study evaluating efficacy, safety and tolerability of oral sotrastaurin 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).

Biomarkers in Transplantation External Qualification Phase (BiT2) (Isbel N, Campbell S, Johnson DW, Hawley CM, Mudge DW, Van Eps CL, Bali V).

A prospective observational case-control study to assess predictors for BK viraemia in adult kidney transplant recipients (Isbel N, Barracloff K, Leary D).

ASCERTAIN Trial (Fassett RG). The assessment of Everolimus in addition to calcinurin inhibitors reduction in maintenance renal transplant recipients.

Xanthin Trial (Fassett RG, Coombes JS). Astaxanthin vs placebo a randomised controlled trial in renal transplant patients assessing oxidative stress inflammation and vascular structure and function.

Swine flu vaccination (John GT).

Sirolimus proteinuria study (John G, Healy H).

General Nephrology
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 (Mudge D, Martin A).

Treatment options for sexual dysfunction in patients with chronic kidney disease: A systematic review and meta-analysis of randomized controlled trials (Johnson DW, Strippoli GFM).

Erythropoiesis-stimulating agents in people with chronic kidney disease: Systematic review and meta-analysis (Johnson DW, Strippoli GFM).

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 randomized controlled trials (Johnson DW, Strippoli GF).

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).

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).

Rosuvastatin and cardiovascular events in patients undergoing hemodialysis (Isbel NM, Johnson DW).

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 IJ, Duncan E, Prins JB, Hawley CM, Johnson DW, Barracough K, Isbel NM).

Interventions for erythropoietin-resistant anaemia in dialysis patients (Badve S, Hawley CM, Johnson DW).

Consumer involvement in topic and outcome selection in the development of clinical practice guidelines (Johnson DW).

Cardio respiratory fitness is independently associated with 25-hydroxyvitamin D status in chronic kidney disease (Petchey WG, Howden EJ, Hawley CM, Johnson DW, Prins JB, Marwick T, Isbel NM).

CORAL Cardiovascular Outcomes in Renal Atherosclerotic Lesions (Mudge DW, Sudak J). 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.

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).


PYR-210 (Isbel N, Pitkin M). A Randomized, Double-Blind, Placebo-Controlled, Multi-Center, Phase 2b Study to Evaluate the Safety and Efficacy of Pyridorin (pyridoxamine dihydrochloride) in Patients With Nephropathy Due to Type 2 Diabetes.

DCVAS (Diagnostic Classification of Vasculitis) (Ranganathan D). ACR/EULAR endorsed study to develop classification and diagnostic criteria for primary systemic vasculitis, in collaboration with investigators from University of Oxford.

POEMSUM study (Ranganathan D, Fassett RG). Mycophenolate study in lupus nephritis.

Acute Kidney Injury
Arterial stiffness in acute kidney injury (Fassett RG, Coombes JS).

Other Research


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

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


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? (Gobe G, Small D, Coombes J, Fassett R, Roy S).


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


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

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


Androgen receptor and androgen self sufficiency in prostate cancer (Bennett N, Gobe G, Johnson D, Hooper J, Gardiner R, Lambie D).


Inflammation and oxidative stress – biomarkers for their detection (Fassett R, Coombes J, Gobe G).


CKD.QLD Site Profiling (Venuthurupalli SK, Fassett R, Hoy W).


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

Pathways to palliative care in renal disease (Fassett RG, Bull R, Robertson IK).

eKIDNNA electronic kidney disease national audit alliance (Fassett RG, Healy H).

**Major Grants & Financial Support**

| Total NHMRC funding: | $650,000 |
| Other competitive funding: | $571,540 |
| Funding from commercial studies: | $84,637 |
| Funding from other sources: | $126,532 |
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.

The Centre led a national and international collaboration that investigated heterogeneity in fibrosis patterns in nonalcoholic steatohepatitis and reported a previously unrecognised pattern of very fine, non-zonal sinusoidal fibrosis that has implications for therapy and understanding pathogenesis.

A further international collaboration demonstrated that IL-32 is a novel proinflammatory cytokine involved in chronic hepatitis C-associated liver inflammation/fibrosis and that its expression is regulated by proinflammatory stimuli.

PhD student, Dr Richard Skoien was awarded the Young Investigator Award - Basic Science by the Gastroenterological Society of Queensland, Poster of Merit at Australian Gastroenterology Week and the internationally prestigious Fellow Research Award by the American Association for the Study of Liver Diseases. Ms Leigh Horsfall was awarded Young Investigator Award - Clinical Science by the Gastroenterological Society of Queensland. Dr Michelle Melino was Young Investigator Award Finalist at the Coolum meeting of the Gastroenterological Society of Queensland.

Associate Professor Elizabeth Powell
Co-Director

Associate Professor Julie Jonsson
Co-Director

Associate Professor Andrew Clouston
Associate Director

Research Activities

Clinical Trials
Non-invasive assessment of hepatic steatosis by magnetic resonance imaging (MRI) and spectroscopy (MRS) (Powell E, Jonsson J, Clouston A, Horsfall L, Skoien R, Benson M, Cowin G, Galloway G, Stuart K, Crawford D)

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

Monocytes/macrophages in chronic liver diseases (Powell E, Jonsson J, Clouston A, Melino M, Gadd V, Walker G)

Characterising the portal inflammatory response in NASH and its relationship to fibrosis (Clouston A, Powell E, Jonsson J, Skoien R, Gadd V)

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

Effect of weight loss on liver protein expression and response to antiviral therapy in patients with chronic Hepatitis C (Powell E, Jonsson J, Clouston A, Horsfall L, Benson M, Cowin G)

Isolation of primary human liver cells (Powell E, Jonsson J, Clouston A, Fawcett J, Melino M)


Awards & Prizes

Leigh Horsfall
Young Investigator Award, Clinical Science Research Presentation, Gastroenterological Society of Queensland

Dr Michelle Melino
Young Investigator Award Finalist, Young Investigator Award, Gastroenterological Society of Queensland

Dr Richard Skoien
Young Investigator Award, Basic Science, Gastroenterological Society of Queensland

AASLD Fellow Research Award, American Society for the Study of Liver Diseases
Poster of Merit, Australian Gastroenterology Week

Major Grants & Financial Support

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National & International Presentations

Associate Professor Andrew Clouston
Laennec Society for Hepatopathology
Summer Meeting, Seoul, Korea

Challenges in Gastroenterology, Melbourne

Conjoint Australia New Zealand Upper Gastrointestinal and Hepatic, Pancreatic and Biliary Association Meeting, Queenstown, NZ

Dr Michelle Melino
Australian Gastroenterology Week, Gold Coast

Associate Professor Elizabeth Powell
7th Australasian Viral Hepatitis Conference, Melbourne

Dr Richard Skoien
Australian Gastroenterology Week, Gold Coast

The Liver Meeting of the American Association for the Study of Liver Diseases, Boston, USA
Centre for Research in Geriatric Medicine

This was the first full year of operation as a School Centre, in the new premises at Princess Alexandra Hospital. The centre’s activity was dominated by extensive field work associated with grants secured in 2009. Data collection to support the studies involved over 20 sites in three Australian states and seven countries, across Europe, Asia and North America.

To support the work in developing quality indicators and systems for aged care, the Research Collaborative for Quality Care of Older Persons has been established which involves senior researcher collaborators from Victoria and the USA, and which, to date, has engaged over 20 clinical experts from around Australia.

The centre was successful in securing an NHMRC Project Grant to explore the efficacy, in an RCT format, of personal accelerometers in promoting functional recovery in rehabilitation. A second major grant, awarded by the Queensland Emergency Medicine Research Fund, will develop quality indicators for the care of older people in the Emergency Department.

During the year, Professor Gray assumed the role of Director of the Centre for Online Health at UQ, thus cementing the already strong collaboration between the centres.

The relationship with the interRAI international research collaborative (which builds assessment systems for aged care) continues to flourish, with the Centre hosting a very successful international interRAI conference in Brisbane during the year.

A Health Research Fellowship was awarded to support a new joint position with Princess Alexandra Hospital, which will result in the appointment of a second full time academic geriatrician at CRGM in 2011.

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

Research Activities

Clinical Trial

Reliability of an “online” geriatric assessment procedure (Gray L, Counsell S, Edwards H, Martin-Khan M, Wooton 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. 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 almost complete at one site.

**Other Research**

*Development and Evaluation of Quality Indicators in Post Acute Transition Care: An Observational Study* (Cameron I, Crotty M, Gray L). This project is part of an NHMRC Health Services Program Grant 2006-2011 “Transition Care: Innovation and Evidence”. The project aims 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 six community-based TCPs will be provided to the expert panel in July 2011 and a consensus approach will be adopted to develop a list of QIs for describing and benchmarking quality of care provided by TCPs. An economic analysis will assess the clinical and resource implications of the program and assess the cost effectiveness of different models of transition care.

*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 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 nine 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.

*Development of quality indicators for the frail elderly in acute care* (Gray L, Brand C, Jones R, Morris J, Wright O, Martin-Khan M). This proposal aims to develop outcome oriented QIs for geriatric syndromes and functional outcomes. 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, excluding cognition. Data was collected from 648 acute care patients in nine 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.

*Clinical outcomes, staff and carer perceptions of acute hospitalisation of patients with dementia* (Gray L, Byrne G, Pachana N). This project aims to provide a clear picture of the problem of dementia in hospital, including how often people with dementia are admitted, what happens to them, how hospitals respond to their needs, and how well carers perceive their needs are met. The key objective is to provide sufficient information to inform better design of hospital procedures for people with dementia.

**Major Grants & Financial Support**

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**National & International Presentations**

Professor Len Gray  
Australian & New Zealand Society of Geriatric Medicine, Coolum, Queensland  
interRAI Asia Regional Conference, Brisbane, Queensland  
ACSA National Community Care Conference & Trade Exhibition 2010, Gold Coast, Queensland  
Dr Prabha Lakhan  
interRAI Asia Regional Conference, Brisbane, Queensland  
Dr Melinda Martin-Khan  
interRAI Asia Regional Conference, Brisbane, Queensland
Australian & New Zealand Society of Geriatric Medicine, Coolum, Queensland

Aged Care Standards and Accreditation Agency Ltd Better Practice, Glenelg, Adelaide

Aged Care Standards and Accreditation Agency Ltd Better Practice, Melbourne

Aged Care Standards and Accreditation Agency Ltd Better Practice, Sydney

Aged Care Standards and Accreditation Agency Ltd Better Practice, Brisbane

Australian Association of Gerontology 43rd National Conference, Hobart, Tasmania

Dr Catherine Travers
4th National Dementia Forum, Surfers Paradise, Queensland

interRAI Asia Regional Conference, Brisbane, Queensland

Australian Association of Gerontology 43rd National Conference, Hobart, Tasmania

Ms Linda Schnitker
4th National Dementia Forum, Surfers Paradise, Queensland

Emerging Researchers in Ageing Conference – ERA Newcastle, NSW

Dr Nancye Peel
The Gerontological Society of America's 63rd Annual Scientific Meeting, New Orleans, USA

interRAI Asia Regional Conference, Brisbane, Queensland
Clinical Governance

The 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, a range of clinical audits, the Clinical review & 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, Metro South**

**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.

**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.

**Awards & Prizes**

**Dr Peter Lee**
National Forum on Safety and Quality in Healthcare, Canberra, October.
First Prize, Poster presentation: *Achieving culture-change in healthcare communication: Yes we can!*

**National & International Presentations**

**Dr Michael Daly**
ACHSM Symposium, Brisbane.

A quality and safety scorecard for hospitals: the missing element in clinical governance. (with Dr Ian Scott)

National Forum on Safety and Quality in Healthcare, Canberra.

The Bundaberg Emergency Response Team. (with Ms Linda McCormack)


Triage of staff complaints about Senior Clinician Competency Concerns: a case series.
Dr Peter Lee
Australian Aviation Psychology Association Symposium, Healthcare Human Factors Seminar, Sydney
Communication for safety in healthcare – can effective communication be effectively taught? Concluding workshop: Human Factors in Healthcare: how far have we come? Where are we now? Where to from here?

2nd Annual Emergency Department Management Congress, Melbourne
Training for improved communication – the good, the bad and the ugly.

Improving communication in your ED – why does it seem so hard?

8th Australasian Conference on Safety and Quality in Healthcare, Perth.
Improving communication ‘on the floor’: What works? What doesn’t? And why?

Ms Kellie Allen
IHI 22nd Annual National Forum on Quality Improvement in Healthcare, Orlando Florida USA. Achieving culture-change in healthcare communication: Yes we can!

Dr Michael Daly
ACHSM Symposium, Brisbane. A quality and safety scorecard for hospitals: the missing element in clinical governance (With Dr Ian Scott).


Health Care Complaints Management Conference, Brisbane. Triage of staff complaints about Senior Clinician Competency Concerns: a case series.

National Forum on Safety and Quality in Healthcare, Canberra. Achieving culture-change in healthcare communication: Yes we can!


Clinical Pharmacology

The department has maintained an active research program, while continuing to provide an expanded tacrolimus monitoring service for transplant centres throughout the state. Apart from providing a state-wide analytical service, the department has a long history of involvement in the development and provision of drug assays for immunosuppressant drugs and is 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 was undertaken with Waters Corporation to investigate measurement of endogenous steroids utilising the latest mass spectrometry technology. A highly accurate aldosterone assay has been developed and clinical validation has taken place during the year. 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. An LC-MS assay has been developed for the tyrosine kinase inhibitor, imatinib and monitoring of patients with chronic myelogenous leukaemia is envisaged to improve outcomes and reduce toxicity. Numerous drug utilisation and pharmacovigilance studies have been performed in collaboration with the hospital pharmacy department.

Associate Professor Peter Pillans
Director

Research Activities

Clinical Trials

Androgen Replacement in Dialysis-dependent Men with Hypogonadism (Fedema J, Pillans P, Taylor P, van Eps C, Russell T). The primary hypothesis of this project is that replacement of testosterone to physiological levels in hypogonadal men is associated with a reduction in the erythropoietin requirements to maintain haemoglobin levels (assessed by the erythropoietin resistance index).

Other Research


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).


**Major Grants & Financial Support**
Total NHMRC funding: $180,000

**National & International Presentations**
**Mr Paul Taylor**
Asian Pacific Conference of Chromatography and Mass Spectrometry. A semi-automated liquid chromatography-tandem mass spectrometry (LC-MS/MS) method for the measurement of plasma aldosterone, Hong Kong
Asian Pacific Conference of Chromatography and Mass Spectrometry. Therapeutic drug monitoring of immunosuppressant drugs by high-performance liquid chromatography-tandem mass spectrometry, Hong Kong

**Associate Professor Peter Pillans**
Australasian Association of Clinical Biochemists Scientific Education Seminar – Therapeutic Drug Monitoring. Analytical issues in TDM – assay selection (immunosuppressant drugs), Brisbane

First IATDMCT Regional Meeting. Current practice in the measurement of immunosuppressant drugs in routine clinical laboratories, Beijing, China

The 12th Asia-Pacific Congress on Clinical Biochemistry. Application of LC-MS/MS in therapeutic drug monitoring, Seoul, Korea

Society of Hospital Pharmacists of Australia. Drugs: remember the risks, Brisbane

Australian Society of Clinical Immunologists and Allergists. Applications for Biologics, Gold Coast

Australasian Society of Clinical and Experimental Pharmacology and Toxicology (ASCEPT). Outcomes in patients with gram negative sepsis treated with gentamicin, Melbourne
The University of Queensland’s Dermatology Research Centre (DRC) confirmed its role within the skin cancer arena in South East Queensland via the establishment of further key collaborations and the strengthening of those already in place. Of significance, the centre has now been awarded an NHMRC Project Grant commencing 2011, for research in collaboration with the Institute of Molecular Biosciences (IMB) and Queensland Institute of Medical Research (QIMR), which demonstrates the national recognition of the quality of research capable within the group.

In June Professor H. Peter Soyer, chair of DRC, was appointed Adjunct Professor within the Diamantina Institute. Formal collaborations have been established with the Melanoma Cluster, lead by Associate Professor Brian Gabrielli, and the SCC Cluster lead by Associate Professor Nick Saunders within the Diamantina Institute. Professor Soyer is a senior member of the Skin Cancer Network initiative, launched in 2010. This network is a collaborative effort of UQ School of Medicine, UQ DI as well as QIMR, and the IMB aimed at promoting and expanding world class skin research currently undertaken in this region.

A long term plan in developing a new centre of excellence in dermatology in the PAH precinct, namely the Queensland Centre of Dermatology, is now being presented as a business case and in avid discussion with key stakeholders. Once established, the Centre aims to integrate provision of specialist clinical dermatology, education and training, research and teledermatology and to foster expanded research and clinical trials, including within the important area of melanoma.

**Professor H. Peter Soyer**
**Director**

**Research Activities**

**Clinical Trials**

**Reflectance Confocal Microscopy (RCM) Studies**

*Histopathologic correlation study (DRC, Lambie D).* To increase knowledge of RCM features and correlate them to clinical, dermoscopic, histopathologic features of lesions that are excised. The long term aim is for RCM to improve management decisions, as RCM can add more confidence in the diagnosis of benign lesions and lead to a more careful management of potentially malignant lesions. Clinical, Dermoscopic & RCM images are taken of all patients with pigmented lesions prior to excision. These images are then viewed together with the histopathology slides together with the histopathologist. Ongoing longitudinal study in progress, with various oral and poster presentations completed.

**Seborrheic Keratosis study (Wurm E).** To describe RCM features of the three histopathological subtypes of seborrheic keratoses. Although seborrheic keratoses are an important differential diagnosis to malignant melanocytic and non-melanocytic skin lesions, a systematic review of RCM features is lacking.
Patients with seborrheic keratoses will be recruited from the Dermatology outpatient service. Images of 30 seborrheic keratoses (10 of each histological subtype) will be acquired using RMC. These images will be evaluated for specific RCM features by two confocal readers. Study and patient recruitment is in progress.

**Characterisation of striae distensae with confocal microscopy** (Gilmore S, Rolfe H). 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 striae alba are investigated using confocal microscopy. Eight subjects have been examined to date, with a total of 30 planned for recruitment.

**Naevus Surveillance using total body photography and dermoscopy** (DRC, Smithers M, Green A). To fully characterise the elements and timing of morphological changes associated with the metamorphosis from naevus to melanoma. Full body photography with individual dermoscopic naevus images recorded and morphology classified and described. Follow patients up twice a year for 5 years with re-imaging of all naevi and documenting any dermoscopic changes arising. Ongoing longitudinal study in progress.

**Pigmentation Genotypes (MC1R) and Phenotypic Correlations with dermoscopic naevus types and distribution** (DRC, Sturm R, Duffy D, Smithers M). Aims: (1) To examine the relationship between genes, the dermoscopic characteristics of melanocytic naevi and melanoma risk. (2) To characterise genes that influence the probability of an individual carrying particular naevus subclasses. Digital photographs of hair and eyes to document pigmented phenotype, and skin pigmentation measured with spectrophotometer. Saliva samples collected for genotyping. Ongoing longitudinal study in progress.

**Perineural Invasion Registry** (Conducted by the Queensland Perineural Invasion Research Group which is a collaboration between Dermatologists, Plastic Surgeons, Pathologists, ENT specialists, Radiologists and Radiation Oncologists from private practices across Brisbane). Aims: 1) To identify outcomes relating to perineural invasion in BCC, SCC, keratoacanthoma (KA) and melanoma. 2) Specifically, to quantify outcomes of local recurrence, distant metastasis and disease specific death due to BCC, SCC, KA and melanoma with PNI. 3) To record treatment modalities for BCCs, SCCs, KAs and melanomas with PNI. 4) To compare and contrast outcomes (in terms of local recurrence, distant metastasis and disease specific death) between treatment modalities. 5) To define an evidence-based, risk adapted treatment algorithm for skin cancer with PNI, based on outcome and treatment modality findings. 6) 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. The registry has been established and patient recruitment has begun. The study is currently being run only through private practise but will look to expand to Queensland Health facilities in the near future.

Genome-wide investigation of the phenotypic underpinnings of psoriasis (Gilmore S, Saunders N). 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 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 will begin in early 2011.

**Major Grants & Financial Support**

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**National & International Presentations**

**Associate Professor Stephen Gilmore**
6th World Congress for Hair Research, Cairns

**Professor H. Peter Soyer**
Raising Expectations in Dermatology Conference, Sydney

AIDNID Conference, Rome, Italy

American Academy of Dermatology 68th Annual Meeting, Miami, USA
Australasian College of Skin Cancer Medicine annual conference/scientific meeting, Brisbane
Australasian Dermatopathology Society Annual Conference, Sydney
Joint Meeting of the Australasian College of Dermatologists and Department of Dermatology, University of Rome Tor Vergata and University of L’Aquila, Rome, Italy
Joint Meeting of the Austrian Society of Dermatology and Venereology and Australasian College of Dermatologists, Vienna, Austria
Melanoma Update for Primary Care Clinicians, Sydney
Diabetes & Endocrinology

The Department continued to maintain a significant number of collaborations broadly around translational research. The significant workload in outpatients provides a fertile ground for recruitment of patients for trials. Associate Professor Russell has established an international collaboration with Professor Rayaz Malik (Manchester, UK) and Professor Efron from QUT to investigate novel ophthalmic markers of diabetic peripheral neuropathy. Associate Professor Russell is broadly looking at novel ways to manage diabetes and continues to develop a model of care for diabetes in the community with upskilled GPs. He is also working with Professor Brian Oldenburg from Monash University, Melbourne, utilising information technology to assist patients self manage their disease and along with Dr O’Moore-Sullivan and Professor Eakin looking at telephone counselling for maintenance of weight loss in patients with diabetes. Professor Prins and Dr O’Moore-Sullivan maintain a role in a Clinical Research Excellence grant looking at the effects of improved insulin sensitivity with lifestyle or drugs and vascular and cardiac function. Professor McIntyre, is forging a international reputation in the area of Gestational Diabetes through his work with the HAPO study. Close relationships continue to be maintained with the basic scientists through Associate Professor Jon Whitehead and Professor Prins at the Mater Medical Research Institute assessing insulin signalling and the role of adipose tissue in the development of insulin resistance.

Associate Professor Anthony Russell
Director

Research Activities

Clinical Trials

Using conversational computer technology to improve diabetes management (Oldenburg B, Courtney M, Friedman R, Russell A). The aim of this NHMRC funded project is to assess a novel self-management tool to assist in the management of patients with Type 2 diabetes. Recruitment is now completed and 6 month data collection nearly complete.


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, O’Moore-Sullivan T). NHMRC funded trial looking at another assessment of a method to assist patients with Type 2 diabetes self manage their condition. Ongoing recruitment.

Systematic diabetic retinopathy screening and monitoring of early stage disease in general practice (Jackson C, Askew D, Mitchell P, Russell A). NHMRC funded grant assessing the ability of general practice to screen for early diabetic retinal disease. Sites have been recruited and training of GPs undertaken.


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). An NHMRC funded grant. Part of this study will further assess the work by Dr Russell in developing a novel model of care for the management of Type 2 diabetes in the community with upskilled GPs.

An Assessment of the Hypothalamic Pituitary Adrenal Axis at Day 5 post Pituitary Surgery Utilising the Metyrapone Short Synacthen Test (Seedat S, Cuneo R, Duncan E, Russell A). This study is determining whether a test performed after pituitary surgery before discharge from hospital can determine long term requirements. Recruitment continues for this trial.

The Mechanical Properties of the Human Femur utilising Nanoindentation (Lin C, Huang H, Cribb B, Russell A). This study was a comparison of the mechanical properties of bone in patients having hip surgery with and without osteoporosis. This study resulted in a publication this year and the engineering student obtaining her Masters degree.

Pharmaceutical Company Trials
IPSEN Protocol A-9B-52030-219 An Observational, Multi Centre, Open label, Non interventional Programme to assess the long Term Safety and efficacy of Somatuline Autogel in the treatment of Acromegaly when administered by patients or their partners("home injection group") or administered by health care professionals
GSK GLP1: A Randomized, Open-Label, Parallel Group, Multicenter Study to Determine the Efficacy and Safety of Albiglutide as Compared with Liraglutide in Subjects with Type 2 Diabetes Mellitus

Major Grants & Financial Support
Competitive funding: $72,000
Funding from commercial studies: $58,953

National & International Invited Presentations
Professor David McIntyre
International Workshop Conference on Gestational Diabetes, Pasadena
Queensland / NSW Chapter of Royal Australasian College of Obstetrics and Gynecology, Gold Coast
Australasian Diabetes in Pregnancy Society, Sydney
International Society for Obstetric Medicine, Melbourne

Associate Professor Anthony Russell
World Congress of Internal Medicine, Melbourne
Directions in Diabetes Meeting – Lilly, Sydney
Australian Disease Management Association Conference, Melbourne
Diamantina Institute

The University of Queensland Diamantina Institute’s central mission is to translate scientific discoveries into practical outcomes for patients. This was another productive year in working to achieve this mission with a number of exciting discoveries and achievements. Cancer vaccine technology developed by Associate Professor Nigel McMillan’s team was licensed to US-based developer of RNAi (ribonucleic acid interference) therapeutics, Alnylam, and has the potential to be developed into new vaccines for cancer and infectious disease. Professor Brown’s group led an international consortium that discovered underlying genetic loci associated with ankylosing spondylitis which may help target disease susceptibility. These discoveries are important steps in the progression of converting discoveries into real-life benefits. Trials of the application of the Gardasil vaccine in the developing world have been occurring.

Efforts to engage with the next generation continue to be effective with the flagship program, Sparq-ed, seeing high school students from around Queensland come into the research labs at UQDI to undertake week-long research projects in the laboratory. The significance of the education benefits of this program was recently recognized by the University of Queensland with the award of bonus rank status for students wishing to enter tertiary education training.

