

Critical Care and Clinical Support Services



Critical Care and Clinical Support Services



Assoc. Prof. Marianne Vonau
Executive Director
Critical Care and Clinical
Support Services



Kerri McLeod
Nursing Director
Critical Care and Clinical
Support Services

Overview

Critical Care and Clinical Support Services undertakes critical care research, including clinical trials and laboratory research. We have a commitment to undergraduate and postgraduate teaching and research and have developed strong links with The University of Queensland (UQ) and Queensland University of Technology (QUT).

Critical Care and Clinical Support Services actively participates in nursing evidence-based practice activities and undertakes nursing research. The nursing staff of the service line are currently involved in a number of nursing research projects, including multidisciplinary research activities and consistently and critically analyse patients to ensure that effective and evidence-based practices are provided to all of our patients.

The Department of Intensive Care Medicine has been recognised as a Nursing Professorial Unit, Queensland University of Technology.

Key departments

- Department of Emergency Medicine
- Department of Intensive Care Medicine
- Staff Health Clinic and Private Practice Specialist Suite
- Professor Tess Cramond Multidisciplinary Pain Centre
- Centralised Specialist Outpatient Services
- Herston Multimedia Unit
- Hyperbaric Medicine Service

Executive and directing staff

- **Assoc. Prof. Marianne Vonau**
Executive Director, Critical Care and Clinical Support Services
- **Kerri McLeod**
Nursing Director, Critical Care and Clinical Support Services
- **Adj. Prof. Alan O'Connor**
Director, Emergency Medicine
- **Prof. Jeffrey Lipman**
Director, Intensive Care Medicine
- **Dr Patrick Mahoney**
Director, Staff Health Clinic and Private Practice Specialist Suite
- **Prof. Julia Fleming**
Director, Professor Tess Cramond Multidisciplinary Pain Centre
- **Dr Robert Webb**
Director, Hyperbaric Medicine Service

Department of Emergency Medicine

Overview

The Department of Emergency Medicine (DEM) at RBWH has a diverse research programme. Research strengths include acute coronary syndrome, sepsis, trauma and care of the elderly patient.

In 2011, the department continued to expand its research program through the creation of a half-time research registrar position and a nursing research portfolio group. The nursing research group are actively involved in more than 40 projects aimed at improving patient care.

Research staff include a half-time director of research, one full-time postdoctoral research officer, three PhD candidates, one honours student and an expanding group of dedicated research nurses.

The research team was successful in publishing in high quality journals and maintained its strong record of success in obtaining research funding. The department is well supported by The University of Queensland's Burns, Trauma and Critical Care Research Centre (BTCCR) and has active research collaborations with the School of Public Health at Queensland University of Technology (QUT), the Department of Cardiology, the Department of Intensive Care Medicine and Pathology Queensland.



Adj. Prof. Alan O'Connor
Director, Emergency Medicine

Research staff

Name	Qualifications	Position	Interests/specialities
Adj. Prof. Alan O'Connor	MBChB, FACEM	Director, Emergency Medicine	administration
Dr William Lukin	MBBS, FACEM	Deputy Director, Emergency Medicine	trauma, Hospital in the Nursing Home
Prof. Anthony Brown	MBChB, FRCP, FRCS (ED), FACEM, FCEM	Chair, Emergency Medicine	medical editing, medical education, acute coronary syndrome
Assoc. Prof. Kevin Chu	MBBS, MS, FACEM	Director, Emergency Medicine Research	diagnostic tests, research methodology
Assoc. Prof. Victoria Brazil	MBBS, MBA, FACEM	Staff Specialist	medical education
Dr Catherine Hurn	MBBS, FACEM	Senior Staff Specialist	trauma, massive transfusion, TEG
Dr Philip Richardson	MBChB, LLB, FACEM	Staff Specialist	end-of-life Issues, medical errors
Dr Louise Cullen	MBBS, FACEM	Staff Specialist	acute coronary syndrome
Dr Julian Williams	MBBS, FACEM	Staff Specialist	sepsis, ARISE trial Queensland State Coordinator
Dr Peter Logan	MbChB, FACEM	Staff Specialist	soft tissue infections
Assoc. Prof. Jaimi Greenslade	BPsych (Hon), PhD	Research Fellow	psychology, statistics
Tracey Hawkins	BN, GradDipNursing (Critical Care and Emerg)	Clinical Nurse (Research)	acute coronary syndrome
Nicole Larcombe	BN	Clinical Nurse (Research)	sepsis
Bronwyn Thomas	BN, BAppSci, BHlthSci, MPH	Clinical Nurse (Research)	sepsis
Kimberley Ryan	BN, GradDipNursing (Critical Care)	Clinical Nurse (Research)	acute coronary syndrome
Shanen O'Kane	BN, GradDipNursing	Clinical Nurse (Research)	acute coronary syndrome
Dr Shane Martin	BSc, MBBS	Research Registrar	research
Carol Readman	DipHeNursing Studies	Clinical Nurse Consultant	nursing research
Sally Jones	BN, GradCert (Oncology)	Assistant Nursing Director	nursing research