Professor Ian Frazer was awarded the 2010 Ernst & Young Champion of Entrepreneurship, (Northern Region) Award in recognition of his discoveries that led to the development of the world’s first cervical cancer vaccine. With immunisation programs initiated across the world, this is a true indicator of bringing scientific discoveries to the patient.

Professor Ian Frazer
Director

Research Activities

Clinical Trials

A multicenter uncontrolled extension study evaluating the long term safety and efficacy of sar153191 in patients with ankylosing spondylitis (Brown, MA).

Multicenter study of the efficacy and safety of adalimumab in subjects with axial spondyloarthritis (Brown, MA). 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 (Thomas R, White D, Pahu H).

Phase I Trial of Rheumavax to Induce Antigen Specific Tolerance in Patients with Rheumatoid Arthritis (Thomas R, 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 and is a co-operative effort between clinicians and researchers at this hospital and at The University of Queensland.

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**


**Awards & Prizes**
- Dr Antje Blumenthal
  - Award for Best Podium Presentation, Australasian Society for Immunology (40th Annual Meeting)
- Professor Matthew Brown
  - Parr Prize in Rheumatology, Australian Rheumatology Association 2010
- Dr Katrina Campbell
  - Travel Grant: International Society of Nutrition and Metabolism in Renal Disease, Private Practice, Princess Alexandra Hospital
- Dr Maree Ferguson
  - Travel Grant: Implementation of International Dietetic and Nutrition Terminology, PA Society, Princess Alexandra Hospital
- Professor Ian Frazer
  - 2010 Ernst & Young Champion of Entrepreneurship, Northern Region, Ernst & Young
- Dr James Gray
  - Best poster award, New Directions in Leukaemia Research Conference

**Research Grant (Acute myeloid leukaemia research, Cancer Collaborative Group, PAH**
- Travel Grant, HSANZ
- Travel Grant, ALLG
- Dr Michelle Hill
  - Runner-up, Senior Category, Health and Medical Research Award, Australian Society for Medical Research Queensland
- Dr Elisabeth Isenring
  - Finalist, Uniquest Trailblazer Competition
- Diwakar Pattabiraman
  - Graduate School Travel Award, University of Queensland
- AACR Travel Bursary, American Association for Cancer Research
- American Association for Cancer Research, New Directions in Leukaemia Research Conference
- Jian Zhou travel award, UQDI

**Publication of the month, UQDI**

**Major Grants & Financial Support**

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**National & International Presentations**
- Dr Antje Blumenthal
  - Australasian Society for Immunology 40th Annual Scientific Meeting, Perth, WA
- Professor Matthew Brown
  - International Bone and Mineral Society, Switzerland
- Korean Rheumatology Association, Korea
- Chinese Rheumatology Association, China
- Dr Katrina Campbell
  - Improving Outcomes in Nephrology, Sydney, September
- Pre-congress meeting: Australia New Zealand Society of Nephrology, Adelaide
- Dr Maree Ferguson
  - Australasian Society for Parenteral and Enteral Nutrition, Gold Coast
- Dr Brian Gabrielli
  - SMR Melanoma Congress, Australia
- Novartis Oncology and Research Symposium, Australia
- Professor Tom Gonda
  - Lorne Genome Conference, Lorne, Vic
- Monash Institutes of Medical Research, Melbourne, Vic
- Latrobe University, Melbourne, Vic
- Gordon Conference on Mammary Gland Biology, Barga, Italy
- RNAI Australia, Melbourne, Vic
- Queen Elizabeth Hospital, Adelaide, SA
- Oz Bio 2010, Melbourne
- Japanese Cancer Association Annual Meeting, Osaka, Japan
- Dr James Gray
  - Translational Research Excellence, Brisbane, Qld
Haematology Society of Australia and New Zealand, Annual Conference, Auckland

American Society of Haematology Annual Meeting, Orlando, Florida, December

New Directions in Leukaemia Research, Sunshine Coast, Qld

**Dr Ingrid Hickman**
Australian Gastroenterology Week, Gold Coast

International Conference on Obesity, San Diego, California

**Dr Michelle Hill**
Lorne Proteomics Conference, Lorne

Australian Prostate Cancer Research Centre, Queensland

PepCon 2010, Beijing

Prostate Cancer Foundation Australian International Conference

Bosch Institute Annual Scientific Symposium, Sydney

**Dr Elisabeth Isenring**
Australasian Society for Parenteral and Enteral Nutrition, Gold Coast

Clinical Oncological Society of Australia, Melbourne

**Dr Graham Leggatt**
International Congress of Immunology, Kobe, Japan

Australasian Society for Immunology National Meeting, Perth, Australia

**Dr Nigel McMillan**
Australian Health and Medical Research Conference, Australia

Tissue Engineering International and Regenerative Medicine Society (TERMIS), Australia

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Endocrine Society of Australia, Australia

12 Annual VVCRI Symposium, Australia

ASBMB WA Symposium *RNA Beyond the Dogma*, Australia

RNAi Asia, Singapore

**Dr Ali Naderi**
15th World Congress on Advances in Oncology, Greece

13th International Symposium on Molecular Medicine, Greece

**Mr Diwakar Pattabiraman**
New Directions in Leukaemia Research, Sunshine Coast, Qld

**Mr Max Ranall**
RNAi Australia, Melbourne, Vic

**Dr Fiona Simpson**
17th Protein Kinase Meeting and FEBS Workshop on Spatiotemporal Dynamics of Cell Signalling, Oslo, Norway

Garvan Signalling Symposium, Sydney

**Dr Duka Skalamera**
Lorne Cancer Conference, Lorne, Vic

RNAi Australia, Melbourne, Vic

**Dr Raymond Steptoe**
40th Annual Scientific Meeting, Australasian Society for Immunology, Perth WA

**Dr Gethin Thomas**
7th International Congress on Spondyloarthropies, Gent, Belgium

Translational Research Excellence Conference, Brisbane

American College of Rheumatology Annual Scientific Meeting, Atlanta, USA

**Dr Ranjeny Thomas**
Rheumatology 2010 Meeting

Asia Pacific League of Rheumatology, China

Indian Pharmaceutical Society, India

**Dr Ping Ye**
New Directions in Leukaemia Research, Sunshine Coast, Qld

Lowy Symposium, Sydney NSW

**Dr Liang Zhao**
New Directions in Leukaemia Research, Sunshine Coast, Qld
The department was very active in research and education during the year. In July 2010 the annual Global Postlaryngectomy Cadaver Demonstration Course was held at the Princess Alexandra and Prince Charles Hospitals and the Head and Neck Cadaver Dissection Course. Both courses were run by Professor Coman for the Princess Alexandra Hospital and The University of Queensland and were highly successful. In 2011 there will be three cadaver dissection courses – the Global Postlaryngectomy Course, Head and Neck Course and FESS/Rhinoplasty Course held at the Prince Charles and the University of Queensland and a Thyroid Conference at Sheraton Noosa held in November. Professor Coman will also run the annual Upover Downunder International ENT Conference in Campitello, Italy.

Professor William B Coman
Chairman and Director

Research Activities

There are a number of current research activities with Associate Professor Chris Perry as outlined below.

Hear to Learn’ Project. One of six Chief Investigators under leadership of Professor Allan Cripps, Griffith University. This is a longitudinal study on the prevalence, language and educational effects, microbiology and the impact of pneumococcal vaccine on otitis media in children attending Royal Children’s Hospital. $75,000 Royal Children’s Hospital Foundation.

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.

With Professor Jake Najman, Centre for Population Health, Medical School, The University of Queensland, looking at factors which may impact on the position of oral cavity cancer in smokers compared with non-smokers. The group have already shown a statistically significant difference in the position of oral cavity cancer in smokers compared to non-smokers. Non-smoking cancers tend to occur in the younger age, have an equal sex distribution and be positioned at the point of chronic rubbing irritation usually by teeth on the lateral tongue, but also from dentures which are ill-fitting. This is ongoing research.

Professor Coman and Annika Anntonsson have 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.

$1.6M NHMRC – Surgery for Otitis Media in Indigenous populations. Stephen O’Leary is Principle Investigator. Other Chief Investigators – Drs Chris Perry, Kelvin Kong, Harvey Coates et al.

$2.65M per year until 2014. Associate Professor Chris Perry, Founder and Clinical Director for the Deadly Ears Program.
Awards and Prizes
Associate Professor Chris Perry
Founder and Clinical Director for the Deadly Ears Program. This program received the Director General of Health' Award, 2010, for the Program that best reflected Qld Health values; Closing the Gap’ Award for best Indigenous Program in Qld Health, 2010; the Perioperative Nurses Association of Qld’ Award for the best perioperative team in Qld 2010.

Major Grants & Financial Support

Total NHMRC funding: $109,065

National & International Presentations
32nd Annual Vanderbilt Otolaryngology Symposium, Vail, Colorado, February
ASOHNS 2010, Sydney
- A prospective multi-centre randomized trial comparing transoral laser microsurgery and radiotherapy for early glottic cancer – preliminary results
- The Scottish Influence on ENT in Australia
- Oropharyngeal Cancer – Then and now
- Steel, Laser or Radiotherapy – Treatment of Laryngeal Cancer (OHNS Nurses Group)

Head and Neck Surgery Congress for the South African Society of Otorhinolaryngology, Drakensberg, South Africa
- The History of Laryngeal Surgery: From Laryngectomy to Laser Microsurgery
- Laser Surgery versus Radiotherapy for the Treatment of Early Laryngeal Cancer
- Oropharyngeal Cancer – Then and Now
- Avoiding Laryngectomy
- Selective Neck Dissection V Radical neck Dissection: When to do What
The department is a designated Level 6 Trauma centre with over 45,000 attendance a year with an admission rate of over 34%. This is amongst the highest in Australasia and demonstrates a high level of clinical acuity. Research continued to be a focus and staff within the department were successful in receiving funding from the Queensland Emergency Research Fund.

Dr Phillip Kay
Director

Research Activities

**Clinical Trials**
Randomised crossover evaluation of TSAC for peripheral vascular stasis (Powie D, Underwood M).

**Other Research**
Developing a quality framework for the care of older patients in the Emergency Department (Burket E).

**Major Grants & Financial Support**
Total competitive funding: $296,139

Awards and Prizes
Kim Nicholls
Princess Alexandra Hospital Excellence in Clinical Education

Peter Thomas
Medal of the Order of Australia (OAM)
Australia Day Council

National and International Invited Presentations
Dawn Bandiera
Discharge Planning, Brisbane

Dr Sean Lawrence
Australasian Association of Bioethics & Health Law, Adelaide

Dr Michael Sinnott
Michigan, OSHA CET, East Lansing, USA

Private Hospital Operating Theatre Organisation, Hong Kong

Association of Perioperative Nurses, Denver USA
Endocrine Hypertension Research Centre

It has been a particularly productive year for the Centre with a number of major research highlights and achievements.

Collaboration with Professor Matt Brown's group at the Diamantina Institute searching for genetic causes of primary aldosteronism, the commonest specifically treatable and potentially curable form of hypertension has been strengthening. Extensive examination of a large region of the genome found to be linked to a familial form of primary aldosteronism (familial hyperaldosteronism type II, FH-II) and sequenced through next-generation high throughput methods yielded a number of candidate polymorphisms. In a further bid to find causative mutations, the work has now moved to whole exomic sequencing using state-of-the-art methodologies.

The establishment of a joint academic/clinical position (UQ Senior Lecturer and Hypertension PHO) for Dr Eduardo Pimenta will facilitate his ongoing work assessing the importance of salt in the development of adverse cardiovascular and renal effects in patients with primary aldosteronism. Dr Pimanta has continued to thrive in his current environment, publishing this year, three book chapters and 16 peer-reviewed full papers (nine as first author) in scientific journals. He was also awarded the top paper published in Hypertension (Clinical Science Category) by the American Heart Association, a Travel Award by the Baker Institute to attend an international meeting, and the Early Career Investigator Award by the High Blood Pressure Research Council of Australia which includes funding to attend the British Hypertension Society Meeting in 2011.

Extensive progress has been made by Dr Ashraf Ahmed towards his PhD thesis examining physiological and pharmacological factors affecting the aldosterone/renin ratio in screening for primary aldosteronism. This work has included the demonstration of higher ratios among women (especially during the luteal phase of the menstrual cycle and those taking a popular oral contraceptive preparation) than men, and in subjects taking beta-blockers, and lower ratios in persons receiving antidepressants of the serotonin selective re-uptake inhibitor type, as well as improvements in quality of life associated with the commencement of medications which antagonize aldosterone in patients with primary aldosteronism. This work has already resulted in the publication of three full papers in the prestigious Journal of Clinical Endocrinology and Metabolism, with a fourth in revision and a fifth newly submitted.

Professor Michael Stowasser
Co-Director

Emeritus Professor Richard Gordon
Co-Director
Research Activities

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).

Effects of dietary salt in determining the severity of obstructive sleep apnoea and cardiovascular and renal damage in patients with hyperaldosteronism (Pimenta E, Stowasser M, Gordon R).


The BP GUIDE study – assessing the value of using central BP measurements to guide treatment of hypertension (Sharman J, Stowasser M).


Awards & Prizes
Dr Ashraf Ahmed
Travel Award to attend the Annual Scientific Meeting of the High Blood Pressure Research Council of Australia, Melbourne, High Blood Pressure Research Council of Australia
Student Poster, Finalist, High Blood Pressure Research Council of Australia

Dr Danielle Aspinall
Travel Award to attend the Annual Scientific Meeting of the High Blood Pressure Research Council of Australia, Melbourne, High Blood Pressure Research Council of Australia

Dr Eduardo Pimenta
Top paper published in "Hypertension" journal in 2009 - Category Clinical Science, American Heart Association
Early Career Investigator Award, High Blood Pressure Research Council of Australia

Young Investigator of the Year Award (Clinician), Princess Alexandra Hospital Week, Princess Alexandra Hospital
Travel Scholarship to attend an International Society of Hypertension Satellite Meeting ("The Pathogenesis of Essential Hypertension"), Vancouver, Baker IDI Heart and Diabetes Institute, Australia
Nominee to attend British Hypertension Society Meeting 2011, High Blood Pressure Research Council of Australia

Major Grants & Financial Support
Total NHMRC funding: $628,425
Funding from other sources: $52,284

National & International Presentations
Dr Ashraf Ahmed
53rd Annual Scientific Meeting of the Endocrine Society of Australia, Sydney
23rd Scientific Meeting of the International Society of Hypertension, Vancouver Canada
32nd Scientific Meeting of the High Blood Pressure Research Council of Australia, Melbourne

Danielle Aspinall
32nd Scientific Meeting of the High Blood Pressure Research Council of Australia, Melbourne
Dr Eduardo Pimenta
53rd Annual Scientific Meeting of the Endocrine Society of Australia, Sydney

23rd Scientific Meeting of the International Society of Hypertension, Vancouver Canada

The Pathogenesis of Essential Hypertension: Focus on Salt, Stress and Obesity; Whistler Satellite Symposium

to the 23rd Scientific Meeting of the International Society of Hypertension, Whistler, Canada

32nd Scientific Meeting of the High Blood Pressure Research Council of Australia, Melbourne

Professor Michael Stowasser
14th International Congress of Endocrinology, Kyoto, Japan

First Radboud Adrenal Symposium, Nijmegen, Holland

Festschrift for Judith Whitworth, Melbourne

Paul Taylor
Asian Pacific Conference of Chromatography and Mass Spectrometry, Hong Kong
Gastroenterology & Hepatology

This year the department conducted clinical research examining the relationship between metabolic factors and outcome in patients with liver disease including those with viral hepatitis, hepatic steatosis, cirrhosis and patients following liver transplantation. Ongoing collaborative studies with other university centres, with both national and international colleagues were a highlight of the year. Exciting developments in the management of viral hepatitis with a number of new direct acting antiviral agents are in development for hepatitis C. The Clinical Trials Unit is a major centre in Australia for phase 2 and 3 studies with these agents.

Dr Richard Skoien, PhD student, was awarded the Young Investigator Award - Basic Science by the Gastroenterological Society of Queensland; a Poster of Merit at Australian Gastroenterology Week, and the internationally prestigious Fellow Research Award by the American Association for the Study of Liver Diseases. Ms Leigh Horsfall was awarded the Young Investigator Award - Clinical Science by the Gastroenterological Society of Queensland.

Dr Bradley Kendall
Acting Director

Research Activities

Clinical Trials

CCRE in Cardiovascular and Metabolic Diseases (Marwick T, Prins J, Macdonald GA, Isbel N, Hegney D, Stowasser M). Collaborative study examining predictors of cardiovascular disease in a number of different disease states. In relation to liver disease the focus is on the prevalence of metabolic disturbance and cardiovascular disease following liver transplantation.

The pathogenesis of co-toxic liver disease (Fletcher L, Crawford D, Tan, Murphy T, Jaskowski L). Excess alcohol consumption, iron overload disease and obesity are major public health issues which often lead to liver fibrosis and may progress to cirrhosis. Coexistence of more than one toxin may lead to accelerated disease. We aim to understanding the interdependent pathophysiological pathways in co-toxicity will allow us to move towards targeted therapeutic interventions to attenuate the fibrogenic process.

The role of adiponectin multimers and receptors in fatty liver disease (Macdonald GA, Nguyen T, Fletcher L, Murphy T, Lipka G, Whitehead J, Hickman I). HMW adiponectin multimers and adiponectin receptor expression are thought to play significant roles in the pathogenesis of liver disease. This project aims to correlate adiponectin multimer ratios and receptor expression in liver disease with a view to characterising their role in disease pathogenesis.

Non-invasive assessment of hepatic steatosis by magnetic resonance imaging (MRI) and spectroscopy (MRS) (Powell EE, Jonsson JR, Clouston AD, Jothimani D, Skoien R, Benson M, Cowin G, Galloway G, Stuart K, Crawford D).

The pharmacogenetics of drug induced liver injury (Martin J, Powell EE).


Monocytes/macrophages in chronic liver diseases (Powell EE, Jonsson JR, Clouston AD).
Characterising the portal inflammatory response in NASH and its relationship to fibrosis (Skoien R, Powell EE, Jonsson JR, Clouston AD).

Factors affecting the progression of liver disease and response to treatment (Powell EE, Jonsson JR, Clouston AD, Macdonald GA, Crawford D, Skoien R).


Industry sponsored trials


Boehringer Ingelheim 1220.5 Antiviral effect, safety and pharmacokinetics of once daily BI 201335 NA in hepatitis C virus genotype 1 infected treatment naïve patients for 24 weeks as combination therapy with pegylated interferon alfa-2a and ribavirin (Macdonald GA).

Roche NV 20536 A randomised double blind study of a polymerase inhibitor prodrug (RO5024048) in combination with chronic hepatitis C genotype 1 or 4 (Macdonald GA).

Tibotec Janssen Cilag TMC435-C205 A phase 2b, randomized, double-blinded trial of TMC 435 as part of a treatment regime including PegIFN alfa 2a and Ribavirin in treatment naïve genotype 1 Hepatitis C infected subjects (Macdonald GA).

Tibotec Janssen Cilag TMC435-206 A phase 2b randomized, double-blinded trial of TMC 435 as part of a treatment regimen including PegIFN-2a and ribavirin in HCV G1 infected subjects who failed to respond or relapsed following at least 1 course of PegIFN and RBV therapy (Macdonald GA).

Bristol Myers Squibb AI444-010 A phase 2B study of BMS-790052 in combination with Peg-Interferon alfa-2a and ribavirin in treatment naïve subjects with chronic hepatitis C genotype 1 and 4 infection. (Macdonald, GA).

Major Grants & Financial Support

| Total NHMRC funding: | $930,905 |
| Other competitive funding: | $79,857 |

Awards & Prizes
Dr Richard Skoien
Award for Best Research Abstract by a Fellow, American Association for the Study of Liver Diseases

Young Investigator Award, Basic Science Research Presentation, Gastroenterological Society of Queensland

Poster of Merit, Australian Gastroenterology Week

Leigh Horsfall
Young Investigator Award, Clinical Science Research Presentation, Gastroenterological Society of Queensland

National & International Presentations
Associate Professor Graeme Macdonald
Australian Gastroenterology Week, Gold Coast, October

Associate Professor Elizabeth Powell
7th Australasian Viral Hepatitis Conference, Melbourne, September
The Haematology Department continues to expand the translational and clinical trials programme in conjunction with its collaborating partners including the Diamantina Institute, University of Queensland, QIMR, Griffith University, Australasian Leukaemia Lymphoma Group (ALLG) and others. The major focus of the research is to develop new treatments, molecular diagnostic tests and monitoring of leukaemias, particularly Acute Myeloid Leukaemia (AML) and Chronic Lymphoid Leukaemia (CLL). Specific examples of this include the identification of new genetic lesions in AML, the development of a new assay for AML patients and the discovery of a new therapy for CLL patients. The collaboration between Princess Alexandra Hospital, Diamantina Institute and Richard D’Andrea from Adelaide has delivered a genome-wide analysis of genetic alterations using parallel, high-throughput, paired-end DNA sequencing and genotyping of an AML genome. Analysis is underway and new genetic lesions have been found. A manuscript for a molecular assay to predict relapse in a subset of AML patients is ready to be submitted for publication and the findings will be incorporated into the next ALLG trial under the authorship of Dr Marlton, Dr Gray and Russell Saal. Up-regulation of surface molecules in in-vitro cultures of primary in CLL cells has identified a novel target for therapy and the provisional application of a patent through the efforts of Dr Gill, Dr McMillan, Dr Mollee and Dr Burgess. This is in addition to the previously identified chemokines CCL2 and CXL2 in CLL.

Other Major Research Highlights:

- The Australian Society of Medical Research Award: Clinician Researcher of the Year 2010 was awarded to Dr Maher Gandhi.
- Dr Tony Mills was elected to the ALLG Scientific Advisory Committee (SAC) and is Chair of Myeloproliferative Diseases and Supportive Care Groups.
- Dr Sally Mapp was appointed to a permanent full-time senior medical officer position and has submitted her PhD thesis entitled “B cell biology and lymphomagenesis”.
- The consolidation all our amyloidosis patients into a dedicated Multi-disciplinary Amyloid Clinic led by Dr Peter Mollee has proved to be very successful, only 1 of 2 clinics in Australia.
- The 3rd international meeting entitled “New Direction in Leukaemia Research” in April 2010 was oversubscribed and highly successful with 6 eminent international speakers. The previous meetings were held in 2006 and 2008 and were initially founded, organised and chaired by Associate Professor Gill and Professor Gonda.
- Clinical trial activity continues to prosper with trials in most blood diseases. The Cancer Services Research Unit continues as one of the largest contributors in Australasia to ALLG co-operative trials. There are 58 trials open with 40 trials actively recruiting patients.
- The Stem Cell Transplant Program remains a strong component of the Unit activity. Some of the novel agents are beginning to reduce the need for stem cell transplant. The development of cell therapy with donor EBV specific cytotoxic T lymphocytes (CTLs) for the treatment of refractory lymphoma continues under the guidance of Dr Maher Gandhi.
- The National Leukaemia and Lymphoma Tissue Bank established and directed by Associate Professor Marlton continues to grow resourcing many research projects around Australia and facilitating translational research in association with clinical trials across the country. It is now in its 6th year of NHMRC funding and continues to receive funding from the Leukaemia Foundation as well as in kind support from Queensland Health.

Associate Professor Devinder Gill
Director
Clinical trials

Trials activity continues to prosper with trials in most blood diseases. The Unit remains one of the largest contributors in Australasia to ALLG Co-operative trials. There are 58 trials open with 40 trials actively recruiting patients.

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 (Gill D).

ALLG LS14 EBV Immune and viral biomarkers as tools to assist clinical outcomes in patients with EBV-associated lymphomas (Gandhi M).

BO21004 / CLL-11 An open-label, multi-center, Three Arm Randomized, Phase III Study to Compare the Efficacy and Safety of RO5072759 + Chlorambucil (GCb), Rituximab + Chlorambucil (RCb) or Chlorambucil (Cb) Alone in Previously Untreated CLL Patients Not Eligible for Fludarabine-Based Chemoimmunotherapy (Marlton P).

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).

ALLG CLL5 / OFOCIR An Australasian, Phase II, Multicentre, Randomised, Dose Intensification Study Investigating Oral Fludarabine, Oral Cyclophosphamide and IV Rituximab (poFCivR) Tolerance in Previously Untreated Elderly (> 65 years old) Patients with Chronic Lymphocytic Leukaemia (CLL) (FOCIR) (Gill D).

ALLG AML M14 A Programme of Development for Older Patients with Acute Myeloid Leukaemia and High Risk Myelodysplastic Syndrome (Marlton P).

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 (Marlton P).

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).

ALLG MM11 A Phase 3, Multicentre, Randomized, Controlled Study to Determine the Efficacy and Safety of Cyclophosphamide, Lenalidomide and Dexamethasone (CRD) versus Melphalan (200mg/m2) Followed by Stem Cell Transplant in Newly Diagnosed Multiple Myeloma Subjects (Mollee P).

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).

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).

PNH Registry The Paroxysmal Nocturnal Hemoglobinuria (PNH) Patient Registry. "PNH Registry". (Mills T).

EBV CTL Autologous EBV-specific T cells as therapy for relapsed / refractory EBV-positive lymphomas (Gandhi M).

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).

ALLG CML8 / TWISTER A Phase II Study of Withdrawal of Imatinib Therapy in Adult Patients with Chronic Phase Chronic Myeloid Leukaemia in Stable Complete Molecular Remission (Mills T).

AMP Tissue Bank The AMP Leukaemia and Lymphoma Tissue Bank: A Joint Research Initiative of the ALLG and the Leukaemia Foundation (Marlton P).