Supervised postgraduate students

Name	Current studies	Research topic
Cullen L	PhD	Acute coronary syndrome
Greenslade J	MS (Statistics)	Statistics
Lukin W	PhD	Hospital in the Nursing Home
Williams J	PhD	Sepsis
Jones S	Masters Nursing	Nursing administration

Research grants

Investigators	Project title	Granting body	Amount awarded	Years of funding
Chu K, Lind J, Walholikar A, Crilly J, O'Dwyer J, Philips N, Greenslade J, Keijzers, G	Checking radiology reports and reviewing patient records: an IT solution for preventing missed limb fractures	QEMRF	\$139,001	2011-2012
Cullen L, Brown AFT, Greenslade J, O'Rourke P, Chu K, Hou X-Y, Parsonage W, Graves N, Than M, Tate J	A decision analytic cost-effectiveness model for chest pain pathways	QEMRF	\$41,716	2011-2013
Rashford S, Bodnar D, Tippett V, Parker L	A prospective, blinded evaluation of the sensitivity and specificity of pre-hospital focussed abdominal sonogram for trauma (FAST) performed by paramedics and emergency physicians as part of an initial assessment, with comparison to CT or operative findings, in patients with blunt or penetrating trauma, treated by a road-based rapid emergency response team in the greater Brisbane area	QEMRF	\$32,075	2010-2011
Williams J, Paterson D, Nimmo G, Greenslade J, Doucet K, Chu K, Lipman J, Brown AFT	Prevalence and risk factors associated with CA-MRSA in a Queensland emergency department	QEMRF	\$94,100	2010-2012
Cullen L, Greenslade J, Brown AFT	Accelerated pathway in the assessment of suspected acute coronary syndrome in the emergency department	RBWH Foundation	\$20,000	2011
Cullen L, Brown AFT, Greenslade J, O'Rourke P, Chu K, Parsonage W, Graves N, Than M, Tate J	Rapid assessment of cardiac chest pain: The Australia and New Zealand Assessment of chest pain rule (ANZAP rule): A prospective validation study	QEMRF	\$581,223	2010-2013
Logan P, Hughes J, Greenslade J, Halton K, Roberts J, Chu K, Wood C	A randomised, unblinded trial of continuous infusion versus bolus dosing of flucloxacillin in the management of uncomplicated cellulitis in an Emergency Department short stay ward	QEMRF	\$41,647	2010-2011
Lukin W, Hou X-Y, FitzGerald G, Green D, O'Connor A, Graves N, Barnard A, Greenslade J, Chu K, Watt Kerrienne, Clarke M, Courtney M	A comprehensive evaluation of a Hospital in the Nursing Home (HINH) program in three Queensland hospitals	QEMRF	\$297,846	2009-2012
Richardson P, Greenslade J, Chu K, Doran E	Medication and fluid orders in the emergency department: Examining the incidence of error and adverse events	QEMRF	\$88,064	2009-2011

Research grants

Investigators	Project title	Granting body	Amount awarded	Years of funding
Williams J, Paterson D, Lipman J, Greenslade J, Brown AFT, Paratz J, Dulhunty J, Chu K	Examining sepsis in the emergency department: A prospective program of research designed to characterise and facilitate improved outcomes for admitted patients with community-acquired infection	QEMRF	\$90,000	2009-2011
Chu K, Spain D, Aitken P	A comparison of the implementation of interventions for controlling laboratory blood test ordering in four Queensland teaching hospital emergency departments	QEMRF	\$130,723	2009-2011
Richardson P, Chu K, Greenslade J	Validation of the CARING criteria: Predicting who should have an advanced health directive	QEMRF	\$47,000	2009-2011
Richardson P, Chu K, Greenslade J	End-of-Life Issues	QEMRF	\$50,000	2009-2011
Hurn C, Chu K, Muller M, Greenslade J, Hou X-Y, Cook S, Rowell J, Cambell D, Ward D, Lowe B, Holly A	Evaluation of a new massive transfusion protocol for exsanguinating trauma patients	Trauma Research Grant	\$97,305	2008-2011

Publications

- Aldous SJ, Richards M, Cullen L, Than MP. Early dynamic change in high-sensitivity cardiac troponin T in the investigation of acute myocardial infarction. *Clin Chem*. 2011;57(8):1154-1160.
- Brazil V, Greenslade J, Brown AFT. Enhancing capacity for intern training in the emergency department: The MoLIE Project. *MJA*. 2011; 194:165-168.
- Brown AFT. Should reading a journal article really change my practice? *EMA*. 2011;23:663-664.
- Cullen L. Troponin: A risk-defining biomarker for emergency department physicians. *EMA*. 2011;23:391-394.
- Gallagher FA, Tay KY, Vowler SL, Szutowicz H, Cross JJ, McAuley DJ, Antoun NM. Comparing the accuracy of initial head CT reporting by radiologists, radiology trainees, neuroradiographers and emergency doctors. *Brt J Radiol*. 2011;84:1040-1045.
- Hunter J, Hammett C, Cullen L, Greenslade J, Brown A, Chu K, Parsonage W. Indeterminate Troponin elevations have poor positive predictive value for acute coronary syndrome in an emergency department population. *Heart Lung Circ*. 2011;20S:S1-S155.
- Jelinek G A, Brown AFT. A stand against drug company advertising. *EMA*. 2011; 23; 4-6.
- Lamanna A, Scott A, Bilesky J, Greenslade J, Cullen L, Denaro C, Brown A, Parsonage W. Limited utility of exercise stress test in the evaluation of suspected acute coronary syndrome in patients aged less than 40 years with intermediate risk features. *Heart Lung Circ*. 2011;20S; S156-S251.
- Lukin B. In that case. *Bioethical Inquiry*, 2011;8:105-106.
- Mahmoud I, Hou X-Y, Chu K, Clark M. Is language a barrier for quality care in hospitals? A case series from an emergency department of a teaching hospital in Brisbane. *Australas Epi*. 2011;18:6-9.
- Mangleson FJ, Cullen L, Scott AC. The evolution of chest pain pathways. *Crit Path Card*. 2011;10(2):69-75.
- O'Connor AE, Winch S, Lukin W, Parker M. Emergency Medicine and futile care: Taking the road less travelled. *EMA*. 2011; 23; 640-643.
- Rothwell SP, Rosengren DJ, Rojek AM, Williams JM, Lukin WG, Greenslade J. Exercise-associated hyponatraemia on the Kokoda trail. *EMA*. 2011;23; 712-716.
- Than M, Cullen L, Reid C et al. A 2-h diagnostic protocol to assess patients with chest pain symptoms in the Asia-Pacific region (ASPECT): A prospective observational validation study. *Lancet*. 2011 Mar;377(9771):1077-1084.
- Williams J, Greenslade J, Chu K, Brown AFT, Paterson D, Lipman J. Prior statin use is not associated with improved outcome in emergency patients admitted with infection. *Acad Emerg Med*. 2011;18:127-134.
- Williams J, Greenslade JH, McKenzie J, Chu K, Brown AFT, Paterson D, Lipman J. A prospective registry of emergency department patients admitted with infection. *BMC Infect Dis*. 2011;11:27.

Department of Intensive Care Medicine



Prof. Jeffrey Lipman
Director, Intensive Care
Medicine

Overview

From an academic point of view for the Department of Intensive Care Medicine/Intensive Care Unit (ICU), 2011 has been one of our most successful years. Medical, nursing and allied health staff of the unit have published more than 50 articles in peer-reviewed journals. This alone is a massive achievement. Congratulations to all concerned.