Griffith Lymphoma: The Griffith University Genomics Research Centre Lymphoma Project (Marlton P).
CLBH589D2308 / PANORAMA A randomized, double-blind, phase III study of the efficacy and safety of oral panobinostat vs placebo in combination with bortezomib and dexamethasone, in patients requiring therapy for relapsed or refractory multiple myeloma (Mapp S).

MUC1 MUC1 as a Marker of Bleomycin Lung Toxicity (Keane C).

CAMN107A2405 / ENESTcmr An Open Label, Randomized Study of Nilotinib Versus Standard Imatinib (400/600 mg QD) Comparing the Kinetics of Complete Molecular Response for CML-CP Patients With Evidence of Persistent Leukaemia by RQ-PCR (ENESTcmr) (NCT00760877) (Mills T).

ALLG CLL2 International Phase III Trial of Primary Therapy for B-Cell Chronic Lymphocytic Leukaemia (Gill D).

ALLG AML M13 High Dose Cytarabine and Flurarabine without Anthracycline for Patients with Core Binding Factor Acute Myeloid Leukaemia (Marlton P).

ALLG AML M12 A Randomised Trial of Idarubicin Dose Escalation in Consolidation Therapy Following Intensive Chemotherapy incorporating High Dose Cytarabine in Patients with Untreated Adult Acute Myeloid Leukaemia (Marlton P).

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 and Prednisone in Subjects with Newly Diagnosed Multiple Myeloma Who are 65 Years of Age or Older (Mollee P).

CLBH589B2206 A Phase Ib, Multi-center, Open-label, Dose-escalation Study of Oral LBH589 when Administered in Combination with Oral Lenalidomide & Dexamethasone in Adult Patients with Multiple Myeloma (CLBH589B2206) (Marlton P).

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).

ALLG CML9 / TIDE2 A Phase II Study in Adult Patients with Newly Diagnosed Chronic-Phase Chronic Myeloid Leukaemia of Initial Intensified Imatinib Haematology Group
Therapy and Sequential Dose Escalation Followed by Treatment with Nilotinib in Suboptimal Responders to Determine the Rate and Duration of Major Molecular Response. (Mills, T).

ML20948 / R-ITP 1000 A multi centre, single arm, open label study to evaluate the efficacy and safety of 1000mg fixed dose of rituximab (MabThera) on day one and fifteen among patients with refractory, relapsing or chronic idiopathic thrombocytopenic purpura (Martlin P).

H6Q-MC-JCBJ / PRELUDE A Randomised, Double-Blind, Phase III Study of Oral Enzastaurin Versus Placebo as Maintenance Therapy Immediately Following First-Line Treatment for Patients with High-Risk Diffuse Large B-Cell Lymphoma (Marlton P).

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).

ALLG MDS3 A Phase I/II Trial of Combination Therapy with 5-Azacytidine (Vidaza) and Thalidomide in Patients with Myelodysplastic Syndromes (MDS) (Mills T).

Other Research

Identification of new genetic lesions in Acute Myeloid Leukaemia (AML). The genome-wide analysis of genetic alterations using parallel, high-throughput, paired-end DNA sequencing and genotyping of an AML genome has been completed. This is a collaboration between PA Hospital, Diamantina Institute and Richard D’Andrea, Adelaide. Analysis is underway and new genetic lesions have been found.

Manuscript for a molecular assay to predict relapse in a subset of AML patients is ready to be submitted for publication (Marlton P, Gray J, Saal R). The findings will be incorporated into the next ALLG trial.

Up-regulation of surface molecules in vitro cultures of primary in chronic lymphocytic leukaemia cells has identified a novel target for therapy – provisional application of a patent. (Gill D, McMillan N, Mollee P, Burgess M). This is in addition to the previously identified chemokines CCL2 and CXCL2 in CLL.

Major Grants & Financial Support

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Awards & Prizes

Dr Maher Gandi
Australian Society of Medical Research Award: Clinician Researcher of the Year 2010
Infection Management Services

The department continued to provide clinical infectious diseases programmes, sexual health services, alternate site infusion services and infection control programmes at Princess Alexandra, Logan, Ipswich, QEII and Redland Hospitals. Undergraduate and post-graduate teaching was provided in all areas of infectious diseases and infection control, as well as some microbiology to medical, pharmacy and science students at The University of Queensland.

Associate Professor Michael Whitby
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 Voriconazole regimen in the treatment of candidaemia and other invasive Candida infections.

A phase III, double-blind, randomised study to evaluate the safety and efficacy of BAL8557 versus Voriconazole for primary treatment of invasive fungal disease caused by aspergillus species or other filamentous fungi.

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.

Ethanol lock therapy for the prevention of tunnelled intravenous catheter-associated bacteraemias: a randomised controlled trial.

Prospective Surveillance of Invasive Fungal Infections in Australian Intensive Care Units.

A Phase 3, Open Label, Randomized Study of the Antiviral Activity, Safety and Tolerability of Intravenous Peramivir in Hospitalized Subjects with Confirmed or Suspected Influenza Infection.

Major Grants & Financial Support

| Total NHMRC funding: | $271,400 |
| Other competitive funding: | $80,000 |

National & International Presentations

Dr Elliott G Playford
50th Interscience Conference on Antimicrobial Agents and Chemotherapy

11th Annual Scientific Meeting of the Australian Society for Antimicrobials
Intensive Care Unit

The Intensive Care Unit has demonstrated another successful year in the development of a successful critical care research program. This is evidenced by the award of two prestigious NHMRC grants, an increase in the number of collaborations, and a consistent track record of publications and presentations. Highlights of the year included:

- The “ESCAPE Trial” $3.27 million NHMRC funding for a bi-national multi-centre study (ANZ) ‘A Randomised Controlled trial of the effect of hydrocortisone on mortality in critically ill patients with septic shock’ to be led by Professor Bala Venkatesh from PAH ICU. It is the largest funding for a sepsis trial from the NHMRC.
- $2.5 million NHMRC funding for a Centre of Research Excellence (CRE) in Nursing Interventions for Hospitalised Patients, being led by Griffith University with Professor Leanne Aitken as a chief investigator and PAH as a partner organisation. It is the largest funding by NHMRC for a CRE in Nursing in recent history.
- Establishment of a collaborative intensive care research centre between the intensive care units at Princess Alexandra Hospital, the Royal Brisbane and Women's Hospital and The Prince Charles Hospital with the University of Queensland.

The unit continued to actively participate in a number of national and international clinical trials, particularly with the Australian and New Zealand Intensive Care Society (ANZICS) Clinical Trials Group (CTG), as well as encouraging investigator-initiated studies and projects for those in training including registrars and doctoral students.

Strengths of the research program include the multi-disciplinary nature of the team, with involvement from medical, nursing, social work, physiotherapy, nutrition and dietetics and pharmacy; 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
**Major Grants & Financial Support**

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**National & International Presentations**

**Professor Leanne Aitken**

Simulation and Beyond: Creative teaching approaches for improving patient safety, Hunter Valley

ANZICS/ACCCN Australian and New Zealand Annual Scientific Meeting on Intensive Care, Melbourne

**Associate Professor Peter Kruger**

8th World Congress on Trauma, Shock, Inflammation and Sepsis, Munich

ANZICS- Clinical Trials Group Winter Research Forum

ANZICS- Spring Research Forum, Melbourne

ANZICS/ACCCN Australian and New Zealand Annual Scientific Meeting on Intensive Care, Melbourne

**Dr Marion Mitchell**

The 4th Australasian Cardiovascular Nursing College Annual Conference: Cardiovascular nursing, prevent, educate, treatment, Brisbane

RCN International Nursing Research Conference, Newcastle upon Tyne England

ACCCN Institute of Continuing Education (ICE), 11th Annual Meeting, Sydney

British Association of Critical Care Conference - Taking Pride in Practice, Southport England

ANZICS/ACCCN Australian and New Zealand Annual Scientific Meeting on Intensive Care, Melbourne

**Professor Bala Venkatesh**

The interstitium: The platform of the future for diagnosis and therapy; Round Table conference: "Thinking outside the box", Brussels Belgium

International Congress of Intensive Care and Emergency Medicine, Brussels Belgium

Acid base and biochemistry in critical illness; Acute Care Medicine Course, Melbourne

Training in Australia - Christian Medical College, Vellore, India

Passing the ICU Fellowship examination - Registrar Course, Wellington New Zealand

ECG interpretation in Critical Care practice - Seminar on Data Interpretation in Acute Medicine, Kuala Lumpur, Malaysia

Anti-fungal agents – Indo Australian Critical Care Program, Calcutta, India

ECG interpretation in Critical Care practice - Seminar on Data Interpretation in Acute Medicine, Calcutta, India
Internal Medicine & Clinical Epidemiology

The department’s profile in health services research continued to grow with its participation as co-investigators in a successful application for a major NHMRC grant of $2 million to fund a Centre of Research Excellence in Primary-Secondary Care Interface for Complex Medical Illness. A 5-year program of research will evaluate the effects of a primary care amplified management (PCAM) model of integrated primary-secondary care on the quality of care and clinical outcomes of patients with complicated diabetes, chronic heart failure or terminal conditions requiring palliative care. It will also assess whether the PCAM model produces higher levels of professional skills and satisfaction, GP-specialist liaison, multidisciplinary teamwork, efficient use of services and resources, and deployment of information technology.

The department was also awarded a PAH Private Practice Foundation grant worth $75,000 to be used in developing a prescribing technology for older patients aimed at minimising inappropriate use of medications and reducing iatrogenic burden of polypharmacy.

The department has continued its collaboration with colleagues at Monash University and the Centre for Research Excellence in Patient Safety in researching tools for screening for adverse events in hospitalised patients, assessing the validity and reliability of standardised hospital mortality ratios as an indicator of hospital quality, and evaluating methods for assessing clinical performance of individual physicians.

The department has been involved in research into the pharmacokinetics of oncologic drugs in diabetes, metabolic syndrome and obesity and has also completed an extensive retrospective review of the incidence and management of iron deficiency anaemia in a tertiary hospital setting.

Associate Professor Ian Scott
Director

Research Activities

To what extent is suboptimal in-patient care responsible for unplanned readmissions to hospital? (Scott IA, Khadem G). Retrospective review of unplanned readmissions to a general medicine service aiming to identify patient and system of care factors that account for most readmissions and to discern prevalence of suboptimal in-patient care and peri-discharge processes.

Management of syncope in a tertiary hospital (Susarla M, Scott IA, Jones M).

Ongoing retrospective audit of management of patients presenting to emergency department with syncope.

Incidence and management of iron deficiency in a tertiary hospital (Khadem G, Scott IA). Retrospective review of the incidence and management of iron deficiency anaemia in a large cohort of patients admitted to a tertiary hospital.


Clinical practice guidelines: the need for greater transparency in developing care recommendations (Scott IA, Guyatt GH). Analysis of the processes of formulating clinical practice guideline recommendations in regards to the rating of the quality of
evidence and grading the strength of recommendations.

**Adverse events in people admitted to hospital for management of chronic heart failure and pneumonia:** Development of the medical adverse events screening Tool (MAST) (Brand CA, Tropea J, Gorelick A, Jolley D, Scott IA, Sundararajan V). Development of a screening tool (MAST) based on administrative data for detecting adverse events in people admitted to hospital for management of chronic heart failure and pneumonia.

**Minimising inappropriate medication use in older populations** (Scott IA, Martin JJH, Gray LA, Mitchell CA). Development of a drug minimisation guide aimed at reducing inappropriate use of medications in older patients at risk of adverse events from polypharmacy.


**Improving the interface between primary and secondary care in managing patients with complex medical problems** (Jackson C, Mitchell G, Davies P, Hollingsworth S, Ashkew D, Dart J). Major research project aimed at evaluating the effects of a primary care amplified management (PCAM) model of integrated primary-secondary care on quality of care and outcomes of patients with complicated diabetes or chronic heart failure or requiring palliative care.

**Drug Induced Liver Injury (DILI) – understanding the pharmacogenetic mechanisms** International Collaboration SEAC (Daly A). Retrospective genotyping of cases and matched controls that develop DILI on commonly used medications.

**Centre of Research Excellence in Dose individualisation: Integrating clinical pharmacology with pharmacogenetics, -metrics and -economics to deliver optimal patient care** (Martin J, Norris R, Charles B, Duley J, Coory M, Barras M, Valery P). A national Centre for integration of pharmacogenetics and pharmacokinetics to understand toxicity and improve efficacy in medications.

**Effects of diabetes and obesity on breast cancer outcomes in women with node positive breast cancer** (Martin J, Coory M, Fay M, Walpole E, Green M, Saleem M, Wilcken N). Does underdosing in obesity lead to worse health outcomes: Measuring chemotherapy exposure in obese and lean women with breast cancer.

**Obesity and underdosing of antibiotics** (Martin J, Looke). Retrospective review of the dose and plasma concentration of commonly used antibiotics in an obese and lean cohort of patients admitted to a tertiary hospital.

**Incidence, prevalence and pathophysiology of metabolic syndrome post allogeneic hematopoietic progenitor cell transplantation (HPCT)** (Martin J, Kennedy, O'Moore-Sullivan T, Prins J).


**An Evaluation of Gentamicin Monitoring Practices at a Tertiary Hospital** (Ah Yui, Kirkpatrick, Barras, KUBLER, Norris, Martin).

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**National & International Presentations**

**Associate Professor Jenny Martin**

World Congress of Internal Medicine, Melbourne

Australian Society of Clinical Biochemists. Therapeutic Drug Monitoring SES, Brisbane

Australian Pharmacogenetics Summit Sydney

3rd International Conference on Fixed Combination, Brisbane

ASCEPT, Melbourne

First National Roundtable on Indigenous Health, Brisbane

**Associate Professor Ian Scott**

World Congress of Internal Medicine, Melbourne, March

Victorian Department of Health and Human Services Conference, Melbourne

CRE Patient Safety Conference on In-hospital Mortality, Melbourne

Readmissions Conference, Melbourne

2010 ACHSM Conference, Brisbane

AHHA/AIHPS 2010 Congress, Adelaide

RACP Measurement for Improvement Seminar, Gold Coast

IMSANZ-RACP Annual Scientific Meeting, Gold Coast

2010 General Practitioners Congress, Cairns

Healthcare Complaints Conference, Brisbane
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, head and neck cancer, pancreatic 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 Group (now a section of the Australian New Zealand Urogenital and Prostate Cancer Trials Group), the Australian New Zealand Breast Cancer Trials Group, Australian Sarcoma Study Group, Eastern Cooperative Oncology Group, National Surgical Adjuvant Breast and Bowel Group, European Organisation for Research and Treatment of Cancer, has enabled the department access to and experience with the latest developments in treatment regimens for cancer patients. The unit has a significant history in the conduct of industry-initiated research trials allowing the hospital, and ultimately the patient, access to potential cutting-edge developments in cancer therapy. The department has a considerable infrastructure of clinical trial research staff and shares research nurses and data managers with the Haematology and the Radiation Oncology departments.

Associate Professor Damien Thomson
Director

Research Activities

Clinical Trials

20062004 / Denosumab (Joubert W). An Open-Label, Multi-Center, Phase 2 Safety and Efficacy Study of Denosumab (AMG 162) in Patients with Recurrent or Unresectable Giant Cell Tumour (GCT) of Bone

BO21990 / AVAGLIO (Atkinson V). 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.


ANZUP 0901 / EVERSUN (McCaffrey E). A Phase 2 Study of Everolimus Alternating with Sunitinib in Patients with Advanced Renal Cell Carcinoma.

EORTC 40054 / PETACC-6 (Walpole E, Jennifer H). Preoperative Chemoradiotherapy and Postoperative Chemotherapy with Capecitabine and Oxaliplatin vs. Capecitabine Alone in Locally Advanced Rectal Cancer.


SCOT: Short Course Oncology Therapy (Joubert W). An International, Open-label Randomised, Two-arm Phase III Non-inferiority Trial Investigating a Shortened Duration of Treatment for Patients with High-risk Stage II/III Colorectal Cancer.

STX 0206 (Walpole E). 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.

EMR 62 202-505 / APEC (Walpole E). An Asia Pacific Non-randomized,
Open-label Phase II Study Evaluating the Safety and Efficacy of FOLFIRI plus Cetuximab (Erbitux) or FOLFOX plus Cetuximab in Patients with Wild-type KRAS Status as First-line Therapy in Subjects with Metastatic Colorectal Cancer (APEC-Study).

NO25026 / BRIM-3 (Atkinson, V). 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 RO5185426 or Dacabazine


AGITG CO20 (Joubert W). A Phase III Randomized Study of Brivanib Alaninate (BMS-582664) in Combination with Cetuximab (Erbitux®) versus Placebo in Combination with Cetuximab (Erbitux®) in Patients Previously Treated with Combination Chemotherapy for Metastatic Colorectal Carcinoma.


ANZGCTG 0801 / Aprepitant Study (Thomson D). 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.

EFC6521 / SAVE-ONCO (Atkinson V). A Multinational, Randomized, Double-blind, Placebo-controlled Study to Evaluate the Efficacy and Safety of AVE5026 in the Prevention of Venous Thromboembolism (VTE) in Cancer Patients at High Risk for VTE and who are undergoing Chemotherapy.

IBCSG 24-02 / SOFT (Woodward N). A Phase III Trial Evaluating the Role of Ovarian Function Suppression and the Role of Exemestane as Adjuvant Therapies for Premenopausal Women with Endocrine Responsive Breast Cancer (IBCSG 24-02 / BIG 2-02).

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

M10-440 / PARP (Thomson D). A Randomized, Double-Blind, Placebo-Controlled, Phase 2 Study Evaluating the Efficacy of ABT-888 in Combination with Temozolomide Versus Temozolomide Alone in Subjects with Metastatic Melanoma.

H8K-MC-JZAO / SUMMIT-1 (Atkinson V). A Randomized Phase 3 Study of Tasisulam Administered as an Intravenous Infusion on Day 1 of a 28-Day Cycle vs. Paclitaxel as Second-Line Treatment in Patients with Metastatic Melanoma

TCSS (Thomson D). Understanding the Psychosocial Sequelae of Surviving Testicular Cancer.

BAY73-4506/1437 / CORRECT (Joubert W). A Randomized, Double-blind, Placebo-controlled Phase III Study of Regorafenib plus Best Supportive Care in Patients with Metastatic Colorectal Cancer (CRC) who have Progressed after Standard Therapy.

EORTC 62072 / PALETTE (Thomson D). A Randomized Double-blind Phase III trial of Pazopanib versus Placebo in Patients with Soft Tissue Sarcoma whose Disease has Progressed during or following Prior Therapy. PAzopanib ExpLoRed in SofT-Tissue Sarcoma - A phase III study.

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Medical Oncology Team
Mental Health

This was a significant year for research at the Metro South Health District Mental Health Service. The central focus was the development of infrastructure and support which aimed at further strengthening the quality and outcome of research activities within the service. The year also witnessed a gathering of momentum of the staff’s desire to participate in clinical research and utilisation of clinical data to improve practice and using evidence to achieve better consumer outcomes.

The journey to increase Metro South Mental Health Service’s contribution to research commenced with the appointment of Professor Steve Kisely. Professor Kisely is trained in psychiatry, addiction medicine and public health medicine in both the U.K and Australia. His research and clinical interests are in health services research (HSR) and physical and psychiatric co-morbidity. He was the winner of the Special Judges Award in the category of Best Use of IT in Clinical Care in Great Britain as part of the 1998 National Health care IT Effectiveness Award and the Canadian Psychiatric Association 2008 RO Jones Award. As part of the process of cultivating research, a monthly Metro South Mental Health Service Clinical Research Forum was also implemented. Video conference technology has enabled the forum to link clinical researchers to share their findings with peers and colleagues across the district both at the hospital setting and all the community sites. There are positive indicators that clinicians are becoming adept at using research to enhance consumer recovery and embrace systematic searches for clinical evidence to bridge the gaps that may interfere with positive clinical and consumer outcomes.

Professor David Crompton
Executive Clinical Director

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, discharge to an inadequate support networks and re-admission (1). Homelessness is common in patients with psychosis and is linked to poorer engagement with mental health services (2). If the social framework of consumers can be stabilized with accommodation, engagement with mental health services, re-connection to community, living skills and strengthening of personal relationships, this cycle can be broken, and the journey to recovery restarted (3). Programs that avert 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.

ECT efficacy and treatment course: A systematic review and meta-analysis of twice vs thrice weekly schedules (Charlton F, Siskind D, Doi S, Broome A, McCallum E and Lie D). Electroconvulsive therapy (ECT) guidelines, across various regulatory bodies, lack consensus as to the optimal frequency of treatment for individual patients. Some authors postulate that twice weekly ECT may have a similar efficacy to thrice weekly, and may have a lower risk of adverse cognitive outcomes. Systematic review and a 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.

These epidemiological observations support the routine use of twice weekly ECT in acute courses, though choice of frequency should take into account individual patient factors. These observations have implications for resource utilisation e.g. costs of duration of admission vs cost of provision of ECT, as well as issues of access to inpatient beds and anaesthetist time.

**Evaluation of outcomes of Twice and Thrice Weekly ECT at a Metropolitan Australian Mental Health Service** (Siskind, D, Charlton F, Lie, D). Using retrospective administrative datasets the group are examining 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 will include length of stay, readmission rates, duration of ECT course and number of ECTs. Data will be stratified by Age and diagnosis.


**Cost-effectiveness of improved primary care treatment of depression in women in Chile** (Siskind D, Araya R, Kim J). Low- and middle-income countries lack information on contextualised mental health interventions to aid resource allocation decisions regarding healthcare. The aim is to undertake a cost-effectiveness analysis of treatments for depression contextualised to Chile. Using data from studies in Chile, we developed a computer-based Markov cohort model of depression among Chilean women to evaluate the cost-effectiveness of usual care or improved stepped care.

The incremental cost-effectiveness ratio of usual care was $113 per quality-adjusted life-year (QALY) gained, versus no treatment, whereas stepped care had a ratio of $468 per QALY versus usual care. This compared favourably with Chile’s per-capita GDP. Results were most sensitive to variation in recurrent episode coverage, marginally sensitive to cost of treatment, and insensitive to changes in health-state utility of depression and rate of recurrence. The results suggest that treatments for depression in low- and middle-income countries may be more cost-effective than previously estimated.

**The Partnership Evaluation: Public Mental Health and Dental Services** (Wieland B, Lau G, Seifert D, Siskind D). The aim of the present study was to evaluate the partnership between the Mobile Intensive Treatment Team and the South Brisbane Dental Hospital in providing patients with a mental illness with timely and efficient access to dentistry and the factors that contributed to the sustainability of the partnership itself. The outcomes of the partnership were appraised using a survey based evaluation with 20 patients, 43 community mental health staff and 14 dental staff, and focus groups with mental health and dental staff.

Feedback received from mental health staff highlighted the importance of the partnership and its role in meeting the oral health needs of patients. Generally patients were satisfied with the treatment they received and valued the dental service. Results highlighted an ongoing problem of poor dietary and lifestyle choices. Dental staff felt that patients were less likely to take care of their teeth and were more likely to cancel appointments. Dental staff also acknowledged frustration with patients with a mental illness not attending appointments or following through with a recommended course of treatment.

Overall, the partnership with the local Dental Hospital has created a sustainable way to ensure improved dental health outcomes for patients of mental health services. This partnership has led to increased access to dental services and consequently greater follow-up. Significantly, forming partnerships with other health services is worthwhile despite barriers, as it greatly benefits patients.

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Research activities within the department have continued to utilise partnerships with students from the QUT and Griffith University. Projects undertaken included a search for optimal methods to demonstrate extended beta-lactamase production in AmpC producing *E. coli* and *Klebsiella* species; and a study into the effects of colloidal silver solutions on multi-drug resistant organisms and human cells.

An investigation of endoscopic sinus surgery on bacterial biofilms in chronic rhinosinusitis was a collaborative effort between the Microbiology Department, the PAH’s ENT department and UQ. Biofilm coefficients were assessed from bacteria isolated from patient’s nares before and after endoscopic sinus surgery. The study demonstrated that endoscopic sinus surgery reduced but did not eliminate bacterial biofilms. The project outcomes were significant and were published in *Otalaryngology Head Neck Surgery* in March.

The department also takes part in the collection and data storage for a number of studies that investigate the epidemiology and antimicrobial resistance patterns of bacterial pathogens. These studies were co-ordinated by the Australian Group of Antimicrobial Resistance, the International Health Management Associates Inc., the AMAZES trial and the Australia New Zealand Cooperative on Outcomes in Staphylococcal Sepsis. The collaboration of our laboratory with other Australian microbiology laboratories enhances the knowledge and understanding of the epidemiology and the mechanisms of resistance in bacteria and identifies trends in resistance that ultimately benefits patient outcomes.

Dr Joan Faogali  
Deputy Director of Microbiology, Pathology Queensland, Clinical and State-wide Services

**Research Activities**

**Clinical Trials**

*Offenders’ MRSA Health Surveillance* (Faogali J, Campbell, V).

*AMAZES trial to evaluate benefits of azithromycin prophylaxis on chronic obstructive airway disease – assessment of clinical microbiology specimens from patients in tria.* (Faogali J, Kleinschmidt, S in collaboration with Towers M, Gibson P).

*Methodology for in-house identification of ESBLs and AmpC beta lactamase production in E. coli and Klebsiella species* (Coleman L, Faogali J).

*Effect of colloidal silver solutions on multi-drug resistant organisms and human cells.* (Castillo L, Faogali J).

**Other Research**

*Identification and collection of yeasts from ICU patients* (Playford G, Faogali, J).

*Assessment of bacterial biofilms on chronic rhinosinusitis patients post endoscopic surgery* (Hai P, Lidstone C, Wallwork, B).