We were recipients of an NHMRC grant to perform a multicentred, double blind, randomised, controlled study (investigating the value of continuous infusion beta-lactams). This grant plus the European Intensive Care Society Award we got last year for DALI (Defining Antibiotic Levels in ICU), has added a new dimension to our research office – namely that of performing multicentred trials run out of RBWH ICU. We didn't realise how dimensionally different this is to our normal single centre studies. Therese Starr has led this expansion admirably.

A number of ICU staff received significant RBWH Foundation grants with Associate Professor Rob Boots being successful with grant funding from the Australian and New Zealand Intensive Care Foundation. New names on our successful grant list are Jayesh Dhanani and Judith Bellpart. Well done.

A special mention needs to go to Matt McGahan, whose postgraduate course work and ensuing research paper was awarded the Best Nursing Review Paper at the ANZICS/ACCN Intensive Care Annual Scientific Meeting 2011.

Jason Roberts has again been acknowledged as a superb researcher. He was awarded the ASCEPT Young Investigators Award and also received a University of Queensland Foundation Research Excellence award.

An exciting development this year has been the appointment of Professor Michael Reade as the inaugural Australian Defence Force (ADF) Professor of Military Medicine and Surgery at The University of Queensland. Professor Reade, who will be doing his clinical work in ICU, did his PhD in Oxford, and brings a different experience and knowledge both in clinical work and research methodology to our unit. His research interests into sedation will add to our unit's other research. We welcome Michael.

Research staff

Name	Qualifications	Position	Interests/specialities
Prof. Jeffrey Lipman	MBBCh, DA (SA), FFA (SA), FFA (CritCare) (SA), FCICM, MD	Director, Intensive Care Medicine	management in intensive care, resuscitation of burns and pharmacokinetics of antibiotic dosage
Assoc. Prof. Rob Boots	MBBS (Hons), FRACP, FCICM PhD, GradDipClinEpi, MMedSci MHealthAdmin, IS	Deputy Director, Intensive Care Medicine	clinical epidemiology, management of burns and prevention of ventilator associated pneumonia
Prof. Michael Reade	MBBS, BSc, DPhil, MPH, PGCertAME, DIMCRCSEd, DMCC, FHEA, FCCP, FANZCA, FCICM	Professor of Military Medicine; Staff Intensivist	management of traumatic brain injury, coagulopathy, inflammation, early identification of sepsis, design of trauma systems
Dr Jason Roberts	BAppSc, BPharm (Hons I), PhD	Clinical pharmacist; NHMRC Research Fellow	pharmacokinetic models for various antibiotics in critically-ill patients with sepsis using microdialysis, therapeutic drug monitoring
Dr Joel Dulhunty	BSc (Hons), MTH, MBBS, PhD	Research Fellow	epidemiology of burn injury and severe sepsis, study design and methodology
Dr Jeremy Cohen	MBBS, BSc, MRCP, FRCA, FCICM	Staff Intensivist	adrenal function in critical illness
Dr John Gowardman	BSc, BHB, MBChB, FRACP, FCICM	Senior Staff Intensivist	intra-vascular device associated infections, Biofilm formation on vascular devices, head injury, weaning and extubation from mechanical ventilation