*Collection of significant gram negative organisms and data causing urinary tract infections in outpatients* (Australian Group of Antimicrobial Resistance).

*Collection of Staphylococcus aureus isolates and data from outpatients* (Australian Group of Antimicrobial Resistance).

*Collection of clinically significant isolates of Enterococci and associated antimicrobial and identification data* (Australian Group of Antimicrobial Resistance).

*A Comparison of Chromogenic, Non-chromogenic and Broth Media for the Detection of Vancomycin Resistant Enterococci in a Tertiary Referral Hospital* (Greening K, Lingard S and Faogali, J).

Blood and urine culture paired isolates of Escherichia coli (Faogali J, Looke D, Schembri M).

**Major Grants & Financial Support**

<table>
<thead>
<tr>
<th>Funding from commercial studies:</th>
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<tr>
<td>Funding from other sources:</td>
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**National & International Presentations**

Dr Joan Faogali  
Pathology Update, Melbourne

Marjoree Sehu  
Pathology Update, Melbourne
Neurosurgery

The Department of Neurosurgery has made significant research gains this year. An arrangement has been formalised with the Diamantina Institute for a neurosurgery registrar to complete a masters or PhD in brain tumour research. The Brain Tumour Clinic continues to run several trials in collaboration with the national trial groups COGNO and TROG. A registrar has been funded fulltime for a second year undertaking research in minimally invasive spine surgery. In addition, funding has been attained for a speech therapist to study language and cognitive function via functional magnetic resonance imaging and tractography in patients with brain tumours. Two studies are currently being completed.

The unit is participating in national and international trials into subarachnoid haemorrhage and brain trauma.

Dr Bruce Hall
Chair

Research Activities

Clinical Trials


Anthropomorphic study of C2 pars dimensions (Laherty R, Grainger A).

Preparation of aneurysm and subarachnoid haemorrhage database (Laherty R, Grainger A).


Trials running through the Brain Clinic Tumour (Smith L, Whiting E, Olson S, McCullum W, de Zubicaray G, Copland D) include:Avaglio study: Avastin in Glioblastoma multiforme; Whole brain radiation for melanoma; EORTC grade II astrocytoma trial; Cabaret trial Avastin and carboplatinum in high grade gliomas on progression; Language and cognitive function in brain tumours; Basic science research in Brain tumours; Investigation of chromosomal Instability in glioblastoma cell lines

Synergistic chemotherapy treatment in Glioblastoma

Aims of these studies are to: Confirm that GBM tumours contain a range of adaptor phenotypes; Confirm GBM polyploid cells are a reservoir of adaptive therapy resistant cells in GBM tumours; Classification of GBM tumoursphere lines based on aggression; Classification of GBM tumoursphere lines based on the level of aneuploidy; Classification of GBM tumoursphere lines based on CIN gene expression profile; Formally characterise the drug interactions of different classes of stress-inducing drugs and identify synergistic and additive combinations. (Rumal Jayalath, Sarah Olson, Bruce Hall, Angus Harding, Brian Gabrielli)


PI3 Kinase, ERK, PKC, JNK and SRC cellular signalling pathways drive glioblastoma multiforme survival and growth (Olsson G, Olson S, Harding A, Gabrielli B).

Major Grants & Financial Support

Competitive funding: $30,000
Funding from commercial studies: $85,000
Funding from other sources: $10,000
The Nursing Practice Development Unit aims to increase the visibility, capability, and quality of nurse-led research at the hospital. The unit has continued to strive to develop the culture of enquiry within the hospital. This year, the unit has implemented tailored research and evidence-based programs, hosting seminars presented by specialists in the area of health promotion research, formalising links with the Joanna Briggs Institute, establishing and supporting positive links with the tertiary sector, and providing ongoing support to nurses engaging in research practice, both in their endeavours in the clinical unit and post graduate study.

These strategies have been particularly effective. There has been an increase in the number of nurses initiating and participating in research projects, with outcomes resulting in changes to practice. The number of nurses enrolling in post graduate study with a research dissertation has also increased.

Nurse scholars and research fellows jointly appointed have continued to collaboratively engage in research projects with outcomes that have influenced care on a local, national, and international scale. Additionally, our nurse researchers have continued to disseminate their findings in national and international arenas through strategic conferences and professional journals.

Funding attained for nurse-led research has once again exceeded that of the previous years. This is a sound record of achievement upon which the group will continue to build.

*Kerri Holzhauser  
Director*

**Research Activities**

*The Patient Assessment Project.* This study is an evidence-based quality improvement project designed to improve patient assessment, documentation, and outcomes at the Princess Alexandra Hospital being coordinated through the NPDU.

Through an extensive literature review and site visits to many Australian hospitals plus focus groups with PAH ward nurses and mapping exercises of the tools and processes in use at the PAH, it was found that the major factors affecting patient assessment by nurses include: (1) nursing expertise, (2) workload, (3) value, (4) communication and handover, and (5) documentation and risk assessment forms. From this evidence, the steering committee decided to focus on more than ‘just the form,’ and address the organisational culture and processes that impact upon change.

The systems assessment approach has been chosen as the preferred patient assessment model because this model is currently taught at the undergraduate level, and can ensure consistency for nurses in daily practice.

A 3-month trial, including documentation audits, vignette study, and focus groups, will be conducted from November 2010 till January 2011 to measure the effectiveness of the new process and forms. This project is expected to be completed in June 2011.

*Discipline Scholar: NPDU Education are currently completing studies examining*
how learning situated in the clinical context directly impacts on the ability of the student to subsequently deliver care. The studies are using pre and post test designs with control and intervention groups. The studies evaluate strategies that could be incorporated within a clinical education role to foster learning in acute care teams. The effect of a unit based intervention on staff perception of support (SINTR) and the clinical learning organisational culture (CLOCS) are measured. The studies are nearing completion and will be published in 2011.

In collaboration with the clinical units we are also involved with clinical studies such as the randomised controlled trial of early versus normal discharge for patients with negative pressure wound therapy for skin grafts. This study has begun recruitment and is hoped to be completed by the end of 2011.

**Awards and Prizes**

**Professor Vanessa Brunelli**  
Academic Excellence (Semester 1 & 2), Queensland University of Technology (Faculty of Health)

Registered Nurse Scholarship, Queensland Nurses Union

**Professor Amanda Henderson**  
Discipline Scholar, Australian Learning and Teaching Council

**Nicola Melton**  
General Nursing Scholarship, Office of the Chief Nurse Officer

**Dr Marion Mitchell**  
Research Scholarship, Queensland Nursing Council

**Gillian Ray-Barruel**  
Best Oral Abstract Paper, Queensland Health

**Major Grants & Financial Support**

<table>
<thead>
<tr>
<th>Source</th>
<th>Amount</th>
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<td>Total NHMRC funding</td>
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**National & International Presentations**

**Professor Leanne Aitken**  
Royal Brisbane and Women’s Hospital Research Symposium, Brisbane

Simulation and Beyond: Creative Teaching Approaches for Improving Patient Safety, University of Newcastle, Australian Learning and Teaching Grants, and University of Western Sydney, Hunter Valley NSW

**Mary Boyde**  
Australasian Cardiovascular Nursing College Conference, Brisbane

European Society of Cardiology Conference, Stockholm, Sweden

**Vanessa Brunelli**  
16th Biannual Conference of the International Society of Nurses in Cancer Care, Atlanta, Georgia, USA

37th Annual Scientific Meeting Clinical Oncology Society Australia, Melbourne, November

**Professor Amanda Henderson**  
Nurse Education Today (NET) and Nurse Education in Practice (NEP): NETNAP, Sydney

**Dr Marion Mitchell**  
The 4th Australasian Cardiovascular Nursing College Annual Conference, Brisbane

**Awards & Financial Support**

Australian College of Critical Care Nurses Institute of Continuing Education

11th Annual Meeting, Sydney

Royal College of Nursing International Nursing Research Conference, Newcastle upon Tyne, England, UK

British Association of Critical Care Conference, Southport, England, UK

Australian and New Zealand Scientific Meeting on Intensive Care Medicine, Melbourne

**Gillian Ray-Barruel**  
National Australian Conference on Evidence-Based Healthcare, Adelaide

**Ramon Shaban**  
Renal Society of Australia Annual Conference, Cairns

Australasian Bioethics Association of Bioethics and Health Law Conference, Adelaide

8th International Conference for Emergency Nurses, Canberra

Nurses at the Helm: Steering Health Across the Pacific, 15th South Pacific Nurses Forum, Auckland, New Zealand

27th Annual Scientific Meeting Australasian College of Emergency Medicine Scientific Committee Meeting, Canberra
In recognition of the active culture in dietetic research and practice at the hospital, three new research positions have been funded until 2015. Dr Liz Isenring, Clinical Academic Fellow, was jointly appointed with The University of Queensland (UQ) (School of Human Movement Studies) and Office of Health and Medical Research. Dr Katrina Campbell received a Lions Senior Medical Research Fellowship and was appointed as a Health Research Fellow, funded by the Office of Health and Medical Research. Dr Ingrid Hickman, Principal Research Fellow, is funded jointly by Queensland Health and UQ Diamantina Institute through the Health Practitioner awards.

Dietetics presented five oral abstracts, eight posters, and led one workshop at the national association’s conference. Dr Ferguson received a PAH Society travel scholarship contributing to the International Nutrition and Dietetics Terminology implementation. Based on identified needs, a Research Competency Framework was developed and implemented to enhance staff capacity and skill.

Other staff achievements include the appointments of: Dr Ferguson as QUT and Griffith University Adjunct Associate Professor and UQ adjunct Senior Lecturer; Dr Vivanti as UQ Senior Lecturer and Griffith University Adjunct Lecture; Dr Campbell as UQ Adjunct Lecturer, and Dr Hickman as honorary Research Fellow with the Mater Medical Research Institute and Program Director for Metabolic Research at the UQ Liver Research Centre.

In 2010, dietetics received over $500,000 in grants for research incorporating oncology, lifestyle diseases and service models and partnered with Griffith University and UQ to provide student research placements and three summer scholarships.

**Research Activities**

**Clinical Trials**

*Comparison of pre- and perioperative immunonutrition in patients undergoing surgical resection of oesophageal cancer* (Jamieson G, Watson D, Smithers M, Isenring E, Ferguson M). NHMRC Project Grant (2010). 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 multistate NHMRC funded trial and assisting other sites in effective data collection procedures. Data collection will continue for two years.

*Obesity-related inflammation and insulin resistance in chronic liver disease: Exercise and Diet as treatment options* (Hickman I). NHMRC Project Grant (2008-2011). This study investigates the role of diet and exercise as treatment options for obesity-related 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.
The role of resveratrol in the management of non-alcoholic fatty liver disease (NAFLD) (Chachay V, Hickman J, Ferguson M, Martin J, Prins J, Macdonald G, Whitehead J, O’Moore-Sullivan T, Cowin, G, Franklin M, Kirkpatrick C). 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.

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. (Hall E, Campbell K, Bauer J, Stowasser M, Pimenta E, Isbel N, Hawley C). This project will aim 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 salt taste preference in participants with moderate kidney disease.

Other Research
Nutrition as medication for geriatric hospitalised patients with malnutrition (Ferguson M, Vivanti A, Varghese P, Amin H, Dickson P, Capra S). This study assesses the impact of a novel, evidence based, dietetics programme (includes accelerated learning through the use of peer teams with support and clinical placements throughout the year, primarily at one site as opposed to the traditional shorter placement blocks across different facilities) upon patient services, staff time and perceptions.

Randomised controlled 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 E). This study investigates the benefit of incorporating frequent, individual nutrition support by a dietitian, compared with providing current services to community-dwelling older adults identified as at risk of malnutrition upon nutritional status and other outcomes including frail mechanical falls, hospital admission and quality of life.

Assessing Nutritional Status and intakes in heart failure patients (Gillen L, Mudge A, Vivanti A, Davies P, Mullins R, Adsett J, Porteous H, Mayrseid J). This observational study aims to describe nutritional status in heart failure (HF) patients at different stages of presentation and to inform evidence based nutrition outcome measures for HF patients to assist in the multidisciplinary management of this patient group and provide valuable pilot data for intervention studies.

Vitamin D & carnitine deficiencies in medical oncology patients receiving chemotherapy (Ferguson M, Walpole E, Davidson W, Isenring E). Preliminary results show that approximately two thirds of oncology patients receiving chemotherapy have low levels of vitamin D. These results will be presented at the Multinational Society for Supportive Care in Cancer in Greece in 2010. Further analysis will demonstrate if vitamin D levels continue to deteriorate during chemotherapy and help to identify contributing factors.

Prevalence of malnutrition and nutrition impact symptoms in chemotherapy patients (Davidson W, Ferguson M, McCarthy A, Vick J, Isenring E, Campbell V). This observational study identified the prevalence of malnutrition and nutrition impact symptoms in chemotherapy patients.

Establishing best practice for the identification and treatment of malnutrition, nationally and internationally (Burton K, Vivanti A, Wright O, Gray L, Ferguson M, Lakhan P). This study aims to compare...
nutritional and comprehensive geriatric assessments amongst patients >70 years to ensure older adults requiring nutrition support are identified quickly upon hospital admission. Streamlined nutrition assessment procedures for older adults and an efficient integration of dietetic and medical expertise are anticipated outcomes.

*Short-term body weight fluctuations amongst well-hydrated older people admitted to a Geriatric and Rehabilitation Unit* (Vivanti A, Palmer M, Dakan L, Varghese P, Yu L, Amin H, Webb L). Although short-term weight change is considered the gold standard for ascertaining dehydration, the degree of daily weight fluctuation within stable, well hydrated populations is not known. As not previously documented, the descriptive study will quantify the extent and contributors to daily weight fluctuations amongst medically stable older hospitalised adults >60 years.

**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)** (Isbel N, Petchy W, Howden E, Strand H, Sonnenburg K, Marwick T, Coombs J, Orazio L, Murray E, Douglas B). 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.

**Nutrition Algorithm for Patients with Chronic Kidney Disease (CKD): Feasibility Study** (Steiber A, Campbell KL, Rossi M). This is a pilot study to test a nutrition algorithm in chronic kidney disease (CKD) patients for clinical feasibility, logical progression, ability to collect data needed for tracking nutrition diagnoses, etiologies, interventions and outcomes, and finally effectiveness to improve nutrition-related outcomes.

**Evaluation of the implementation of an information technology system for capturing the nutrition care process on patient outcomes** (Ferguson M, Campbell KL, Rossi M, Capra S, Hulcombe J, Lees M, Johnson DW). 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.

**Obesity and clinical outcome in patients with Chronic Kidney Disease** (Campbell KL, Isbel I, Hurst K). This research will investigate measures of obesity (BMI and waist circumference) for patients on referral to our Nephrology service and compare this to clinical outcome. The hypothesis is that obesity upon referral for CKD treatment (that is BMI > 30kg/m²) result in different clinical outcome compared to non-obese patients. Clinical outcome is measured as mortality or commencement of dialysis.

**Guidelines for Nutrition in Kidney Transplant Recipients: are they translating to quality care and improved clinical outcomes?** (Murray E, Orazio L, Campbell KL). The aim of this study is to evaluate the new dietetics clinic and implementation of key service recommendations from new Evidence Based Practice (EBP) Guidelines for Nutrition in Kidney Transplant Recipients, whilst characterising transplant patients determinates of lifestyle behaviours and changes post transplant.

**Mind the gap: Implementation of Evidence-based Nutrition Assessment by Renal Dietitians** (Campbell KL, Hall E). This research project aims to identify the barriers (or enablers) which exist for dietitians to integrate evidence based practice (EBP) with their clinical practice and facilitate planning and support in the implementation of EBP in the nutritional management of kidney disease.


**Measurement of physical activity levels in people with stroke using sensewear armbands** (Kuys S, Vivanti A, Morris N).


### Awards & Prizes

**Dr Katrina Campbell**
Private Practice, Princess Alexandra Hospital, Travel Grant: International Society of Nutrition and Metabolism in Renal Disease

**Dr Maree Ferguson**
PA Society, Princess Alexandra Hospital, Travel Grant: Implementation of International Dietetic and Nutrition Terminology

**Dr Elisabeth Isenring**
Private Practice, Princess Alexandra Hospital, ASMR Leadership Seminar

### Major Grants & Financial Support

- **Total NHMRC funding:** $161,357
- **Other competitive funding:** $340,880

### National & International Presentations

**Dr Katrina Campbell**
Improving Outcomes in Nephrology, Sydney

Pre-congress meeting: Australia New Zealand Society of Nephrology, Adelaide

**Dr Maree Ferguson**
Australasian Society for Parenteral and Enteral Nutrition, Gold Coast

**Dr Ingrid Hickman**
Australian Gastroenterology Week, Gold Coast

International Conference on Obesity, San Diego, California, USA

**Dr Elisabeth Isenring**
Australasian Society for Parenteral and Enteral Nutrition, Gold Coast

Clinical Oncological Society of Australia, Melbourne
Occupational Therapy

The hospital 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, the occupational therapists are 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 concentrated in the areas of brain injury acute care and rehabilitation, cancer services, spinal cord injury research, aged care assessment and 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. Staff disseminated their research outcomes through publication in peer-reviewed journals and books and by presentation at many national conferences throughout the year. The department currently supports 12 postgraduate research students conducting research in the fields of brain injury, aged care, cancer, and hand therapy.

Mrs Mary Whitehead  Dr Amanda Purcell
Director      Acting Director

Mrs Ruth Cox  Dr Jennifer Fleming
Acting Director  Associate Professor

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, Wood A, Wiemers A, Mills V, Clements L, Fleming J). This project aims to establish and test a more appropriate staff mix resulting in more optimal use of resources and enhanced service productivity within the Occupational Therapy Aged Care Team at the Princess Alexandra Hospital. Results will be used to guide the workforce in the implementation of similar roles in the future.

Community based rehabilitation after traumatic brain injury: a comparison of home and hospital based outpatient intervention (Doig E, Fleming J, Kuipers P, Cornwell, P). This PhD research project used within-subjects repeated measures cross-over design to compare two contexts for the delivery of occupational therapy to patients with brain injury. Completion of the PhD resulted in three journal publications.

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, Haines T, Burmeister, B.) This trial recruited 110 participants to investigate whether group-based education sessions were effective in reducing cancer-related fatigue and to identify the most effective timing of these sessions. The trial found that whilst fatigue levels did not significantly improve, pre-radiotherapy education was associated with increased activity levels without a corresponding increase in fatigue.

Other Research
Investigation of the transition from hospital to home for individuals with acquired brain injury and their family
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. A descriptive study of current practice was completed and resource development commenced.


Evaluation of a telephone screening tool for the presence of post-concussive symptoms (Wright S, Prescott C, Fleming J). The multidisciplinary team at PAH have developed a pragmatic telephone assessment screening tool, that aims to assist in identifying post concussive symptoms and reviewing return to functional activity post mild traumatic brain injury. The aim of this research is to evaluate the appropriateness and accuracy of this newly developed telephone screening tool. The confirmation of this research would allow confident and effective assessment of patients with mild head injury in emergency departments at PAH and across the state.

Financing and management of lifetime care for adults with acquired disabilities and high care needs (Foster M, Henman P, Fleming J, Tilse C, Harrington R). This ARC Linkage project aims to investigate the lifetime care and support needs of young people with high care needs due to trauma or neurological disease, and to understand the complex financing and service systems which address these needs.

Does individualised hand splinting reduce spasticity after traumatic brain injury (Copley J, Kuipers K, Fleming J, Griffin J). This randomised single case series study examines the use of individualised hand splinting to reduce hypertonicity and improve passive range of motion in rehabilitation clients with brain impairment.

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.) This honours student project aimed to determine the clinical utility of the Canadian Occupational Performance Measure in the spinal cord injury inpatient rehabilitation setting.

Past and current leisure activities of individuals in a brain injury rehabilitation unit (Braithwaite H, Fleming J, Gustafsson L, Griffin J). The aim of this study was to describe the participation in leisure activities by adults undergoing brain injury rehabilitation and to identify barriers to leisure participation.

Investigations of care requirements of people with brain tumour (Haines T, Cornwell P, Fleming J, Olsen S, Omerod A, Dicks B). This qualitative study used in depth semi-structured interviews to gather data on the experiences of patients with brain tumours and their family care-givers over the first 3 months following hospital discharge.

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

Splinting to prevent forearm rotation – to what degree? (Slaughter A, Miles L, Fleming J, McPhail S). This study evaluated the effectiveness of five different splint designs on the prevention of forearm pronation and supination to determine which provided the best form of immobilisation while maintaining patient comfort. Results were published in the Journal of Hand Therapy.

Comparison of two methods of measuring for compression arm sleeves for lymphoedema (Nixon J, Purcell A). This project aims to establish the most accurate method of measuring for custom-made compression sleeves for patients with upper limb lymphoedema to improve both fit and comfort. The trial has ethical approval and is due to commence recruitment in 2011.
Clinical utility, reliability and validity of the Self-Perceptions in Rehabilitation Questionnaire (SPIRQ) in brain injury rehabilitation (Ownsworth T, Fleming J, Ross J, Collier AM, Stewart E). The SPIRQ is a newly developed self-report questionnaire designed to measure self-perceptions of progress in rehabilitation. This study examines its psychometric properties with patients from the Brain Injury Rehabilitation Unit.

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). Using a qualitative research approach, this study aimed to understand the experience of driving cessation from the perspective of individuals with brain injury, their family members and involved health professionals.

Rehabilitation of prospective memory following traumatic brain injury (Fleming J, Shum D, Strong J). This NHMRC funded randomised controlled trial investigated the effectiveness of a compensatory approach to prospective memory rehabilitation. Final results were accepted for journal publication.

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 honours student project used a qualitative research approach to investigate the experiences of individuals and their family members during admission to the Brain Injury Rehabilitation Unit.

The effect of environmental barriers on community integration following traumatic brain injury (Fleming J, Naider E, Alves-Stein S). This honours student project was commenced in 2010 examining the effect of environmental factors on the level of community integration at 6 months post-discharge for patients with traumatic brain injury.

The transition experiences of stroke patients and their carers (Worrall L, Fleming J, Grohn B, Naider E, Hall A). This honours student project commenced in 2010, and uses in-depth qualitative interviews to examine the experiences of stroke patients and their family caregivers during the first six-months of transition from hospital to home.

Awards & Prizes
Kylie Bower
Peer support program “Stroke Connect”, Selection as trial site, National Stroke Foundation

Major Grants & Financial Support
Competitive funding: $402,489

National & International Presentations
Margo Coffey
Australian Hand Therapy Association Conference, Perth

Associate Professor Jennifer Fleming
OT Australia Qld Cognitive Rehabilitation Workshop, Brisbane
OT Australia NSW Cognitive Rehabilitation Workshop, Sydney

Lauran Fulop
Oncology Nursing and Allied Health Conference, Gold Coast

Lyndal Gray
Oncology Nursing and Allied Health Conference, Gold Coast

Erin Griffin
Radio National, Radio interview

Janelle Griffin
Best of Both Worlds Rehabilitation Conference, Melbourne

Jodie Nixon
Oncology Nursing and Allied Health Conference

Patterson, Freyr
Public Health Association of Australia National Conference, Adelaide, September
Older Persons Mental Health

The service continues to enjoy a close relationship with the Centre for Research in Geriatric Medicine and the Dementia Collaborative Research Centres (QUT, ANU, UNSW). The group had collaborations with colleagues from the Queensland Centre for Mental Health Research and UQDRIVE.

Emily McCallum (Medical Student, UQ SOM) was the inaugural Research Intern. Her work led to a paper recently being accepted by the Journal of Affective Disorders. The group have been successful in receiving a grant for work towards a future national Dementia strategy and funding from Queensland Health to support research into Electroconvulsive Therapy.

Congratulations to Dr Natasha Squelch, Clinical Psychologist and Neuropsychologist on her PhD completion.

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 PAH Psychogeriatric Research Trust Fund.

Dementia and Population Health: a Needs Evaluation (DAHPNE) (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

ECT Quality Initiative Study – Frequency (EQuIS-F) (Siskind D, Charlson F, Doi S, McCallum E, Broome A, Lie D). The Service is examining the best evidence for current ECT practice at PAH following a recent review of clinical practice. Qld Health funded a systematic review and meta-analysis.

Major Grants & Financial Support

Competitive funding: $5,500

National & International Presentations

Dr David Lie
Annual Scientific Meeting, RANZCP
Faculty of Psychiatry of Old Age, Hobart

Annual Scientific Meeting, Aust NZ Soc Geriatric Medicine, Coolum, QLD

RACP Annual Geriatric Medicine Advanced Trainee Workshop: Nambour Hospital
Ophthalmology

Dr Madden has been assisting in the reorganisation of the organ, eye and tissue banks into a single entity. Recent changes have resulted in a decrease in research activity. A productive group has been recently formed investigating the use of silk fibroin as a substratum for ocular tissue. The group have been able to demonstrate corneal endothelial growth on a transparent fibroin membrane. This has the potential to improve corneal transplantation and reduce reliance on corneas from deceased donors.

Peter W Madden  
Scientific Director  
Queensland Eye Bank

Research Activities

Current PAH work involves analysis of Eye Bank data, particularly the utility of the Australian Organ Donor Register and the impact and future value of automatic notification of death.

Major Grants & Financial Support

| Funding from other sources: | $4,000 |
Based at the Princess Alexandra Hospital, 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. This year MaCH R laboratory equipment that was purchased has been installed and staff have been allocated and trained. The ability to perform service work has been developed and this has been gradually increased over the financial year. A specific internet website (www.health.qld.gov.au/qhcss/research/machr/default.asp) has been constructed to increase awareness of the facility and we have had agreement that we officially open the facility. This is due to take place this year. The MaCH R purchased two pieces of new equipment. The SOLiD E Z Bead system and the Dell Computer storage system (mirrored server array). The purchasing of these pieces of equipment was facilitated through Queensland Health.

Dr Glenn Francis has been interviewed for various media pieces related to the ABC Breast Cancer Cluster for both print and radio outlets.

The MaCH R laboratory has developed the methodology for Cytogenetic Microarray Analysis (CGH) and successfully managed to transfer the existing work for CGH from an external provider to the MaCH R laboratory.

**Research Activities**

**Phenotypic/genotypic profiling and outcome in breast cancer: Identification of biomarkers to determine outcome in breast cancer patients** (Francis G, Stein S, Wagner S), Collaborators/Partnerships Dr Geoff Beadle, Queensland Institute of Medical Research

**Prediction of lymph node status in breast cancer patients: Prediction of lymph node status from characteristics of the primary tumour** (Francis G, Stein S, Wagner S). Scientist Collaborators/Partnerships (Wetzig N)

**Prospective assessment of patient response to treatment with the drug Trastuzumab: To determine biomarkers to predict response of HER2 positive patients to targeted therapy** (Francis G, Stein S, Wagner S)

**High-through-put tissue analysis of novel candidate biomarkers of breast cancer progression: To determine biomarkers to predict breast cancer progression in lymph node positive patients** (Francis G, Stein S, Wagner S). Students Helen McCosker, Queensland University of Technology, Collaborators/Partnerships

**Professor Zee Upton, Institute of Health and Biomedical Innovation, Queensland University of Technology, Professor David Leavesly, Institute of Health and Biomedical Innovation, Queensland University of Technology**

**E-Health extraction of pathology data from text reports: To extract data from pathology reports into synoptic format** (Francis G, Stein S, Wagner S). Collaborators/Partnerships David Hansen, Commonwealth Scientific and Industrial Research Organisation, Anthony Nygun, Commonwealth

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**Pathology Queensland**

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**Dr Glenn Francis**

**Director**

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**Glenn Francis**

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**Dr Glenn Francis**

**Director**

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**Pathology Queensland**
Scientific and Industrial Research Organisation

Utilization of biomarkers to determine outcome in HER2 positive breast cancer patients: To determine biomarkers to predict response of HER2 positive patients to therapy (Francis G, Stein S, Wagner S).

Collaborators/Partnerships: Associate Professor Camile Farah, University of Queensland,

Gene expression analysis of breast cancer cell populations and correlation with metastatic clones using immuno-laser capture microdissection: To identify gene expression profiles of breast cancer cell populations and correlation with metastatic clones (Francis G, Stein S, Wagner S). Collaborators/Partnerships: Associate Professor Camile Farah, University of Queensland

Identification and analysis of non-coding RNAs that contribute to advanced breast cancer

Identification and analysis of non-coding RNAs that contribute to advanced breast cancer (Francis G, Stein S, Wagner S)

Collaborators/Partnerships: Associate Professor Melissa Brown, University of Queensland, Dr Juliet French, University of Queensland

An analysis of the Pathological Characteristics of a Proven Epidemiological Cluster of Breast Cancers

To identify non-coding RNAs that contribute to advanced breast cancer

Collaborators/Partnerships: Associate Professor Melissa Brown, University of Queensland, Dr Juliet French, University of Queensland

Identification and analysis of non-coding RNAs that contribute to advanced breast cancer

Identification and analysis of non-coding RNAs that contribute to advanced breast cancer (Francis G, Stein S, Wagner S)

Collaborators/Partnerships: Associate Professor Camile Farah, University of Queensland

To review the pathology of the tumours form the breast cancer patient cluster (Francis G, Stein S, Wagner S). Collaborators/Partnerships: Professor Sunil Lakhani & Associate Professor Melissa Brown, University of Queensland, Professor Tom Gonda, Associate Professor Nigel McMillan and Dr Nick Saunders, Diamantina Institute for Cancer Immunology and Metabolic Medicine, University of Queensland, Dr Ian Bennett, PAH, Dr Georgia Chenevix-Trench, Queensland Institute of Medical Research, Beth Newman, Queensland University of Technology

Novel Strategies for Prediction and Control of Advanced Breast Cancer via Nanoscaled Epigenetic-Based Biosensors: Identification of DNA methylation profiles using nanotechnology that enables prediction advanced breast cancer (Francis G, Stein S, Wagner S). Yvette Emmanuel, Scientist (University of Queensland)

Collaborators/Partnerships: Professor Matt Trau, Associate Professor Melissa Brown, University of Queensland, Professor Alex Dobrovic, Peter MacCallum Cancer Centre, Professor Sue Clark, Garvan Institute, Professor John Forbes, Australian New Zealand Breast Cancer Trials Group, Professor Rodney Scott, Newcastle University


Collaborators/Partnerships: Professor Matt Trau, Associate Professor Melissa Brown, Dr Kate Peters, University of Queensland

Translational pilot study of combined Androgen Receptor and ErbB2 inhibition in Molecular Apocrine subtype of Breast Cancer: To identify androgen receptor status in apocrine type breast cancer (Francis G, Stein S, Wagner S). Collaborators/Partnerships: Dr Ali Naderi, University of Queensland

Major Grants & Financial Support

Competitive funding: $100,000
Pharmacy

The department improved its research output significantly this year, particularly in cancer services where the department had a significant increase in research and publications. A particular focus has been on local audit and clinical practice improvement/development. In collaboration with medical specialities the group have completed a program of twelve internal Drug Use Evaluations during the year, which have all influenced local guidelines/practice.

The department had a specialist pharmacist working in over 100 clinical trials, as well as an infectious diseases specialist pharmacist involved in multiple clinical trials and an oncology pharmacist involved in close to 100 clinical trials.

Lynette Loy
Director

Research Activities

Clinical Trials

Improving adherence to medication in ACS patients using the repertory grid technique: a randomised interventional controlled trial (Gujral G, Winckel K, Cottrell N).

Other Research

The Role of the Pharmacist in the Medication Management of Patients Receiving Chemotherapy for Breast Cancer in Day Care. Research for Doctor of Clinical Pharmacy (Carrington C). The aim of this study is to investigate what effect the pharmacist has on the medication management for patients who are receiving chemotherapy for breast cancer in the oncology day care unit. It also aims to develop novel methodology using a modified repertory grid method to measure patient understanding of medications.

Prescribing and safety issues of oral molecular therapies and chemotherapies in Australian haematology oncology practice (Carrington C). The aim of the study was to determine the prescribing practices of oncologists and haematologists regarding oral molecular and chemotherapy medications across various practice settings in Australia.

Does closed system compounding reduce levels of contamination in pharmacy preparation areas? (Bates J, Semmler J). This trial is in recognition of new developments that may help to achieve a reduction in occupational exposure to cytotoxic drugs.

Patients access to cancer medications across Australia (Carrington C).

Compliance with chemotherapy safety guidelines (Sandhu G, Carrington C).

An electronic prescription for safer chemotherapy: an audit of pharmacist interventions (McKavanagh D, Carrington C).

Relationship of obesity and breast cancer outcomes (Carrington C).

Standardisation of the documentation to support the prescribing, dispensing and administration of anticancer therapy (Sandhu G, Carrington C).

Antibiotic stability for the application in home intravenous therapy (McDougall D, McWhinney B).
Investigating a relationship between the usage of extended spectrum antibiotics and the incidence of clostridium difficile associated diarrhoea (McDougall D, Morton A).

Evaluation of a collaborative doctor/pharmacist prescribing model in elective surgery patients (Hale A).

Evaluation of a collaborative doctor/pharmacist prescribing model in HIV patients at a sexual health clinic (Hale A).

Major Grants and Financial Support

| Competitive funding: | $75,000 |

National & International Presentations

Christine Carrington
Advancing Key Initiatives in Cancer Care, Brisbane

Cancer Council Oncology Nurses, Sydney

33rd Annual Oncology Nurses Group Conference, Gold Coast

COSA Annual Scientific Meeting, Melbourne

Tina Chang
SHPA Annual Conference, Melbourne

J. Grant
SHPA Annual Conference, Melbourne

G. Gujral
National Medicines Symposium, Melbourne

Andrew Hale
National Medicines Symposium, Melbourne

Australasian Professional Society on Alcohol and other Drugs (APSAD), Canberra

SHPA Annual Conference, Melbourne

Australasian Pharmaceutical Science Association, Brisbane

J. La
SHPA Annual Conference, Melbourne

T. Le
International Society of Oncology Pharmacy Practitioners International Symposium, Prague

Daniel McKavanagh
COSA Clinical Skills Course, Brisbane

Advancing Key Initiatives in Cancer Care, Brisbane

SHPA CPD, Brisbane,

COSA Annual Scientific Meeting, Melbourne

Tina Patterson
ASCEPT, Melbourne

Sally Porter
SHPA Annual Conference, Melbourne

Geetpal Sandhu
Advancing Key Initiatives in Cancer Care, Brisbane

International Society of Oncology Pharmacy Practitioners International Symposium, Prague

33rd Annual Oncology Nurses Group Conference, Gold Coast

2nd National Conference for Young Women affected by Breast Cancer, Cancer Council Queensland, Gold Coast

Statewide Adolescent and Young Adult Cancer Conference, Brisbane

COSA Annual Scientific Meeting, Melbourne

Sally Taylor
SHPA Annual Conference, Melbourne

J. Weir
International Society of Oncology Pharmacy Practitioners International Symposium, Prague

K. Winckel
National Medicines Symposium, Melbourne
The Physiotherapy Department had a successful year with five publications in peer reviewed journals and a large number of projects underway across the department. The group received $50,000 in grant funding. Two research higher degree students continued to make substantial progress in their studies. During the year the department farewelled Steve McPhail and Dr Suzanne Kuys. Steve McPhail who played a lead role in research joined the Centre for Allied Health Research in February. Dr Suzanne Kuys who resigned on 30 June 2010 has made a significant contribution to research and facilitated and assisted physiotherapists in turning clinical questions into research projects. Their support and contribution was greatly appreciated by the group. The energy and enthusiasm of both will be greatly missed.

Kathy Grudzinskas  
Director

Research Activities

Clinical Trials

Review of outcomes of people with lower limb amputations (Batten H, McPhail S, Kuys S, Varghese P).

Validation and reliability of the Acute Brain Injury Physiotherapy Assessment (Gesch J, Low Choy N, Steele M, Novak K).

The effect of Nintendo Wii-Fit on outcomes in people with lower limb injuries (Kuys S, Tonks P, McPhail, Toon M).

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 efficacy of a novel, non-robotic intervention to train reaching post stroke (Brauer S, Barker R, Hayward K).

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).


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).

Gait pattern following femoral to distal artery bypass graft (Lehtonen N, Kuys S).

Activity levels of elderly patients admitted to the Internal Medicine Unit (Kuys S, Dolecka U, Lehtonen N, Guard A).

Functional level of elderly patients on discharge from Internal Medicine Unit (Dolecka U, Kuys S).

Physiotherapy enhancement of Internal Medicine Unit (Kuys S, Dolecka U, O’Gorman P).

Prevalence of dizziness, balance disorders and falls in head and neck cancer patients undergoing treatment (Pinkham L).

Lymphoedema in patients following breast surgery (Manning S, Kuys S, Pinkham L).

**Major Grants & Financial Support**

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**National & International Presentations**

**Heather Batten**
Queensland Rehabilitation
Physiotherapy Network Bond University, Brisbane
Queensland Rehabilitation
Physiotherapy Network Griffith University, Gold Coast

**S Chatterton**
Cardiac Rehabilitation Workshop, Brisbane
Workshop for Respiratory Nurses, Brisbane

**Leah Clements**
Occupational Therapy Australia, Queensland Conference, Sunshine Coast
Workforce Innovation Conference

**Urszula Dolecka**
Bariatric Conference, Brisbane
Annual Gerontology Update Weekend, Brisbane
Queensland Rehabilitation
Physiotherapy Network, Brisbane

**Cherie Hearn**
National Allied Health Benchmarking Consortium National Meeting, Sydney
Inviting Innovation Forum, Brisbane

**Suzanne Kuys**
Queensland Rehabilitation
Physiotherapy Network, Brisbane
Society of Hospital Pharmacists of Australia Conference, Melbourne

**Greg Morrison**
Occupational Therapy Australia, Queensland Conference, Sunshine Coast
Queensland Rehabilitation
Physiotherapy Network, Brisbane

**Micky Nascimento**
Serial Casting for Upper and Lower Limbs, Caloundra, Nambour
Serial Casting for Lower Limb, Brisbane
Assessment and Management of Hypertonicity, Brisbane

**Brooke Wadsworth**
If you can’t breathe, you can’t function, Brisbane
The Plastic and Reconstructive Surgery Unit has had ongoing involvement in both clinical and laboratory research throughout the year. Dr Michael Wagels has completed his PhD research under the supervision of Dr David Theile Jnr. The department had a number of studies investigating reconstructive procedures and techniques relating to head and neck cancer reconstruction, orthopaedic reconstruction and the influence of angiogenesis on muscle flap revascularisation.

Dr David Theile (Jnr)
Chair

Research Activities

Mathematical modelling of the tibia for the design of a periosteal reconstruction in trauma (Allison S, Wagels M, Senewiratne S, Rowe D, Theile DR). The ability of a formal periosteal reconstruction to prevent non-union has never been investigated. The aim of this study is to accurately estimate the area of periosteum required to reconstruct periosteum in lower limb trauma.

Harmonic scalpel in muscle flaps: a non-randomised animal study (Gu J, Wagels M, Senewiratne S, Rowe D, Theile DR). This study aims to compare wound complications and angiogenesis in electrosurgery and harmonic scalpel using a rat muscle flap model.

The Relative Contributions of the Inset and the Wound Bed on Full Thickness Graft Take: A non-randomised controlled animal study (Chan KG, Wagels M, Senewiratne S, Rowe D, Theile DR). This study aims to determine the contribution of the inset to graft by controlling for contact with the wound bed.

Free jejunal interposition reconstruction post pharyngolaryngectomy: 368 consecutive cases (Perez-Smith D, Wagels M, Sharp DA, Cook R and Theile DR). Free jejunum has been the preferred method of pharyngolaryngectomy reconstruction at the Princess Alexandra Hospital for 33 years. The Department of Plastic and Reconstructive Surgery review their experience with the technique and analyse temporal changes in outcomes.

Re-raising muscle flaps: a randomised controlled animal study (Wagels M, Senewiratne S, Rowe D, Theile DR). 30-70% of reconstructed compound lower limb injuries will need to be re-exposed. 25% will need revision after the re-exposure if muscle is used. Re-exposure is achievable by re-raising the inset to protect the pedicle (marginal) or by splitting the flap to protect the inset (split). The aim of this study was to determine which approach results in less necrosis.

Review of long term outcomes for compound tibial fractures at the PAH (Jardim C and Wagels M). The aims of this study are to elucidate the long term outcomes for patients with compound tibial fractures and determine whether or not these are significantly different from outcomes prior to the year 2000.

Pre-Treatment Diagnosis of Non-Melanomatous Skin Cancer: to shave or punch, that is the question (te Kloot M, Perez-Smith D, Lewis J, Wagels M and Kane A). This study aims to make a recommendation regarding the optimal type of biopsy to accompany a referral to the Department of Plastic and Reconstructive Surgery for the treatment of non-melanomatous skin cancers.

Major Grants & Financial Support

| Total NHMRC funding: | $35,750 |
| Other competitive funding: | $18,150 |
Queensland Clinical Trials & Biostatistics Centre

The centre was established by The University of Queensland in September 2009, within the School of Population Health, with the goal of promoting and running high quality clinical and biostatistical methodological studies, both nationally and internationally. Since its establishment, four scientific staff members including a senior statistician, clinical data manager, and project manager have been recruited, with negotiations ongoing for two additional fulltime statisticians. A statistician PhD student has recently joined to work on an international collaborative project in the field of biostatistics and clinical epidemiology.

While still a relatively new centre, it has been successful in securing research funding from both commonwealth government and commercial sources. The centre is currently involved in eight research projects and thirteen collaborations, covering broad areas of basic science, clinical biostatistics and clinical epidemiology. It has recently obtained a competitive grant from the Australian government to participate in the development of a network of discovery studies and clinical trials. New collaborative research programs were initiated with the University of Oxford, Imperial College London, University of Leicester, Peking University, Baker IDI; and pharmaceutical companies including Amylin Pharmaceuticals Inc. and Medtronic USA.

The centre is currently involved in the design, conduct and analysis of funded clinical studies with several internal collaborators including Diamantina Institute, Centre for Research in Geriatric Medicine, Cancer Services PA Hospital, Diabetes & Endocrinology Department of PA Hospital and Griffith University. The centre is responsive to the needs of both academically led and industry initiated research studies, as well as service providers such as Queensland Health.


Associate Professor Sanjoy K. Paul
Director

Research Activities

Clinical Trials
Promoting activity for frail aged in post-acute hospital settings: a randomised controlled trial of accelerometry. In partnership with Centre for Research in Geriatric Medicine: an NHHMC-funded clinical trial led by L Gray, Principal Investigator.

Rheumatoid Arthritis (Paul S). In collaboration with Diamantina Institute; a phase I clinical trial led by R Thomas, Principal Investigator.

ALLG MM8 Trial: A phase II study of a risk-adapted strategy to intravenous melphalan dosing in acute leukaemia. In partnership with Cancer Services, PA Hospital: an ALLG-sponsored trial led by P Mollee, Principal Investigator. Study closed to follow up and data analysis in progress.
Clinical & Biostatistical Research Projects

Exploring the dynamics of inter-relationships between clinical & biochemical parameters in type 2 diabetes patients (Paul S). The aim of this study is to understand the pathophysiology of certain risk factors and biomarkers in type 2 diabetes patients; funded by a research program grant from Amylin Pharmaceuticals Inc., USA. Manuscript submitted to BMJ.

Dynamics of weight change and glycaemic control in type 2 diabetes patients treated with exenatide or insulin (Paul S). The aim of this pioneering study is to understand the benefits of GLP-1 Agonist in diabetes and metabolic diseases; led by QCTBC in collaboration with Amylin Pharmaceuticals Inc., USA. Manuscript submitted to Circulation.

Prediction of incipient hypoglycaemia using continuous blood glucose monitoring system (Paul, S).

A program of study initiated by QCTBC to use data collected using the Continuous Blood Glucose Monitoring System (CGMS) to develop real-time models that can reliably forecast the likelihood of incipient hypoglycaemia. Manuscript submitted to IEEE Transactions in Biomedical Engineering.

Initiation of insulin in type 2 diabetes patients using CGMS based glycaemic assessment (Paul S). This pilot study aims to explore the ability of CGMS to provide a means of characterizing a patient’s glycaemic patterns in order that the most appropriate method of insulin administration can be selected for each individual patient. In collaboration with J Shaw, Baker IDI, and supported by Medtronic USA.

Comparison of diabetic cardiovascular risk factors between the Caucasian and South-Asian populations (Paul S). This study addresses the long-standing issue of the possible differences between Caucasian and South-Asian populations in the behaviour and association of anthropometric, clinical, and biochemical risk factors defining the likelihood of Type 2 diabetes. In collaboration with University of Leicester, UK. Manuscript submitted to Diabetes Care.

Statistical analysis of disease progression in type 2 diabetes patients (Paul S). Research study in the fields of clinical epidemiology and biostatistics, using the 20-year longitudinal UK-GPRD study data. In collaboration with Imperial College London, and University of Leicester, UK. Manuscripts submitted to Lancet and BMJ.

WT1 Expression: A biomarker study. In collaboration with Cancer Services PA Hospital, led by Principal Investigator J Gray.

Plant sterols in type 2 diabetes (Paul S). This study aims at determining the effect of statin treatment and omega-3 polunsaturated fatty acid supplementation on plasma plant sterol concentrations and cholesterol synthesis in 800 patients with Type 2 diabetes. In collaboration with University of Oxford. Published (Atherosclerosis 2010).

Major Grants & Financial Support

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National & International Presentations

Associate Professor Sanjoy Paul
- China International Medical Foundation Forum, Beijing, China
- American Diabetes Association 70th Scientific Sessions, Orlando, Florida USA
- ARCS Scientific Congress 2010, Sydney, NSW
- New Zealand Clinical Research Conference 2010, Auckland, New Zealand
- PA Hospital Week, Brisbane, QLD
- ADS & ADEA Annual Scientific Meeting, Sydney, NSW
- 2010 Translational Research Excellence (TRX10) Conference, Brisbane, QLD
Queensland Melanoma Project

The Queensland Melanoma Project focuses on clinical research into all aspects of cutaneous melanoma from diagnosis to surgery to immunotherapy for metastatic melanoma. It is involved in local, national and international clinical trials. This year the unit became the fourth highest recruiter in a phase III international immunotherapy vaccine trial.

The Queensland Melanoma Project has developed over the years to include a multi-disciplinary meeting and clinic that involves General Surgeons (Surgical Oncology), Plastic and Reconstructive Surgeons, Medical Oncology, Radiation Oncology and Allied Health. This is the only specialist melanoma clinic in Queensland and offers patient care and advice to clinicians in Queensland and Northern New South Wales.

The project continues to collect prospective data on all patients undergoing nodal surgery and isolated limb therapy. This clinical data is being used in collaboration with scientists at the University of Queensland to try to identify molecular markers of sentinel node invasion.

Associate Professor B Mark Smithers
General Surgeon, Associate Professor, The University of Queensland Department of Surgery,
Chairman Queensland Melanoma Project Princess Alexandra Hospital
Director, Upper GI and Soft Tissue Unit Princess Alexandra Hospital

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 BM, Bayley G, Barbour A, Jones S, 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 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 BM, Barbour A, Burmeister B, Walpole W, Bayley G, Allan C). 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 on intralesional PV-10 followed by Radiotherapy in the treatment of metastatic melanoma. (Smithers BM, Barbour A, Burmeister B, Foote M, Bayley G, Allan C). 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 call vaccine in patients with Stage IV malignant melanoma. (Smithers BM, Barbour A, Burmeister B, Walpole E, Bayley G, Allan C). 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.

Molecular markers of sentinel node invasion in melanoma. (Khosrotehrani K, Smithers BM). This study is being conducted with the University of Queensland using the existing database being 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.

Prospective evaluation of prognostic factors in patients with medium risk melanoma (Green A, Smithers BM).

Follow-up Study of randomised double-blind phase II trial of NY-ESO-1 Iscomatrix vaccine and Iscomatrix adjuvant alone in patients with resected stage IIc, II or IV malignant melanoma. (Multicentred trial) (Smithers BM, Barbour A, Burmeister B, Walpole E, Bayley G).

The natural history of patients who were entered into the MRPQ0161A study. (Smithers BM, O’Rourke M, Schmidt C).

Other Research
Melanoma Database – Sentinel Node and Nodal Dissection 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 1468 patients. (Smithers BM, Jones S, Barbour A, Bayley G, Allan C).

Melanoma - Isolated Limb Infusion Database 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 132 patients. (Smithers BM, Jones S, Barbour A, Bayley G, Allan C).

Major Grants & Financial Support
Funding from commercial studies: $176,924

Queensland Melanoma Group
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 two international clinical trials. One is comparing the addition of an intensive task specific motor training program to standard rehabilitation in people with recent tetraplegia. The second trial will determine the effect 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 quadriplegia. The Department did also conduct research into managing respiratory dysfunction after SCI-ICU. The education package developed may provide for future collaborations with the Austin Hospital in Melbourne.

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 Investigators: 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.

COSAQ: A prospective, randomised controlled trial for auto-titrating Continuos positive airway pressure for Obstructive Sleep Apnoea after Acute Quadriplegia (Chief Investigator: Berlowitz D, Staff: Geraghty T, (Principal Investigator); Tsai P, Deuce, B (Co-investigators); Jones R (Research Nurse); Lewis J (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.
The Spinal Outreach Team continues to focus its research endeavours on service enhancement projects. The *Clinical Knowledge Translation Through Consultancy* project has implications well beyond spinal cord injury practice. A novice grant received from the Queensland Health Nursing and Midwifery Research Grants Program means that this research will be extended to examine clinicians’ motivations for seeking consultancy.

Kiley Pershouse  
Manager

**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 study is to track changes in quality of life and function for people with spinal cord injury (SCI) along the lifespan. Data analysis has continued throughout 2010. The findings to date have highlighted the importance of prevention and intervention for secondary conditions following a SCI.

*When do community nurses seek help? Factors influencing consultancy seeking for wound care in spinal cord injury?* (Ladhams J, Schuurs S, Amsters D). This broad study being undertaken by the Spinal Outreach Team is investigating the nature of consultancy amongst health professionals and its efficacy as a model for translation of research evidence to practice. It is in collaboration with the Transitional Rehabilitation Program, Acquired Brain Injury Outreach Service, Centre for Functioning and Health Research and the Centre for Remote Health (NT).

*A study of outcomes for spinal cord injured clients after interventions for complex seating problems* (Amsters D, Schuurs S). This project aims to examine factors which influence community nurses’ decisions to seek the assistance of a wound care consultant, when faced with a spinal cord injured client with skin breakdown. An online survey design will be used to gather data from community nurses across Queensland, commencing in 2011.

*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). This project aims to evaluate the outcomes and impact of a custom seating service for people with complex wheelchair seating problems after spinal cord injury. It is in collaboration with the Rehabilitation Engineering Centre at RBWH, Metro North Health Service District.

**Major Grants & Financial Support**

| Competitive funding: | $8,800 |

**National & International Presentations**

Bettina Power  
ANZCoS Annual Meeting, Adelaide, September

Carey Bayliss  
ISCoS Annual Meeting, New Delhi, India, October

Julie Ladhams  
National Continence Foundation Australia, Brisbane

ANZCoS Annual Meeting, Adelaide

Bettina Power  
ANZCoS Annual Meeting, Adelaide

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*Management of Respiratory dysfunction after acute SCI- ICU to SIU*. This project involves a retrospective chart review of 30+ charts (education package to be utilised within QHealth and future collaborative research options with Austin Hospital in Melbourne).
Transitional Rehabilitation Program

The Transitional Rehabilitation Program provides post-primary rehabilitation services for people with spinal cord injuries who have undergone inpatient rehabilitation in the Queensland Spinal Injuries Unit.