Research staff

Name	Qualifications	Position	Interests/specialities
Dr Andrew Udy	BHB, MBChB, PGCert (AME), FCICM	Staff Intensivist	impact of augmented renal clearance on the prescription of antibiotics, acute kidney injury, microcirculation, severe sepsis, septic shock and measurement techniques in ICU
Dr Judith Bellapart	MD, ESICM, FCICM	Staff Intensivist	cerebral blood flow haemodynamics in patients on intra-aortic counterpulsation balloon pumps, endothelin as a marker of severity in subarachnoid hemorrhage vasospasm
Dr Anthony Holley	BSc, MBChB, DipPaeds, DipDHM, FACEM, FCICM	Senior Staff Intensivist	identifying alterations in microcirculation during shock using side stream dark field imaging
Dr Alex Douglas	BMedSc, MBBS, FANZCA, FCICM	Staff Intensivist	current practice and education in anaesthesia and intensive care medicine, pharmacokinetics of antibiotics used in abdominal aortic aneurism surgery
Dr Steve O'Donoghue	MBChB, FANZCA, FCICM	Staff Intensivist	microcirculation in shocked critically ill patients during resuscitation and prevention of ventilator associated pneumonia
Dr Neil Widdicombe	MBBS, FRCA (UK), FCICM	Senior Senior Staff Intensivist	trauma, ethics in intensive care and air medial retrieval, documentation of death for transplants
Dr Jayesh Dhanani	MBBS, MD, FCICM	Staff Intensivist	antimicrobial therapy, lung infections, inhaled/aerosol therapy
Dr Rajeev Hegde	MBBS, MD, EDICM, FCICM	Senior Staff Intensivist	inhalation injury
Dr George Pang	MBBS, FANZCA, FCICM	Staff Intensivist	lipid rescue from anaesthetic overdose
Dr Jennifer Paratz	MPhty, FACP, PhD, GradCertEd (Medical and Health Sciences)	Physiotherapist, Research fellow	management and outcome of critically ill and burns patients, myocardial dysfunction, exercise and metabolism, diagnosis of sepsis in burns patients
Hiran Bandeshe	BSc, BEng	Database Manager	data mining, ICU database management
Therese Starr	GradCertCritCare, GradDipHealth Prom	Research Coordinator	certified clinical research coordinator involved in major clinical trials
Melissa Lassig-Smith	DipAppSc (Nursing), GradDip (Adv Nursing), GradDipCritCare, MNursing (CritCare)	Research Coordinator	involvement in all aspects of studies in intensive care from initial proposal to completion
Janine Stuart	BNurs	Research Coordinator	involved with all research currently being completed in ICU, writing proposals, obtaining ethics approvals, writing grants, data collection and publishing research articles
Renae Deans	BNurs, CertCritCare	Research Coordinator	projects from protocol writing to publication, subject recruitment, data collection, liaison with other study coordinators and study sponsors

Research staff

Name	Qualifications	Position	Interests/specialities
Paul Jarrett	Dip (HE) Nurs	Research Coordinator	involved in research studies taking place within ICU, from proposal to completion as well as communication and liaison with study sponsors and other coordinators
Rachael Dunlop	BNurs, GradCert (CritCare)	Research Coordinator	Involved in research studies taking place within ICU and QUT
Martha Druery	BA (Psych), BSocWk (Hons)	Social Worker	psychosocial outcomes following major burn injuries, bereavement outcomes for families following deaths in intensive care

Supervised postgraduate students

Name	Current studies	Research topic
Winzer B	PhD	Exercise to prevent oesophageal cancer
Stockton K	PhD	Fatigue in systemic lupus erythematosus
Al-Balushi R	PhD	Glutamine Supplementation in trauma patients
Kayambu G	PhD	Early rehabilitation in critical care
Bissett B	PhD	Inspiratory muscle training in ventilated patients
Walsh J	PhD	Predictors of success in pulmonary rehabilitation
Patel B	MPhil	Infection in burns patients
Williams J	PhD	Outcomes of septic patients presenting to the emergency department
Udy A	PhD	The impact of augmented renal clearance
Spermon M	MPhil	Prevention of donor site scarring in burns patients
Gray P	PhD	Management of pain in burns patients
Varghese J	PhD	Pharmacokinetics in continuous dialysis
Jarugula R	PhD	Analgesia in children with fractures
Adnan S	PhD	Antibiotic clearance in surgical drains
Wong G	MPhil	Multicentre evaluation of TDM in beta-lactam dosing
Hanrahan T	MPhil	Predisposing factors to vancomycin nephrotoxicity
Clark K	Hons	Potassium disturbances in patients receiving thiopentone treatment
Scheerlinck P	Hons	Maintenance of cerebral perfusion pressure in subarachnoid haemorrhage
Mitic G	Hons	Risk factors for recurrent atrial fibrillation in ICU

Achievements and awards

Award	Event	Recipient
Australia Day Certificate of Achievement for outstanding leadership to commitment to telehealth ICU series	Queensland Health Australia Day Awards	Lipman J
ANZICS Honour Roll for recognition of contribution to practice and development of Intensive Care Medicine	ANZICS	Lipman J
Denis Wade Johnson and Johnson Young Investigator Award	Australasian Society of Clinical and Experimental Pharmacologists and Toxicologists (ASCEPT)	Roberts J