Research highlights during the year have included the completion of research into staff training on client sexuality with the publication of two year follow-up findings. Work continued on collaborative research being undertaken with the Spinal Outreach Team, the Acquired Brain Injury Outreach Service, Centre for Functioning and Health Research 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. Significant quality improvement work has occurred in the area of goal setting and attainment and this body of work is expected to be published within the coming year. Work has also continued on finalising research into professional boundaries while collaboration has continued with the Spinal Outreach Team in preparing publications from research into long term outcomes following spinal cord injury. New research, in collaboration with the Acquired Brain Injury Outreach Service, the Spinal Outreach Team and Griffith University has been explored in the area of psychosocial models of care, in particular identity reconstruction.

Greg Ungerer
Manager

Research Activities

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 occurring during 2010. 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 (Fronek 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 analysis has continued throughout 2010.

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.

National & International Presentations

Emilie Gollan
Joint 49th International Spinal Cord Society (tSCoS), 9th Asian Spinal Cord Network (ASCoN) and 10th Spinal Cord Society (SCS) Meeting, New Delhi, India

Kirsten Hinchy
Annual Scientific Meeting of the Australian and New Zealand Spinal Cord Society, Adelaide
Radiation Oncology (PAH)

The Princess Alexandra Hospital Radiation Oncology Department has maintained a high level of clinical trial activity throughout the year. The department administered more than 1500 courses of radiation therapy during the year and was able to expand the consultant staff with the appointment of Dr Matthew Foote who returned from Canada, having completed a fellowship at Princess Margaret Hospital in Toronto. Matthew has a strong focus in research and will be pioneering several projects in melanoma, brain tumours and stereotactic radiation therapy.

The department had the privilege of being able to host their first radiation oncology fellow, David Pryor who has already excelled himself with some prestigious awards as a registrar. David has focussed his efforts in projects involving head and neck and oesophageal cancer and has submitted some important manuscripts for publication. Another highlight of 2010 was an oral presentation on the predictive value of PET scanning in head and neck cancer by Associate Professor Sandro Porceddu at the American Society of Therapeutic Radiation Oncology (ASTRO) meeting in San Diego. Sandro has since had some initial outcomes of his work published. Contributions to research from radiation therapists and medical physicists continue to increase with several projects close to completion.

Work has commenced on the radiation oncology expansion which will not only increase the numbers of patients being treated but also the capacity to conduct research within the department. The clinics will be much closer to the treatment facility which should lead to increased collaboration among all researchers. The new clinical areas will commence in July 2011 and the new linear accelerator in November 2011.

Professor Bryan Burmeister
Director

Research Activities

Clinical Trials

TROG 08.03 / RAVES (Lehman M). A Phase III Multi-Centre Randomised Trial Comparing Adjuvant Radiotherapy (RT) With Early Salvage RT in Patients With Positive Margins or Extra-Prostatic Disease Following Radical Prostatectomy.

Hypo Cetux / 62202-828 (Porceddu S). Hypofractionated Radiotherapy with Cetuximab as Palliation for Locally Advanced Head and Neck Squamous Cell Carcinoma – A Phase II Study

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 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
Pmab / CSCCS (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

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

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)

TROG 07.02 / QUARTZ (Burmeister B). A Phase III Multi-Centre Randomised Controlled Trial to Assess Whether Optimal Supportive Care Alone (Including Dexamethasone) is as Effective as Optimal Supporting Care (Including Dexamethasone) plus Whole Brain Radiotherapy in the Treatment of Patients with Inoperable Brain Metastases from Non-Small Cell Lung Cancer.


TROG 08.05 / WBRT (Burmeister B). Whole Brain Radiotherapy following Local Treatment of Intracranial Metastases of Melanoma

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 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

TROG 08.02 / Elderly GBM (Foote M). A Randomised 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

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

TROG 03.01 / Palliative Oesophageal Cancer (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

TROG 06.01 / LGG (Lehman M) Primary Chemotherapy with Temozolomide vs. Radiotherapy in Patients with Low Grade Gliomas after Stratification for Genetic 1p Loss: A Phase III Study

Other Research

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

Major Grants & Financial Support

Competitive funding: $214,634
Radiation Oncology (Mater)

This year has been a productive year for the Mater research team. The delivery of radiation oncology services resulted in 33,757 treatment attendances and 113,882 treatment fields. The past 12 months has been a year of consolidation with the gradual expansion of the Image Guided Radiotherapy and the Intensity Modulated Radiotherapy programs. This has included the implementation of stereotactic spinal treatments using Intensity Modulated Radiation Therapy (IMRT) under the supervision of Dr Matthew Foote as well as the development of an IMRT protocol for gynaecological malignancy with Dr Bryant and Dr Peres. The expertise of the IMRT team under the guidance of Robyn Guidi, Tammy Barry, Penny Knapp and Adrian Gibbs has been appreciated. The staff continue to accrue to clinical trials. There were 63 patients entered onto clinical trials in the last financial year. The site remains a principle site for a number of TROG trials and the research staff have worked tirelessly to achieve high quality data collection.

The group was enormously proud to see Pauline Rose graduate with her PhD. This is an outstanding achievement for radiation oncology nursing. There has been continued expansion of radiation therapy research on the campus and the appointment of Dr Owen as Radiation Research fellow will further assist in fostering research. Dr Poulson successfully completed his MD and graduated this year. A state-wide cross sectional survey on burnout and work engagement in cancer workers has also been completed and submitted for publication.

Associate Professor Michael Poulson
Director

Research Activities

State-wide survey of cancer workers in Queensland (Poulsen MG, Poulson A). This is a cross sectional study which aims to identify the factors associated with burnout and worker engagement in all professional streams involved with cancer care.

Investigation of Image guidance methods for improved localisation in external beam radiotherapy of the prostate (Deegan T). This project will allow the more accurate delivery of radiotherapy for cancers of the prostate.

Improving head and neck stabilisation: a comparative study of the Civo and Posifix immobilisation systems (Cronin B). This project will improve on the stabilisation of the head for head and neck radiotherapy.

Exploration of Lung Imaging in External Beam Radiotherapy (Schloman T). This project will improve target definition for lung cancer treatment.

Intra-fractional respiratory motion and its impact on breast radiotherapy (Jones RFS). To document the effect of respiratory movement of breast radiotherapy.

Methods for automated 3D analysis of volume variation for tumours, healthy tissues and planned dose in patients undergoing RT (Project Manager: Hargrave C, Moore M PhD student at QUT). This will allow us to develop method for 3-D change in treatment volumes during radiotherapy.

A dosimetric comparison of 3DCRT with IMRT for treatment of anal canal cancer (Barry T). A technique to reduce morbidity of radiotherapy.

Inter-observer variability of MRI and CT in prostate radiation therapy (Parfitt M). To study the variability of MRI and CT contouring.

Measuring dose delivered by CBCT and kV setup images during radiation therapy treatment to the head and neck (Cronin B). To evaluate radiation dose from on line imaging.

An evaluation of reflective tutorial sessions and their outcomes (Abrahams K). An educational project.

Circumventing the infrastructure drain: A comparative study of e-learning as a clinical training method in radiation therapy (Brady C). To study the impact of e-learning.

A prone technique for treatment of the breast, supraclavicular and axillary nodes (Mason N, MacFarlane D).
Radiology

Escalating service commitment and the introduction of new Accident and Emergency CT facilities, and arrangements to introduce PET/CT scanning, together with difficulties in radiologist recruitment has hindered our research endeavours this year.

However, the group still participate in international trials and have had papers published as well as posters and presentations at conferences and scientific meetings during the year.

With new teaching positions appointed, radiographic and nuclear medicine staff had increased presentations at national and international scientific meetings.

With a change in the training rules for radiology registrars, they are now expected to produce at least two major projects, this is expected to stimulate a greater amount of research in the department, especially related to the new Emergency Department CT and PET/CT equipment.

Dr Mark Benson
Acting Director

Research Activities

Clinical Trials

CERAL Study Cardiovascular Outcomes with Renal Atherosclerotic Lesions (Redmond K, Mudge D). 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 antihypertensive 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 (pharmacoepidemiologic) 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

Radiologic Patterns in H1N1 Admissions (Saad N, Greenslade S, McEniry J).

Superior Ophthalmic vein size as predictor of increased intracranial pressure (Saad N, Dehdari A).

Diffusion-weighted imaging of liver lesions: A retrospective Study (Saad N, Moghaddam A).

Awards & Prizes

Dr Nivene Saad
Annual Teaching Award, RANZCR Training Scheme Adelaide
# National & International Presentations

**Sally Bell**  
16th International Society of Radiographers & Radiological Technologists World Congress, Gold Coast

**Dr Mark Benson**  
RANZCR ASM - Early experience in contrast-enhanced ultrasound, Brisbane

**Richard Boytar**  
16th International Society of Radiographers & Radiological Technologists World Congress, Gold Coast

**Associate Professor John Earwaker**  
RANZCR ASM - The Nobel Prize and Radiation Sciences, Brisbane

**Dr Mitesh Gandhi**  
Radiological Society of North America (RSNA), Chicago USA

**Madeleine Neels**  
16th International Society of Radiographers & Radiological Technologists World Congress, Gold Coast

**Dr Ben Ong**  
RANZCR ASM - MR Perfusion in Brain Tumors, Brisbane

**Jit Pratrap**  
RADAIM 2010, Gold Coast

**Susan Rattray**  
16th International Society of Radiographers & Radiological Technologists World Congress, Gold Coast

**Dr Kendal Redmond**  
RANZCR ASM - MR Abdominal apoplexy: when good blood vessels go bad, Brisbane

**Dr Nivene Saas**  
Intensive Care Medicine Clinical Refresher Course - Data Interpretation 2010, Brisbane, September  
Hepatology Group Meeting - Advances in MRI, Brisbane, September

**Gary Smith**  
16th International Society of Radiographers & Radiological Technologists World Congress, Gold Coast

**Thomas Steffens**  
16th International Society of Radiographers & Radiological Technologists World Congress, Gold Coast

**Andrew Whiteman**  
16th International Society of Radiographers & Radiological Technologists World Congress, Gold Coast
Respiratory and Sleep Medicine

The Department of Respiratory Medicine and the Lung & Allergy Research Centre (UQ School of Medicine) have an active research program focussing on (a) the role of viral infections and allergy in patients with asthma and chronic obstructive pulmonary disease, (b) improving influenza vaccination and (c) finding better ways to diagnose sleep apnoea.

This past year has seen further growth in staff numbers and expertise, and has been highly productive for all concerned with success in attracting research funding, 21 publications in peer-reviewed journals and book chapters, and a successful patent application.

Key achievements included:

- Investigating the importance of antigen presenting dendritic cells (DC) in the pathogenesis of human allergic disease, confirming the importance of DC in both established asthma in adults, and in the development of the disease in young children.
- New approaches to inhibiting allergen specific Th2 cytokine production using bacterial lipopeptides that alter antigen presenting cell function.
- 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.

During the year major conference presentations included a State of the Art Lecture at the major international allergy conference in the USA, and the prestigious oration at the Australasian Society of Clinical Allergy and Immunology.

Professor John Upham
Head of Research

Dr Craig Hukins
Head of Respiratory and Sleep Medicine

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**
*Developmental aspects of respiratory inflammation, allergy & asthma* (NHMRC Program Grant) (Sly P, Holt P, LeSouef P,Thomas W, Stick S, Upham J). The investigators are studying how delays in immune system development predict the onset of asthma and allergies in
children. In particular, it has been found that a particular type of white blood cell known as a plasmacytoid dendritic cell plays a key role in protecting against virus infections of the lungs and protecting against asthma.

Allergic sensitization to grass pollens in patients with allergic rhinitis and asthma in subtropical regions of Australia (Asthma Foundation of Qld) (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.

Protracted bacterial bronchitis (Chang A, Yerkovich S, Upham J). Recurrent chest infections are a common and distressing problem in young children. This study aims to discover why these infections develop in some children, and whether this has any long term health effects.

Using components of bacteria to treat asthma and allergy (State Government, Office of Health & Medical Research) (Upham J). This study aims to find new treatments for asthma and allergies. A component of the cell wall of common bacteria can re-program the immune system and reverse the allergic response in the test tube. Recent findings have uncovered some of the important mechanisms involved. This is an initial step to developing a new treatment.

Major Grants & Financial Support

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
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<tr>
<td>Total NHMRC funding:</td>
<td>$302,815</td>
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<tr>
<td>Other competitive funding:</td>
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National & International Presentations
Professor John Upham
American Academy of Allergy, Asthma & Immunology (State of the art Lecture), New Orleans, USA
Australasian Society of Clinical Allergy and Immunology; Basten Oration, Gold Coast

Respiratory and Sleep Medicine Group
The Speech Pathology Department continued to advance the evidence base for clinical practice in the areas of communication and swallowing. As in previous years, head and neck cancer and acquired brain injury remained strong research themes. Additionally, staff continued to be actively involved in a number of multidisciplinary research projects spanning across the hospital.

The department’s research profile continued to develop with a large number of staff presenting the results of projects and clinical trials at national and international conferences throughout the year. In August, Dr Emma Finch was appointed in the conjoint research fellow position (PAH and the University of Queensland), replacing Dr Petrea Cornwell who resigned in 2009. Dr Finch’s research interests are based primarily around communication and swallowing disorders in neurological conditions. On her commencement Emma became a member of the newly formed Centre for Functioning and Health Research which has already begun to provide an exciting range of collaborative research opportunities.

Wendy McCallum
Director

Research Activities

**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). The long term component of this Provox Vega voice prosthesis trial was completed in 2010 with the collation of objective data from 24 laryngectomy patients. The data that was collected related to device life and complications including the reasons for voice prosthesis change. By the end of 2010, key data had been analysed and presented at national and international forums. One paper had been accepted for publication.

**Other Research**

*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). Patients who have undergone altered fractionation radiotherapy with concomitant boost and radiotherapy have now been assessed along the continuum of care from pre-treatment to 2 years post treatment. In 2010, data analysis for the prospective study, comparative study and acute study have been completed. One paper has been published and the research has been presented at statewide and national conferences.

*Personal Environment Enhancing Rehabilitation Program Quality Improvement project* (Addis P, Watter K, Freebairn C, Fleming J, Finch E). The project evaluates the implementation of an intervention based on the ICF “environment” dimension for enhancing the well being and psychosocial outcomes of adults in day hospital brain injury rehabilitation. The program was developed as part of a research project with the short term treatment effects evaluated and published. Further evidence of the long term effects of the program are now being investigated.

*Communication partner training* (Lethlean J, McGovern D). The Training Communication Partners project aims to investigate the impact of implementing a communication partner training program on people with aphasia, health practitioners and health practitioner students. It is hoped that this research will assist people with aphasia to overcome the barriers aphasia creates and facilitate re-engagement in health
care decisions and everyday life. To date a pilot training program has been conducted with positive outcomes reported.

The effects of thrombolysis following ischaemic stroke on communication and swallowing outcomes (Finch E, Clark K, Short K, Smith L, Antonio M, Aitken P). Evidence suggests that thrombolysis shortly after ischaemic stroke may reduce some of the subsequent neurological damage. The current study is investigating the effects of thrombolysis on communication and swallowing recovery after stroke. Increasing knowledge in this area will assist in the development of effective patient rehabilitation programs to maximise quality of life post stroke.

ASSIST Swallowing screening tool trial (Robinson K, Lawson N). This project initially evaluated the outcomes of the use of a nursing administered dysphagia screening tool with the stroke population to detect patients who were able to proceed directly to their premorbid diet and those who required specialist speech pathology intervention. Modifications will be made to the current tool and will then be implemented in all neurological populations. It is expected that at the completion of the project, a single nursing dysphagia screening tool will be used effectively in the neurosciences ward.

Understanding what helps people live successfully with aphasia (Grohn B, Worrall L, Simmons-Mackie N). (Sponsor is K. Clark). The study aims is to investigate what people with aphasia want from aphasia services. It also investigates what the families of those with aphasia want from aphasia services and how speech pathology assisted in achieving some of those goals.

Neurocognitive substrates of naming facilitation in aphasia (Copland D, Heath S). (Sponsor is K. Clark). There is evidence to support the effectiveness of certain naming treatments, however the mechanism for the positive outcomes remains unclear. This project will compare the effectiveness of three naming therapy techniques at a cognitive and neural level using functional MRI.

Awards & Prizes
Jenni Boxall
ANZHNC Poster Prize, Head and Neck Cancer, ANZHNC

Major Grants & Financial Support
Competitive funding: $7,000
Funding from other sources: $26,000

National & International Presentations
Jenni Boxall
ANZHNC, Sydney

Cass Budden, Michaela Antonio,
Speech Pathology Australia, Melbourne

Bena Cartmill
ANZHNC, Sydney

Kelli Hancock
Annual German ENT Conference, Weisbaden Germany

ATOS Medical Meeting, Horby, Sweden
Voice Prosthesis Workshop, Brisbane
ANZHNC, Sydney
Kelli Hancock, Nadine Lawson
Global Postlaryngectomy Rehabilitation Cadaver Demonstration Course, Brisbane
Speech Pathology Australia, Melbourne
ANZHNC Pre-meeting workshop, Sydney
Annie Johnson
ANZHNC, Sydney

Nadine Lawson
FEES Clinical Education and Training Queensland, Brisbane
Victorian Head and Neck Speech Pathology Interest Group, Melbourne
FEES Clinical Education and Training Queensland, Brisbane

Nadine Lawson, Kelli Hancock
Provox vega voice prosthesis workshop, Brisbane

Nadine Lawson, Kelli Hancock, Annie Johnson
ANZHNC Pre-meeting workshop, Sydney

Kerrin Water, Carly Freebairn
ASSBI, Gold Coast
Therapeutics Research Centre

Under the directorship of Professor Mike Roberts, the Therapeutics Research Centre studied basic and clinical therapeutics, ranging from theoretical mathematical modelling of drug disposition, to practical aspects such as drug trials. A major highlight was the renewal of Professor Roberts’ NHMRC fellowship, ensuring his strong leadership in the centre for 2011 – 2016, while mentoring young scientists to become independent researchers.

Another highlight came with the success of Postdoctoral Fellow, Dr Tarl Prow in achieving several research grants, including his first NHMRC project grant with Professor Roberts and a UQ Early Career Research Award, studying targeted delivery using microdevices such as microneedles and microfibers.

New NHMRC funding for 2011-2013 was also achieved in collaboration with Professor Nick Buckley, studying renal toxicity.

Targeted topical delivery, focussing mainly on imaging in skin, microneedles for vaccines and nanoparticle delivery continued to be a major interest, with 14 papers and 3 chapters published and several conference presentations. The liver / pharmacokinetics and the clinical research areas were also productive, with 13 publications and a number of conference presentations.

The NHMRC-funded STATINS trial with Dr Peter Kruger was completed and the centre has commenced the analysis of the huge numbers of samples generated. The results of the trial are expected to have a major impact on the management of patients with severe sepsis.

Professor Vania Leite, visiting from Brazil, provided expertise in topical formulation and gave invaluable help to students and staff.

Professor Mike Roberts
Director

Research Activities

Clinical Trials
A phase II randomised controlled trial of atorvastatin therapy in intensive care patients with severe sepsis (Roberts MS, Kruger P, Venkatesh B, Bellomo R, Kostner K, Cooper D). The project was completed in 2010 and final sample analyses are due for completion in early 2011. Dr Kruger has been invited to delivered several presentations on the results of this trial, as soon as they become available.

Other Research
Toxicology of Nanomaterials (Minchin RF, Roberts MS, Martin DJ, Smith SV, Monteiro MJ, Gahan). This multidisciplinary study progressed well, with the TRC contributing studies showing no penetration of various inorganic nanoparticles, or of radiolabelled zinc ions across excised human skin. Eight publications were achieved by the team in 2010.

Pharmacodynamics in Liver Disease and in Liver Surgery (Roberts MS, Weiss M, Macdonald G, Fawcett J, Vitetta L, Fletcher L). Commencing in 2010, work concentrated on multiphoton imaging of the disposition of fluorescent solutes in rat liver in vivo. Other studies examined the disposition of clinically important drugs in diseased liver models. Seven publications were achieved.
Antibiotic dosing in the "at risk" critically ill patient (Roberts MS, Lipman J, Paterson D, Kirkpatrick C, Kruger P, Roberts J). Clinical data collection with patients recently admitted and those under stable management (hepatic, renal and cardiac function and body fluid distribution) is nearing completion. The team had 16 articles published or in press in 2010.

Targeted delivery by topical application (Roberts MS). Work carried out in 2010 included studies of nanoparticle penetration with flexing and massage and in diseased skin, the stratum corneum reservoir, molecular structure-skin penetration relationships and follicular targeting. Thirteen articles, reviews and chapters were published or accepted in 2010.

A world-wide comparison of nanoparticle properties and safety, sponsored by the OECD (Roberts MS, Sanchez WH, Grice JE, Prow TW). TRC researchers presented data at a CSIRO-sponsored OECD workshop showing no zinc oxide nanoparticle penetration in intact excised skin. Further studies on zinc oxide penetration in human skin in vivo were commenced and are due for completion in 2011.

Awards & Prizes
Professor Michael Roberts
Knight of Order of Saint John of Jerusalem (KSJ), Services to the Community, Knights Hospitaller

Professor Michael Roberts,
Dr Jeffrey Grice
Preceptor of the Year, For acceptance and mentoring of Pharmacy elective students, School of Pharmacy, University of Manitoba, Winnipeg, Canada

Dr Tarl Prow
Highly Commended – Open category, Uniquest Trailblazer Original, Early-stage Research and Entrepreneurial Ideas Competition, The University of Queensland, UniQuest

Dr Kanchana Ranasinghe
Nominee, clinical coach award, Contribution to advanced training, UQ School of Medicine

Major Grants and Financial Support
Total NHMRC funding: $1,251,661
Competitive funding: $564,000
Funding from commercial studies: $12,000

National & International Presentations
Professor MS Roberts
United States of America Defense Threat Reduction Agency Meeting, Dermal Kinetics, Florida
Royal Australian Chemical Institute (RACI) Pharmaceutical Workshop Preparing a New Dosage Form for Clinical Trial, Preparing a New Dosage Form for Clinical Trial, Adelaide
Novartis Pharma AG: Development, Modelling & Simulation, Topical drug delivery - chemical structure, product, skin and pharmacokinetic relationships, Basel, Switzerland

8th International Conference and Workshop on Biological Barriers – in vitro Tools, Nanotoxicology, and Nanomedicine, Fluorescence Lifetime Imaging (FLIM) and Its Application On Skin, Saarland University, Saarbrücken, Germany

Pre conference course for 12th Perspectives in Percutaneous Penetration International Conference, Skin structure and function, La Grande Motte, France
Australian Pesticides and Veterinary Medicines Authority (APVMA) nanotechnology workshop, APVMA, Pharmacokinetics of nanomaterials, Canberra

5th Workshop on Advanced Multiphoton and Fluorescence Lifetime Techniques: FLIM 2010, Studies on dynamic changes in skin and liver in vivo using multiphoton microscopy and FLIM imaging, Saarland University, Saarbrücken, Germany
Australian Office of Chemical Safety & Environmental Health, Dermal Exposure, Canberra
Australian Office of Chemical Safety & Environmental Health, Pharmacokinetic/ toxicokinetic principles, Canberra
Australia’s National Industrial Chemicals Notification and Assessment Scheme – NICNAS, Dermal Absorption, Sydney
Australian Health and Medical Research Congress, Unraveling drug disposition in organs using 4D imaging and impulse-response modelling, Melbourne

Dr Peter Kruger
8th world congress on Trauma, Shock, Inflammation and Sepsis, Statins in sepsis: the first clinical results. (International invited speaker) Munich, Germany
Heinrich Heine University, Statins in sepsis. (International invited guest) Dusseldorf, Germany
Physiotherapy Association Education meeting, Acute management of Tetraplegia - - pitfalls, case studies & respiratory failure, Brisbane

ANZICS clinical trials group, winter research forum, (i) STATinS in sepsis RCT– an update, (ii) Pandemic influenza – Shovel ready RCT’s., Creswick, Victoria

ANZICS / ACCCN National Scientific Meeting, Statins in Sepsis – clinical results, (National invited speaker), Melbourne

ANZICS clinical trials group Spring research forum, STATinS in sepsis RCT– an update, Melbourne

Dr Tarl Prow
8th International Conference and Workshop on Biological Barriers, Zinc oxide nanoparticles from sunscreens do not penetrate lesion or non-lesion sites in the skin of volunteers with psoriasis or dermatitis, La Grande Motte, France

Dr Xin Liu
23rd Annual Meeting of the European-Society-of-Intensive-Care-Medicine, Clearance of antibiotics by high and low intensity continuous renal replacement therapy in critically ill patients, Barcelona

Australasian Pharmaceutical Science Association Annual Conference, Effect of cyclosporine A on hepatic disposition of rhodamine 123 in rat by in vivo imaging, (oral presentation) Brisbane

Ms Michelle Wu
8th International Conference and Workshop on Biological Barriers, Topical Synthetic Hectorite Nanoparticles do not Penetrate Excised Human Skin, Saarbrücken, Germany

Dr Kanchana Ranasinghe
15th Congress of the International Society for Burn Injuries, Antibiotic transport into Keratinocytes with administered resuscitation fluids in acute thermal injury, Istanbul, Turkey

12th International Conference on Perspectives in Percutaneous Penetration, Chemical enhancer-induced changes in the endogenous fluorophore, NAD(P)H within keratinocytes, Saarbrücken, Germany
Trauma Service

The Trauma Service Department expanded clinical service delivery, education and research throughout the year. The department’s goal was to provide evidence based practice that achieves optimum care for multi-injured patients by engaging all hospitals throughout the Metro South Health Service District in education that best achieves that goal as well as influencing Statewide delivery of acute care to multi-trauma patients.

The department restructured the existing team and model of care to enhance patient care. The realignment of existing staff within the Trauma Service as well as the establishment of new roles to meet the needs of the Trauma Service in moving forward has been developed, ensuring that the key objectives of the Queensland Health Strategic Plan 2007-2012 are met in improving patient care, safety and patient outcomes, and better meeting peoples’ needs across the health continuum, and in aligning with Royal Australasian College of Surgeons recommendations to achieve these aims.

The basic research components remain focussed on fracture healing and the influence of severe soft tissue injuries, carried out at QUT’s Institute of Health and Biomedical Innovation (IHBI). In 2011 the Trauma Service’s goal is to establish a stronger clinical aspect of trauma research.

This year governance meetings between the Royal Darwin Hospital (RDH) and Princess Alexandra Hospital (PAH) continued along with successful nurse rotations to Darwin. Through the National Critical Care and Trauma Response Centre agreement a first round of research grants was offered to RDH and PAH for collaborative research projects in the field of trauma/disaster management.

Professor Michael Schuetz
Director

Dr Tom O’Rourke
Deputy Director

Research Activities

Clinical Trials

Determinants of internal fixation stability and healing outcome (Epari DW, Schuetz MA). The aims of this project are to: (i) Determine the in vitro stiffness characteristics of an internal fixator configured according to best clinical practise and compare with previously determined optimal values. (ii) Investigate the influence of modifying the internal fixator configuration on the stiffness characteristics to optimise the fixation stability and (iii) Evaluate the performance of an optimally configured plate versus the gold standard in an in vivo model of fracture healing.

Establishing a non-invasive method for assessing the musculoskeletal loading of the lower limb during the golf swing (Epari DW, Cole M, Kerr G). The primary aim of this study is to establish a non-invasive method to determine the musculoskeletal loading of the lower limb (hip and knee contact forces) during the golf swing addressing the influence of club head speed, type of club and position (stance).

Role of mechanical stability in metaphyseal fracture healing in mice (Steck R, Histing T, Gregory L). This project aims to characterise the physiological mechanical environment of the intact distal femur of the mouse from evaluation of high resolution dynamic radiographs, as well as using FE analyses and mechanical testing.

3D reconstruction of the orbita from 3T MRI as an alternative to CT (Schmutz B, Lynham A, Coulthard A, Rahmel B, Schuetz M). The objective of this study
is to design MRI acquisition protocols for imaging the orbita that reproduce the 3D bone geometry obtained from CT images. It will further quantify and compare the accuracy that can be achieved by using MRI data instead of CT data for the virtual 3D reconstruction of the orbita. Looking to quantify the increase in the relative amount of manual segmentation time of MR-based images compared to CT based images.

Establishment of an experimental small animal model that enables research for improving the prevention, assessment and treatment of traumatic soft tissue injuries (Steck R). The aim of this project is to develop a soft tissue impaction device and to develop methods for the non-invasive in vivo monitoring of the progression of the soft tissue injury. It will also look at establishing techniques for the post mortem histological assessment of experimental soft tissue injuries and perform a baseline in vivo animal experiment to characterise the recovery of rat hind limbs after soft tissue injury by applying methods developed above.

Other Research
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, Duda G). Large bone defects remain a challenging situation in orthopaedic trauma and tumour management. The field of tissue engineering has already demonstrated its enormous potential with the successful transplantation in human. The field is a multidisciplinary one relying heavily on biomaterials and cellular processes. Tissue engineering of bone is one of the favoured topics in the research community. Bone Morphogenic Proteins (BMPs) are currently under clinical evaluation; however the costs associated with high doses required to stimulate healing are likely to be unsustainable to overburdened healthcare systems. The applicants propose that by greater understanding of tissue regeneration using BMP loaded scaffolds the clinical dose and hence cost of using BMPs may be reduced, consequently making the system more feasible.

An innovative system for accurate bending of fracture fixation plates in orthopaedic surgery (Yarlagadda PK, Schmutz B, Gu Y, Schuetz MA). The novel system developed in this project will not only shorten surgical procedures but also result in anatomically better fitting plates which will improve the functional outcome and reduce the need for surgical implant removal. It will further lessen degenerative changes in adjacent joints as a result of incorrect fracture alignment. It can be expected that these improvements in surgical techniques will translate into reduced healthcare expenditure and ensure patients quality of life.

Understanding the biomechanical effects of fixation strategies to improve the technology of fracture management (Chen G, Mishra S, Schuetz M, Perren S M). This project will study the regulation of fracture healing by fixation devices, using finite element analysis to characterise their biomechanical effects. While the mechanical environment is critical to the healing process, neither the optimal conditions nor those created by each fixation strategy have been defined. Hence, the innovative, validated models created will be a major step towards practical applications of the technology, enabling refinements in fixation methods and device design.

Development of Integrated Trauma Management System for Head Injury (Chattopadhyay G, Mishra S, Rashford S, Schuetz M, Kemsley J, Halder S, Toft Y). The project aim to develop a risk and cost assessment model and Decision Support System (DSS) based on real time patient condition, resource, logistics and environmental conditions for head injury trauma cases and to provide timely and relevant information and help in decision making with ‘what if’ scenarios for better coordination and planning for optimal management under competing risk conditions based on real time information. This will be achieved by developing a prototype for an Integrated Trauma Management System for multi injured patients.

Business Process Management Analysis of Trauma Patients in an Emergency Department (Clements S, Schuetz M, Rosemann M, Sinnott M, Hofstede A). The project aims to use established process modelling techniques and tools to design an intuitive end-to-end process model that facilitates the re-design of current trauma practices. The objective is to understand and comprehensively improve the processes involved with multi-trauma patients, and the main outcome will be a highly intuitive reference model encapsulating guidance for the re-design of the current processes leading to measurable improvements for all involved stakeholders.

Reducing the incidence of screw jamming in locked compression plates (Lutton C, Perren S, Schuetz M).

Major Grants & Financial Support

Competitive funding: $543,150
The department treats patients with oesophagogastric disease, including oesophageal and gastric cancer, and benign conditions such as gastro-oesophageal reflux, Barrett’s oesophagus and achalasia. It is the largest referral unit for oesophagogastric cancer in Australia, all of which is documented and maintained in a prospective database.

A large proportion of patients seen have a malignant cancer. The department conducts multi-disciplinary meetings and clinics for these patients in conjunction with General Surgeons, Medical Oncologists, Radiation Oncologists and Allied Health. All data on these patients are collected in a prospective database. The department is involved in local, national and international clinical trials. A phase II clinical trial in oesophageal cancer that was initiated by one of our clinician’s in 2009 was successful in obtaining NHMRC funding in 2010. This funding will enable the group to conduct this study in a number of facilities throughout Australia in 2011.

The department is also experienced in advanced Upper Gastrointestinal laparoscopic surgery all of which is documented (including progressive quality of life assessment) and maintained in a prospective database.

**Associate Professor B Mark Smithers**
**Director**
**Upper GI and Soft Tissue Unit**
**Chairman, Queensland Melanoma Project**

### Research Activities

**Clinical Trials**

*Intermediate and high risk localized, completely resected, gastro-intestinal stromal tumours (GIST) expressing KIT receptor: a controlled randomised 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). Assesses whether the use of the drug Glivec in patients who have had Gastro-Intestinal Stromal Tumours completely removed surgically.*

*A randomised Phase II trial of preoperative Cisplatin, 5 Fluorouracil and Docetaxel or Cisplatin, 5 Fluorouracil, Docetaxel plus 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). Using a PET scan after standard chemotherapy, we aim to select patients who are likely to have a worse prognosis after surgery and give them a more intense course of therapy trying to improve the survival from the disease.*

*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 D, Woodward N, Joubert W, Atkinson V, Harvey J). The study aims to assess whether the outcome from resectable gastric cancer can be improved by*
giving patients preoperative radiation as well as the standard chemotherapy.

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). NHMRC sponsored trial assessing whether the peri-operative use of a form of immune-nutrition will decrease the infective complications after oesophagectomy for cancer. Presently accruing patients.

Basic Research Projects

Whether inhibition of the shh pathway represents a potential therapeutic target in gastric cancer (Barbour A, Gotley D, Woodhall E). A Cancer Council Queensland funded project that aims to perform genome wide studies of oesophageal cancer primary tumours using microarray technology. We have performed high resolution DNA copy number analyses to date with mRNA expression and DNA methylation studies to be done in 2011. Biomarker discovery is ongoing.

The identification and characterisation of cancer stem cells in oesophagogastric cancer cell lines (Barbour A, Gotley D, Woodhall E). We have isolated subpopulations of cancer cells with stem cell-like behaviour: slower growing and resistant to standard doses of chemotherapy. DNA copy number analyses have been undertaken.

Other Research

Oesophageal Cancer Database and Quality of Life: Established in 1997 the database currently has 1862 patients who have been diagnosed with cancer of the oesophagus or OG Junction. Quality of Life has been conducted on all curative intent patients at baseline, 3, 6, 9, 12, 18, 24, 36, 48 & 60 months. (Smithers BM, Gotley D, Martin I, Barbour A).

Gastric Cancer Database: Established in 2006 data has been collected both retrospectively and prospectively since 2000. The database currently has 450 patients who have been diagnosed with gastric cancer. (Barbour A, Smithers BM, Gotley D, Martin I).

Gastro-intestinal Stromal Tumour Database: Established in 2006 data has been collected both retrospectively and prospectively since 2000. The database currently has 110 patients diagnosed with GISTs. (Smithers BM, Gotley D, Martin I, Barbour A).

High Grade Dysplasia Database: Established in 2006 data has been collected both retrospectively and prospectively since 2000. The database currently has 95 patients diagnosed with HGD. (Smithers BM, Gotley D, Martin I, Barbour A).

Laparoscopic Fundoplication Database: Established in 1991 data has been collected prospectively on all patients undergoing a Laparoscopic Fundoplication. The database currently has 4400 patients with quality of life on approximately 88% of patients. (Gotley D, Smithers BM, Martin I, Barbour A).

Para-oesophageal Hernia Repair Database: 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 730 patients with quality of life in over 88% of patients. (Gotley D, Smithers BM, Martin I, Barbour A).

Redo Hiatal Surgery Database: Established in 1991 data has been collected prospectively on all patients who have undergone a redo hiatus hernia repair. The database currently has 550 patients with quality of life in over 85% of patients. (Gotley D, Smithers BM, Martin I, Barbour A).

Major Grants & Financial Support

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

Associate Professor Andrew Barbour AGITG Annual Scientific Meeting
Australian and New Zealand Gastro-Oesophageal Surgeons Association Annual Scientific Meeting, Queenstown, New Zealand

Professor David Gotley
Adelaide Surgical Seminars, Adelaide, Australia

Associate Professor Bernard Mark Smithers
Annual Scientific Congress, Royal Australasian College of Surgeons, Perth, Australia

Australian and New Zealand Gastro-Oesophageal Surgeons Association Annual Scientific Meeting, Queenstown, New Zealand

International Society for the Diseases of the Esophagus, Kagoshima, Japan

3rd Asia Pacific Gastro-oesophageal Cancer Congress, Kuala Lumpur, Malaysia

The 3rd MATTU Oesophago-Gastric Cancer Symposium, Guilford, England
The Vascular Medicine Department provides clinical and diagnostic services for patients with disorders of the arterial, venous and lymphatic circulations. Research activities include participation in clinical trials and investigation of vascular diagnostic techniques.

Departmental staff published one article and six abstracts in peer reviewed journals and were invited to speak at a number of local and international meetings.

Dr Andrew McCann
Director

Research Activities

Clinical Trials

ADOPT: Apixaban Dosing to Optimize Protection from Thrombosis. A phase III Randomized, Double-blind, Parallel-group, Multi-centre Study of the Safety and Efficacy of Apixaban for Prophylaxis of Venous Thromboembolism in Acutely Ill Medical Subjects During and Following Hospitalization.

AMPLIFY: A multicentre, randomised, double-blind safety and efficacy trial evaluating the use of Apixaban in the treatment of symptomatic deep vein thrombosis and pulmonary embolism.

AMPLIFY EXTENSION. A multicentre, randomised, double-blind, placebo-controlled study evaluating the safety and efficacy of the use of Apixaban for the extended treatment of deep vein thrombosis and pulmonary embolism.

ASPIRE - NHMRC: (ASPIrin to prevent REcurrent venous thromboembolism). A multi-centre, randomised, double-blind, placebo-controlled clinical trial examining the efficacy and safety of low-dose aspirin after initial oral anticoagulation to prevent recurrent venous thromboembolism.

CRUX biomedical evaluation of the Crux Inferior Vena Cava Filter System.

EINSTEIN VTE Study 11702. A multi-centre, randomised, open-label, assessor-blind, non-inferiority program for efficacy 3, 6 or 12 month treatment for acute symptomatic DVT or PE, comparing the safety and efficacy of Rivaroxaban compared to standard treatment of warfarin/Enoxaparin.

REMEDY: A phase III, randomised, multicenter, double-blind, parallel-group, active controlled study to evaluate the efficacy and safety of oral dabigatran etexilate (150 mg bid) compared to warfarin (INR 2.0-3.0) for the secondary prevention of venous thromboembolism.

Tra2P TIMI 50: A Multicenter, Randomized, Double-blind, Placebo controlled Study to Evaluate the Safety and Efficacy of Care in Subjects with a History of Atherosclerotic Disease: Thrombin Receptor Antagonist in Secondary Prevention of Atherothrombotic Ischaemic Events.

Major Grants & Financial Support

Total NHMRC funding: $2,000
Funding from other sources: $120,565

National & International Presentations

R Collins
VTE Champions Weekend: Invited Speaker and Scholarship committee member

2nd EFORT Orthopaedic Asia Symposium, Invited Speaker, Taiwan

Dr Andrew McCann
International Medical Society of Australia and New Zealand –Royal Australasian College of Physicians Queensland: Venous thromboembolism Update

Vascular Medicine Group
T4 – Translation to population health:
Moving scientific discoveries into the community. Researchers study factors and interventions that influence the health of populations, ultimately leading to improved global health.
Journal Articles


- Askew DA, Jackson CL, Ware RS, Russell A. Protocol and baseline data from The Inala Chronic Disease Management Service evaluation study: a health services intervention study for diabetes care. BMC Health Serv Res. 2010;10:134.

- Askew DA, Jackson CL, Ware RS, Russell A. Study protocol Protocol and baseline data from The Inala Chronic Disease Management Service evaluation study: a health services intervention study for diabetes care. BMC Health Serv Res. 2010 May;10:9.


<table>
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<th>Research - key to health</th>
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<tr>
<td>Brook NR, Gibbons N, Johnson DW, Nicol DL. Outcomes of transplants from patients with small renal tumours, live unrelated donors and dialysis wait-listed patients. Transpl Int. 2010 May;23(5):476-83.</td>
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</table>


Carrington C, Weir J, Do C. Study to support the standardization of the prescribing, dispensing and labelling of etoposide formulations in Australia. Asia Pac J Clin Oncol. 2010 Sep;6(3):173-86.


Centres for Health Research 2010 Annual Research Report


Pimenta E. Should we send our kids to the gym? Hypertens Res. 2010 Sep;33(9):880-2.


Powell EE, Jonsson JR, Clouston AD. Metabolic factors and non-alcoholic fatty liver disease as co-factors in other liver diseases. Dis Gastroenterol. 2010;28(1):186-91.


Stripoli GF, Johnson DW, DOSEE. CEsDosE5GC. Effects of the dose of erythropoiesis stimulating agents on cardiovascular, quality of life, and health-related costs in hemodialysis patients: the clinical evaluation of the dose of erythropoietins (C.E. DOSE) trial protocol. Trials. 2010;11:70.


Tallack MR, Perkins AC. KLF1 directly coordinates almost all aspects of terminal erythroid differentiation. IUBMB Life. 2010 Dec;62(12):866-90.


Books & Book Chapters

- FitzGerald GJ, Queensland University of Technology, & National Health and Medical Research Council (Australia). Pandemic (H1N1) 2009 Influenza Outbreak in Australia: Impact on Emergency Departments. Brisbane: Queensland University of Technology eprints 2010.


Carrington C, McGuire T, Burrows J. Virtual reality - Delivering Cancer Care education to Pharmacists in the Wimba Classroom. Asia Pac J Clin Oncology 2010:s3;A229.

Carroll M, Yerkovich S, Upham J. Targeting Toll-like receptors (TLR) 7 and 8 to improve immunity to rhinoviruses. Respirology 2010:A82.


Centres for Health Research 2010 Annual Research Report


- Hall E, Campbell KL. Mind the gap: Barriers to implementation of evidence-based nutrition assessment by renal dietitians. Nephrology 2010:82.


- Kruger PS. Statins in sepsis: the first clinical results. 8th world congress on Trauma, Shock, Inflammation and Sepsis. Munich, Germany 2010.


Lim C, Wu YT, Prow TW, Grice JE, Roberts MS. Chemical enhancer-induced changes in the endogenous fluorophore, NAD(P)H within keratinocytes. 8th International Conference and Workshop on Biological Barriers. Saarbrucken, Germany 2010.

Lim C, Wu YT, Prow TW, Grice JE, Roberts MS. Chemical enhancer-induced changes in the endogenous fluorophore, NAD(P)H within keratinocytes. 12th International Conference on Perspectives in Percutaneous Penetration. La Grande Motte, France 2010.


Paul SK, Best JH, Haughton M, Maggs D. Dynamics of Weight Change and Glycemic Control in Patients with Type 2 Diabetes Treated with Exenatide or Insulin. Diabetes 2010:A161.


Prow TW, Sanchez WH, Yoong C, Li L, Butler M, Grice JE, et al. Zinc oxide nanoparticles from sunscreens do not penetrate lesion or non-lesion sites in the skin of volunteers with psoriasis or dermatitis. 12th International Conference on Perspectives in Percutaneous Penetration. La Grande Motte, France 2010.

Prow TW, Sanchez WH, Yoong C, Li L, Butler M, Grice JE, et al. Zinc oxide nanoparticles from sunscreens do not penetrate lesionAL or non-lesional skin of volunteers with psoriasis or dermatitis. 8th International Conference and Workshop on Biological Barriers. Saarbrucken, Germany 2010.


Wu YT. Topical Synthetic Hectorite Nanoparticles do not Penetrate Excised Human Skin. 8th International Conference and Workshop on Biological Barriers. Saarbrucken, Germany 2010.

Accepted for Publication (In Press)


- Feeney GF, Connor JP. Acamprosate reduces risk of return to drinking after detoxification, but is similarly effective to naltrexone. Evid Based Ment Health 2010.


• Howard JD, Moo V, Sivalingam P. Anaphylaxis and other adverse reactions to blue dyes: a case series. Anaesth Intensive Care 2010.


• Madden PW, Lai JNX, George KA, Giovenco T, Harkin DG, Chirila TV. Human corneal endothelial cell growth on a silk fibroin membrane. Biomaterials 2010.

• Madden PW, Lai JNX, George KA, Giovenco T, Harkin DG, Chirila TV. Human corneal endothelial cell growth on a silk fibroin membrane. Biomaterials 2010.


Centres for Health Research 2010 Annual Research Report


- McPherson S, Powell EE, Barrie HD, Clouston AD, McCuckin M, Jonsson JR. No evidence of the unfolded protein response in patients with chronic hepatitis C virus infection J Gastroenterol Hepatol. 2010


Sinnott M, Shaban RZ. Can we have a culture of patient safety without one of staff safety? BMJ 2010.


Skerman HM, Yates PM, Battistutta D. Cancer-related symptom clusters for symptom management in outpatients after commencing adjuvant chemotherapy, at 6 months, and 12 months. Support Care Cancer 2010.


## Summary of Publications and Postgraduate Students

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<tr>
<th>Departments (A to H)</th>
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# Students supervised at the Princess Alexandra Hospital
## Major Grants

Selected funds received in 2010 over $50,000 per grant

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<th>Grant Description</th>
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<tr>
<td><strong>ARC/ARC Discovery</strong></td>
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<tr>
<td>Improving immune response to vaccines (Kendall MA, Frazer IH, Roberts MS,</td>
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<td>Ambrosi DC)</td>
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<td><strong>ARC/ARC Discovery</strong></td>
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<td>Nursing interventions for hospitalised patients (Chaboyer W, Rickard C, Aitken L,</td>
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<td>Wallis M, Webster J, Cooke M, Thalib L, Scuffham P, Doran D, Cullum N)</td>
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<td><strong>ARC/ARC Discovery</strong></td>
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<td>Predicting the risk of invasive candidiasis in critically ill patients (Sorrell</td>
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<td>TC, Lipman J, Playford EG, Jones M, Iredell JR, Paterson D, Marriott D)</td>
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<td><strong>Food services in residential aged care: financial, personnel and service delivery factors</strong> (Wilson JE, Wright O, Hagney DG, Ward EC)</td>
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<td><strong>Food services in residential aged care:</strong> financial, personnel and service delivery factors (Wilson JE, Wright O, Hagney DG, Ward EC)</td>
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<td><strong>The MYB gene as a model for global transcriptional regulation: stopping, starting</strong> and looping (Gonda T, Ramsay R, Brown M)</td>
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<td>**Determinants of successful community transition for individuals with ABI (Fleming J, Worrall L, Cornwell P, Haines T, Kendall M, Ownsworth T, Chenoweth L)</td>
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<td><strong>Future Fellowship (Thomas R)</strong></td>
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<td><strong>Preclinical evaluation of snake venom proteins with therapeutic potential (Lavin M, de Jersey J, Masci P, Guddatt L, Trabi M)</strong></td>
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<td><strong>Financing and management of lifetime care (Foster M, Henman P, Fleming J, Titse C)</strong></td>
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<td><strong>Integration of risk evaluation in cardiovascular disease management programs (Marwick, T Stewart, S Scuffham, P Inglis, S Kostner, K Abhayaratna, W Gould, P Carrington, M)</strong></td>
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<td><strong>National Health and Medical Research Council (NHMRC)</strong></td>
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<td><strong>PET/CT (positron emission tomography-computed tomography) (Thomas R, Frazer I, Brown M, Saunders N, Gonda T, McMillan N)</strong></td>
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<td><strong>PET/CT (positron emission tomography-computed tomography) (Thomas R, Frazer I, Brown M, Saunders N, Gonda T, McMillan N)</strong></td>
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<td><strong>Retroviral Expression Cloning using an Arrayed Full-Length cDNA Gene Set (ARVEC) (Gonda T, Gabrielli B, Grimmond S, Barry S)</strong></td>
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<td><strong>Australasian Leukaemia Lymphoma Group (ALLG) National Leukaemia and Lymphoma Tissue Bank (NLLTB) (Marlton P)</strong></td>
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<tr>
<td><strong>Role of obesity in impaired treatment response in chronic hepatitis C: mechanisms and therapeutic strategies (Powell EE, Jonsson JR, Clouston AD)</strong></td>
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<tr>
<td><strong>Pharmacodynamics in Liver Disease and in Liver Surgery (Roberts M, Weiss M, Macdonald GA, Fawcett J, Vitetta L, Fletcher L)</strong></td>
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<td><strong>Clinical Centre of Research Excellence in Cardiovascular Disease and Metabolic Disorders (Marwick T, Prins J, Macdonald G, Isbel N, Hegney D, Stowasser M)</strong></td>
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<td><strong>RNA interference and the Immune System (McMillan N, Preiss T, Steptoe R)</strong></td>
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<td><strong>RNA interference and the Immune System (McMillan N, Preiss T, Steptoe R)</strong></td>
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168 research - key to health
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<td>Improved patient outcomes through dosage individualisation of the newer immunosuppressant drugs (Staatz CE, Tett SE, Taylor PJ, Johnson DW, Lynch SV)</td>
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<td>$174,757</td>
<td>A novel tumour suppressor function of E2F7 in squamous cell carcinoma formation (Saunders N)</td>
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<td>IL-17 in bone marrow transplantation (Hill GR, Clouston AD, Negrin RS)</td>
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<td>$173,000</td>
<td>Antibiotic dosing in critical illness (Roberts MS, Lipman J, Paterson D, Kirkpatrick C, Kruger P, Roberts J)</td>
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<td>$171,500</td>
<td>A novel Receptor Activated Pathway (Subramaniam N, Wallace D, Lopez-Otin C, Hooper J)</td>
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<td>$170,477</td>
<td>A comprehensive analysis of Myb target genes involved in myelopoiesis and myeloid transformation (Gonda T)</td>
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<td>Collaborative Oncological Gene-environment Study (EU-COGS) (Giles, Clements, English, Hayes, Hopper, Kedda, Nelson, Pedersen, Severi, Southey, Spurdle)</td>
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<tr>
<td>$168,000</td>
<td>Continuing Research Fellowship (Roberts MS)</td>
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<tr>
<td>$167,249</td>
<td>Centrosome overduplication contributes to tumorigenesis (Gabrielli B, Boutros R)</td>
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<td>$168,000</td>
<td>Value of central Blood Pressure for Guiding management of hypertension (BP GUIDE Study) (Sharman J, Stowasser M)</td>
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<td>$169,723</td>
<td>Squamous cell carcinomas of the head and neck: Exploring the role of human papillomavirus Infection (Antonsson A, Coman W, et. al.)</td>
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<td>$168,893</td>
<td>Practitioner Fellowship (Upham J)</td>
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<td>Endosomal tubule formation in health and disease CDA Fellowship (biomedical) (Simpson F)</td>
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<td>$168,000</td>
<td>Molecular mechanisms underlying the positive associations between male gender &amp; leptin with Barrett’s oesophagus CDA (Biomedical) Fellowship (Hill M)</td>
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<td>A longitudinal study of nerve morphology in diabetic neuropathy using novel non-invasive ophthalmic surrogate markers (Efron N, Boulton A, Malik R)</td>
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<td>A novel Receptor Activated Pathway (Subramaniam N, Wallace D, Lopez-Otin C, Hooper J)</td>
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<td>$128,975</td>
<td>Improved 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)</td>
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<td>$128,975</td>
<td>Uncoupled Research Fellowship (Gabrielli B)</td>
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<td>Systematic diabetic retinopathy screening and monitoring of early stage disease in general practice (Jackson C, Askew D, Mitchell P)</td>
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<td>Elucidating genetic mechanisms responsible for familial hyperaldosteronism type II (Stowasser M, Leo P, Duffy D, Gordon R)</td>
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<td>Value of central Blood Pressure for Guiding management of hypertension (BP GUIDE Study) (Sharman J, Stowasser M)</td>
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<td>$123,169</td>
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$100,000
Synthetic lethality screen targeting a defective checkpoint in melanoma (Gabrielli B, Waterhouse N.)

$100,000
Understanding a potential mediator of metastasis (Hooper J, Quigley J, Waterhouse N.)

$100,000
The role of osteoclasts in the development of osteosarcoma metastases (Saunders N, Thomas D, Evdokiou A.)

$98,250
Understanding a potential mediator of metastasis (Hooper J, Quigley J, Waterhouse N.)

$93,750
S-allylm mercaptocysteine as an adjuvant therapy in the treatment of prostate cancer (Ling P, Nelson C.)

$82,000
RNA and Immunity (McMillan N, Tindill R.)

$66,847.83
MYB regulation of differentiation and apoptosis in breast cancer: Targets and Targeting (Gonda T, Ramsay R.)

$45,825
Suppressor NKT cell trafficking to epithelial precancer (Legatt G, Saunders N.)

Queensland Government and Queensland Health

$660,000

$250,000
Effective immunotherapy for chronic infection and cancer - Innovation Skills Fund Smart State Premier’s Fellowship (Frazer I)

$250,000
Development of New Therapeutic Approaches for Prostate Cancer Progression - Dissecting the Efforts of Diabetes and Obesity in Cancer Progression - Queensland Smart Futures Premier’s Fellowships (Nelson C)

$110,000

$100,000
Using components of bacteria to treat asthma and allergies – Qld Clinical Research Fellowship (Upham J)

$94,300
To establish a Speech Pathology Telehealth service (Bassett L, Burns C, Ward E)

$80,000
Queensland Health Smart Health Grant (Hawley C, Johnson DW, Beller E, De Zoysa, Playford EG, Cass A)

$75,000
Senior Clinical Academic Fellowship – OHMR (Ferguson M, Capra S)

$65,000
Queensland Health Cancer Care Research Fellowship (Carrington C)

$50,000
The Road Ambulance Matters to Patients experiencing delayed off-loading (RAMPing) study (Ting J, Holzhauser K, Crilly J, Odwyer J, Scuffham P, Burmeister E)

$50,000
Combined Androgen Receptor and MEK inhibition in Breast Cancer - University of Queensland and Queensland Department of Employment, Economic Development and Innovation (Naderi A)

Other Grants & Funding

$1,500,000
Australian Government - Department of Health & Ageing (Nelson C, Clements J, Nicol D)

$692,287

$338,333
Epiderm Scientific Research Grant - Australian Dermatology Research and Education Foundation Limited (Epiderm), UQ & PAH Research Foundation (Soyer, H.P.)

$330,000

$272,405
Does Tai Chi regular practice improve depression and metabolic syndrome for depressed adults at risk of developing cardiovascular disease – Heart Foundation & Beyond Blue (Liu X, Vitetta L, Kostner K, Cromptonn D)

$231,982
Genetics and ankylosing spondylitis (AS) pathogenesis – NIH (Reveille JD, Brown MA)

$220,000
Harmonising higher education and professional quality assurance processes for the assessment of learning outcomes in health (O’Keefe, Henderson A)

$212,000
An implementation framework for OSCE; best practice guidelines designed to improve nurse preparedness for practice (Mitchell M, Henderson A, Jeffrey C, Nulty D)

$207,318
Genome wide Association Study of Ankylosing Spondylitis Susceptibility (National Institute of Arthritis and Musculoskeletal Skin Diseases (USA ) and UniTexas) Reveille JD, Brown MA)
<table>
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<tr>
<th>Grant Amount</th>
<th>Project Title and Details</th>
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<tr>
<td>$190,000</td>
<td>Analytical instrumentation enabling rapid compound separation and chemical structure analysis via mass fingerprinting (Shaw PN, Roberts MS, Gidley MJ, Coombes AGA, Fuerst JA, Cabot PJ, Duley JA, McGeary RP, Steadman KJ, Parekh HS, Ross BR Hewavitharana AK, Staatz CE)</td>
</tr>
<tr>
<td>$171,000</td>
<td>Workforce Innovation and Reform: Caring for older people project funding - Health Workforce Australia (Cox R, Mills V, Wiemers A, Wood A, Clements L)</td>
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<tr>
<td>$100,000</td>
<td>The role of Wnt proteins in inflammation – Bażan Fellowship (Blumenthal A)</td>
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<td>Long-term paediatric liver allograft function: role of obesity and metabolic factors and investigation of a new model for fibrosis - Royal Children's Hospital Foundation (Sasakawa Memorial Fund) (Jonsson J)</td>
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<td>Leukaemia Foundation (Keane C)</td>
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<tr>
<td>$100,000</td>
<td>Obesity-related chronic liver disease - Lions Medical Research Foundation (Hickman I)</td>
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<tr>
<td>$100,000</td>
<td>Understanding the Heterogeneity of Invasive Ductal Breast Cancers – a proteomic approach for the discovery of biomarkers and novel therapeutic targets - National Breast Cancer Centre Foundation (Chopin L, Simpson R Lakhan S, Bennett I, Hill M)</td>
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<td>$86,825</td>
<td>Induction of tolerance in memory diabetogenic T cells - Juvenile Diabetes Research Foundation Int. (Steptoe R)</td>
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<td>$76,100</td>
<td>Asthma Foundation Qld (Davies J, Upham, J)</td>
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<td>Identifying the molecular basis for osteosarcoma metastasis - Wesley Research Institute Ltd (Saunders N, Endo-Munoz L, Sommerville S)</td>
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<td>$65,391</td>
<td>The Genetic Determination of Rheumatoid Arthritis in the Chinese Population (Danoy P)</td>
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<td>nPOD Research Projects- Pathological changes associated with chronic ReB activation in T1D - Juvenile Diabetes Research Foundation Int (Thomas R, Irvine K)</td>
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<tr>
<td>$50,000</td>
<td>Pick Your Partners-High Throughput identification of calcium transporter targets for breast cancer (Gonda T, Monteith G, Roberts-Thompson S)</td>
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<tr>
<td>$50,000</td>
<td>Obesity-related inflammation and insulin resistance in chronic liver disease: Exercise and diet as treatment options - Lions Medical Research Foundation (Hickman I)</td>
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<tr>
<td>$50,000</td>
<td>Dietary factors influencing cardiovascular disease progression in chronic kidney disease - Lions Medical Research Foundation (Campbell, K)</td>
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<tr>
<td>$50,000</td>
<td>Inhibition of sex hormone binding globulin proteolysis by kallikrein-related protease 4; a potential target for prostate cancer therapy - Prostate Cancer Foundation of Australia (Harris J, Clements J)</td>
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<td>$50,000</td>
<td>The role of the transcription factors PITX2 (paired-like homeodomain) and YB-1 (Y-box binding protein 1) in metastatic prostate cancer and possible therapeutic implications - Australasian Urological Foundation (Nelson C, Pokorny, M)</td>
</tr>
</tbody>
</table>
Committees

Human Research Ethics Committee - Metro South Health Service District

The Committee is constituted in accordance with the National Statement on Ethical Conduct in Human Research (2007), section 5.1.29-5, 1.33

- Dr Jennifer Fleming, Chair (to July 2010)
- Associate Professor Carl Kirkpatrick, Acting Chair (to September 2010)
- Dr. Eleanor Milligan, Acting Chair (from September 2010)
- Ms Beverley Gaye Kurkowski, Lay Person Female
- Mr Col Sutcliffe, Lay Person Male
- Mr Denzil Scrivens, Lay Person Male
- Dr Karam Kostner, Physician and Researcher
- Associate Professor Richard Roylance, Paediatrician
- Dr John North, Surgeon Orthopaedic
- Dr Robert Zubeshaw, Medical Practitioner
- Michael Jerome-Smith, Professional Care
- Dr Sean Hatherill, Professional Care - Psychiatrist Child Youth Mental Health Service
- Dr Adam La Caze, Pharmacist
- Rev.Father Bernard Thomas, Minister of Religion
- Mr John Bennett, Lawyer
- Dr Dan Siskind, Psychiatrist
- Dr Scott Campbell, Renal Physician
- Associate Professor Maher Gandhi, Haematologist Physician and Researcher
- Dr Peter Mollee, Haematologist Physician and Researcher
- Mr Russell Saal, Scientific Director Laboratory Haematology

Health Practitioner Research Collaborative - Metro South Health Service District

- Dr Jennifer Lethlean, Chair Health Practitioner Research Collaborative
- Ms Delena Amsters, Spinal Outreach Team
- Ms Annette Broome, Psychology
- Dr Katrina Campbell, Research Fellow, Nutrition and Dietetics
- Ms Julie Connell, Executive Director, Clinical Support Services
- Ms Judith Coombes, Pharmacy
- Ms Sue Cumming, Director, Social Work
- Dr Maree Ferguson, Director, Nutrition and Dietetics
- Dr Emma Finch, Conjoint Research Fellow in Speech Pathology PAH/UQ
- Associate Professor Jenny Fleming, Conjoint Research Fellow in Occupational Therapy PAH/UQ
- Dr Pim Kuipers, CFaHR
- Mr Steve McPhail, CFaHR
- Dr Melissa Kendall, Transitional Rehabilitation Program & Acquired, Brain Injury Outreach Service
- Ms Sue Pager, Allied Health Project Officer, Metro South
- Professor Elizabeth Ward, CFaHR
- Dr Angela Vivanti, Research & Development Dietitian

PAH Cancer Collaborative Group

- Associate Professor Devinder Gill, Chair, Director, Clinical Haematology
- Areti Gavrilidis, Director, Research Development & Ethics, Centres for Health Research
- Associate Professor Nicholas Saunders, Diamantina Institute for Cancer, Immunology & Metabolic Medicine
- Associate Professor Mark Smithers

- Associate Professor Damien Thomson, Director, Medical Oncology
- Dr Alexandra McCarthy, Senior Research Fellow, SAHSCCN; Senior Lecturer, QUT
- Dr Peter Mollee, Haematologist
- Dr Maree Ferguson, Director, Nutrition & Dietetics

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- Mr William Deutrom OAM, Deputy Chairman, Chair, Marketing Committee, Company Director
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- Mr Bob Vines
- Mr Cameron Buchanan
- Professor David Theile (Snr) AO, District CEO, Metro South Health Service District
- Mr Les Watson, District Health Council
- Ms Heather Tyrrell, Company Secretary, Manager, Governance, PAH
- Mr Michael Back, (Honorary Solicitor)
- Mr Phillip Sciaccia, (Honorary Accountant)

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- Professor Leanne Atkik
- Professor John Upham
- Professor Len Gray
- Dr Maree Ferguson
- Emeritus Professor Robert Tindle
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Acquired Brain Injury
- Ray Quinn, Manager
- Areti Kennedy, Program Manager, STEPS
- Dr Melissa Kendall, Research & Development Officer
- Susan Gauld, Rehabilitation Coordinator
- Karen Goddard, Rehabilitation Coordinator
- Marie Hollingworth, Rehabilitation Coordinator
- Ann Lancaster, Rehabilitation Coordinator
- Alison Liley, Rehabilitation Coordinator
- Judy Roser, Rehabilitation Coordinator
- Sharon Smith, Rehabilitation Coordinator
- Benjamin Turner, STEPS Coordinator
- Suzanne Wright, Rehabilitation Coordinator

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- Associate Professor Jason Connor, Visiting Senior Clinical Psychologist

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- Dr Paal Sivalingam, Director of Research
- Dr Bruce Burrow, Deputy Director
- Dr Bart McKenzie, Deputy Director
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- Dr Rebekah Ferris, Consultant Anaesthetist
- Dr Kerstin Wyssusek, Anaesthetist SMO
- Dr Paul Davies, Consultant Anaesthetist

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- Professor Judith Clements, Scientific Director
- Professor Pamela Russell, Research Leader
- Professor Adrian Herington, Research Leader
- Dr Lisa Chopin, Research Leader
- Dr Jon Harris, Research Leader
- Dr Sally-Anne Stephenson, Research Leader
- Ms Maggie Fung, Clinical Coordinator
- Dr Patrick Ling, Vice Chancellor Fellow
- Dr Jyuan An, Postdoctoral Fellow
- Dr Jyotsna Batra, Postdoctoral Fellow
- Dr Jennifer Gunter, Postdoctoral Fellow
- Dr Varinder Jeet, Postdoctoral Fellow
- Dr Lidija Jovanovic, Postdoctoral Fellow
- Dr John Lai, Postdoctoral Fellow
- Dr Max Mariasegaram, Postdoctoral Fellow
- Dr Stephen McPherson, Postdoctoral Fellow
- Dr Melanie Murrell, Postdoctoral Fellow
- Dr Anya Rockstroh, Postdoctoral Fellow
- Dr Martin Sadowski, Postdoctoral Fellow
- Dr Carolina Sokrmadj, Postdoctoral Fellow
- Dr Sonika Tjagi, Postdoctoral Fellow
- Dr Raj Vasireddy, Postdoctoral Fellow
- Jyuan Liu, Research Assistant
- Vandhana Bharti, Research Assistant

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- Dr Paul Garrahy, Director
- Dr John Hill, Director of Cardiac Pacing & Electrophysiology
- Dr Paul Gould, Consultant Cardiologist
- Dr Gerald Kaye, Consultant Cardiologist
- Dr Dariusz Korczyk, Consultant Cardiologist
- Dr Richard Lim, Consultant Cardiologist
- Dr Sudhir Wahi, Consultant Cardiologist
- Dr William Wang, Consultant Cardiologist
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- Charmaine Sieg, Clinical Trials
- Ruth Calvert, Clinical Trials

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- Associate Professor Julie Mundy
- Dr Pallav Shah

Cardiovascular Imaging Group
- Professor Thomas H Marwick, Academic
- Associate Professor Karam Kostner, Academic

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- Associate Professor Ian Bennett, Chairman
- Dr Petar Vujovic, Breast & Endocrine Surgeon
- Dr Neil Wetzig, Consultant Surgeon
- Dr David Wilkinson, Consultant Surgeon
- Dr Magdalene Biggar, Breast and Endocrine Fellow
- Amanda Smith, Breast Care Nurse
- Karen Miles, Breast Care Nurse
- Cathy Daunt, NUM 4D

Research Staff
Associate Professor William Wang, Academic  
Associate Professor Paul Gould, Academic  
Associate Professor Gerald Kaye, Academic  
Dr Sudhir Wahi, Academic  
Dr Brian Haluska, Research Academic  
Dr Carly Jenkins, Research Academic  
Dr Matthew Cooke, Research Academic  
Dr Eduardo Pimento, Medical Registrar  
Rodel Leano, Research Academic  

Centre for Functioning & Health Research  
Dr Elizabeth Ward, Conjoint Professor  
Dr Jennifer Fleming, Conjoint Associate Professor  
Dr Pim Kuipers, Principal Research Fellow  
Dr Steven McPhail, Senior Research Fellow  
Dr Emma Finch, Conjoint Research Fellow  
Susan Pager, Research Workforce Development Officer  

Centre for Integrative Clinical & Molecular Medicine  
Associate Professor Luis Vitetta, Director  
Dr Paul Masci, Principal Professional Officer  
Assoc Professor David Colquhoun, Honorary Professor  
Professor Anthony Linnane, Honorary Professor  
Professor Avni Sali, Honorary Professor  
Associate Professor David Colquhoun, Honorary Associate Professor [Cardiologist]  
Dr Liu Xin, Senior Research Fellow  
Dr Kong-Nan Zhao, Senior Research Fellow  
Dr Nathan Reiden, Research Associate  
Dr Manuela Trabi, Research Associate  
Dr Ellen Van der Hall, Senior Research Assistant  
Dr Michael Whitehouse, Honorary Research Consultant  
Ms Shoshannah Beck, Admin & Research Assistant  
Helen Gramotnev, Statistician  
Professor Robert Allen, Affiliated General Practitioner / Academic from the National Institute of Integrative Medicine in Melbourne  
Dr Rick Abraham, Affiliated Oncologist  
Dr Maree Colosimo, Affiliated Oncologist  
Associate Professor Karam Kostner, Affiliated Cardiologist  

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Professor David Johnson, Director  
Associate Professor Glenda Gobe, Administrative Director, Centre for Kidney Disease Research  
Associate Professor Carmel, Hawley, Assistant Director of Haemodialysis, Chair of AKTN Operations Secretariat  
Associate Professor Nikky Isbel, Assistant Director of Ambulatory Renal Services  
Associate Professor David Mudge, Assistant Director of Redlands Renal Service  
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David Small  
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Dr Carolyn Clark  
Ms Miko Yamada  
Dr Jun Li  
Dr Sunil Badve  
Dr David Small  
Dr David Vesey  

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Associate Professor Julie Jonsson, Principal Research Fellow, Co-Director  
Associate Professor Andrew Clouston, Deputy Director  
Dr Melino Michelle, Postdoctoral Research Fellow  
Ms Leigh Horssfall, Clinical Research Coordinator  
Ms Victoria Gadd, Research Assistant  
Ms Millicent Williams, Technical Assistant  

Centre for Research in Geriatric Medicine  
Professor Len Gray, Director Research  
Associate Professor Paul Varghese, Director  
Dr Glenise Berry, Senior Lecturer  
Dr Charles Lie, Senior Lecturer  
Dr Sahih Salih, Senior Lecturer  
Dr Catherine Yeillard, Senior Lecturer  
Dr Lucy Dakin, Lecturer  
Dr Prabha Lakhan, Research Fellow  
Dr Melinda Martin-Khan, Research Fellow  
Dr Nancye Peel, Research Fellow  
Dr Catherine Travers, Research Fellow  
Dr Elaine Fielding, Data Manager  
Dr Sean Halloran, Research Assistant  
Joanna Kho, Research Assistant  
Lisa Mackenzie, Research Assistant  
Mark Rozaria, Research Assistant  
Rochelle Vincent, Research Assistant  
Dr Catherine Beverely, Research Nurse  
Bonnie Pimm, Research Nurse  
Leigh Bradley, Nurse Assessor  

Clinical Governance  
Dr Michael Daly  

Clinical Pharmacology  
Associate Professor Peter Pillans, Director  
Dr Paul Taylor, Senior Scientist  
Michael Franklin, Senior Scientist  
Dr Joel Iedema, Registrar  
Dr Christine Staatz, Senior Lecturer  
Chun-hai Tai, Scientist  

Dermatology Research Centre  
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Associate Professor Stephen Gilmore, Dermatology  
Prof Helmut Schaider, Visiting Professor  
Dr Jose Neila Iglesias, Visiting Scholar  
Dr Cathy Xu, Senior Research Fellow  
Dr Shobhan Manoharan, Senior Lecturer  
Dr Jim Muir, Senior Lecturer
Dr Greg Siller, Senior Lecturer  
Dr Jason Wu, Senior Lecturer  
Dr Laura Baillie, Research Assistant  
Theodore Borgovan, Research Assistant  
Dr Zachary Boyce, Research Assistant  
Terri Campbell, Research Assistant  
Dr Claudia Curchin, Research Assistant  
Dr Nicola Douglas, Research Assistant  
Dr Daniel Gaffney, Research Assistant  
Dr Melissa Hickey, Research Assistant  
Christopher Torpy, Research Assistant  
Dr Elisabeth Wurm, Research Assistant

**Diabetes and Endocrinology**
- Associate Professor Anthony Russell, Director  
- Dr Trisha O’Moore-Sullivan  
- Professor John Prins  
- Professor David McIntyre  
- Jody Sawyer, Study Coordinator

**Diamantina Institute of Cancer, Immunology & metabolic Medicine**
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- Associate Professor Nigel McMillan, Deputy Director Academic, Group Leader Epithelial Cancer Division  
- Professor Melissa Brown, Deputy Director Research;  
- Professor Ranjeny Thomas, Research Leader Dendritic Cell Biology Group  
- Professor Tom Gonda, Research Leader Cancer Biology  
- Associate Professor Brian Gabriere, Research Leader Cell Cycle Group  
- Associate Professor Nick Saunders, Research Leader Epithelial Pathobiology Group  
- Professor Matthew Brown, Research Leader Musculoskeletal Genetics Group  
- Professor Mark Kendall, Research Leader Delivery of Drugs and Genes Group

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- Dr Benedict Panizza, Visiting Medical Officer  
- Dr Scott Coman, Visiting Medical Officer  
- Dr Bernard Whitfield, Senior Staff Specialist  
- Dr Ben Wallwork, Visiting Medical Officer  
- Dr Christian Betz, German Fellow Otolaryngology, Head and Neck Surgery - PAH  
- Dr Parag Patel, UK Fellow Skull Base  
- Dr Herman Basson, South African Fellow Otolaryngology, Head and Neck Surgery - Logan  
- Dr David Hall, Registrar PAH  
- Dr Kristy Fraser-Kirk, Registrar PAH/Logan  
- Dr David Hogan, Registrar Logan

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- Dr Phillip Kay, Director  
- Dr Ellen Burkett, Co-director of Research  
- Dr Michael Sinnott, Co-Director of Research  
- Cathy Davis, Acting Nurse Researcher (Southern Districts Emergency Department Clinical Network)  
- Eleanor Hammond, Acting Nurse Researcher (Southern Districts Emergency Department Clinical Network)  
- Dr Iain McNeil, Co-director of Research  
- Nicola Melton, Research Officer  
- Ramon Shaban, Visiting Senior Research Fellow

**Endocrine Hypertension Research Centre**
- Professor Michael Stowasser, Co-Director  
- Professor Richard Gordon, Co-Director  
- Dr Eduardo Pimenta, Clinical Research Fellow  
- Dr Ashraf Ahmed, PhD Student  
- Paul Taylor, PhD Student  
- Bartosz Kowalski, Research Assistant  
- Diane Cowley, Clinical Nurse Consultant  
- Dianne Robson, Hypertension Nurse  
- Cynthia Kogovsek, Hypertension Nurse  
- Danielle Aspinall, Honours Student  
- Lorraine Saunders, Administration Officer

**Gastroenterology & Hepatology**
- Dr Brad Kendall, Acting Director  
- Associate Professor Elizabeth Powell, NHMRC Practitioner Fellow, QLD Health Research Fellow, Hepatologist and Co Director Centre for Liver Disease Research  
- Professor Graeme Macdonald, Senior Staff Gastroenterologist  
- Dr Linda Fletcher, Senior Scientist  
- Fiona Giddons, Clinical Trials Coordinator  
- Sid Siddle, Clinical Trials Coordinator  
- Leigh Horfall, Clinical Research Coordinator  
- Geraldine Lipka, Clinical Research Coordinator

**Haematology**
- Associate Professor Devinder Gill, Director Clinical Haematology  
- Dr Robert Bird, Director, Haematology  
- Associate Professor Paula Marlot  
- Dr Anthony Mills  
- Dr Peter Mollee  
- Associate Professor Peter Wood  
- Dr Sally Mapp, Specialist  
- Associate Professor Maher Gandhi  
- Professor Andrew Perkins  
- Dr Helen Wordsworth  
- Dr Matt Hourigan  
- Dr Catherine Cheung, PD Research Scientist  
- Dr James Gray, Haematology Fellow  
- Dr Lyle McMillan, Translational Research Scientist  
- Melinda Burgess, Research Scientist  
- Lynn Chambers, Research Scientist

**Tissue bank**
- Jana Augsten, Sample Coordinator  
- Megan Ellis, TB Manager  
- Andrea Shaw, Sample Coordinator  
- Josie Thomas, Laboratory Technician

**Infection Management**
- Associate Professor Michael Whitby, Director
Intensive Care
- Professor Bala Venkatesh, Director of Research
- Associate Professor Chris Joyce, Director
- Associate Professor Peter Kruger, Deputy Director
- Professor Leanne Aitken, Chair of Critical Care Nursing
- Dr David Cooke, Senior Staff Specialist
- Dr David Fraenkel, Senior Staff Specialist
- Dr Anand Krishnan, Staff Specialist
- Dr Roslyn Purcell, Staff Specialist
- Dr Leo Nunnink, Staff Specialist
- Dr James Walsham, Staff Specialist
- Dr Gordon Laurie, Staff Specialist
- Dr Wayne Kelly, Visiting Specialist
- Nicola West, Nurse Unit Manager
- Jennifer Robertson, Nurse Unit Manager
- Kellie Beard, Nurse Unit Manager
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T1 – Translation to first in humans (refer to inside cover)
T2 – Translation to patients (refer page 17)
T3 – Translation to clinical practice (refer page 23)
T4 – Translation to population health (refer page 134)

References:
Westfall JM et al. Practice-Based Research—"Blue Highways" on the NIH Roadmap. JAMA, Jan 24/31, 2007—Vol 297, No. 4, 403-406
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