Achievements and awards

Award	Event	Recipient
The University of Queensland Foundation Research Excellence Award		Roberts J
Research Citation Finalist for abstract 'Using population pharmacokinetics to develop personalised dosing regimens to achieve target concentrations by continuous infusion'	Society of Critical Care Medicine, San Diego, United States	Roberts J
Best Contributed Research Paper in Making Antibiotics Safe Section	Society of Hospital Pharmacists of Australia National Conference, Hobart	Roberts J
Merit Award for a medical presentation	Australia and New Zealand Burns Association, Brisbane	Roberts J
Nominee and Finalist for Clinical Pharmacist of the Year Award	Society of Hospital Pharmacists of Australia,	Roberts J
Research Citation Finalist	Society of Critical Care Medicine, San Diego, United States	Roberts J
Highly Commended Award for 'Exercise programmes are effective and safe in a burns population: a controlled trial'	ANZBA Meeting, Brisbane	Paratz J
Winner of Best Clinical Science Poster	RBWH Healthcare Symposium	Varghese J

Research grants

Investigators	Project title	Granting body	Amount awarded	Years of funding
Rickard C, Wallis C, Young, Gowardman J, Whitby M, Fraser J, McMillan, Zhang D	Intravascular device administration sets: Replacement after standard versus prolonged use (RSVP Trial)	NHMRC Project Grant	\$1,555,305.30	2010-2012
Shekar S, Roberts JA, Smith M, Wallis SC, Thompson B, Pellegrino V, Buscher H, Welch S, Levkovich B	Pharmacokinetics of commonly used sedatives, analgesics, their metabolites and broad spectrum antibiotics during extracorporeal membrane oxygenation	The Prince Charles Hospital Foundation	\$9,997.84	2011-2012
Cooper M, Roberts J, Butler M	Non-haemolytic fridulimicins for the treatment of multi-drug resistant bacteria	NHMRC APP1026921	\$533,675	2011-2013
Seppelt I, Marshall A, Myburgh J, Lipman J, Francis J, Cuthbertson B, Glass P	An exploratory study of perceived risks, benefits and barriers to the use of selective decontamination of the digestive tract in Australasian ICUs (SuDDICU)	ANZCA/12/032	\$42,000	2011-2012
Roberts J	Improving antibiotic dosing in critically ill patients with renal failure	UQ Foundation Research Excellence Award	\$80,000	2011-2012
Boots R, Paratz J, Lipman J, Paterson D, Roberts J	Prevention of ventilator associated pneumonia by inhaled heparin	Intensive Care Foundation	\$35,000	2011-2012
Bellapart J, Boots R, Fraser J, Maybauer M	Investigation of the cerebral microcirculation after head injury: Pilot study	Brain Foundation	\$19,000	2011-2012
Coyer F, Stotts N	Device related pressure ulcers in critical care	Atlantic Philanthropies Grant	\$30,000	2011-2012
Churchill A, Coyer F	Revamp	RBWH Foundation	\$20,000	2011-2012
Muller M, Paratz J, Roberts J, Younger J, Dhanani J, Towsey K	Can adrenergic blockade improve outcome in burns?	RBWH Foundation	\$35,000	2011

Research grants

Investigators	Project title	Granting body	Amount awarded	Years of funding
Wullschleger M, Pollard C, Paratz J, Dulhunty J, Hosien S, Bandeshe H, Rashford S, Elcock M	The tyranny of distance, transfer, intervention and advice: A prospective study of patient management from the time of trauma to admission to a tertiary hospital intensive care unit	RBWH Foundation	\$35,000	2011
McGuire M, Hurn C, Pang G, Edwards M, Pollard C, Paratz J	Serial thrombelastography in the evaluation of a massive transfusion protocol	RBWH Foundation	\$35,000	2011
Venkatesh B, Finfer S, Myburgh J, Webb S, Cohen J	A randomised controlled trial of the effect of hydrocortisone on mortality in critically ill patients with septic shock	NHMRC Project Grant	\$3.8 million	2011-2016
Avent M, Roberts JA, Lipman J, Forrest A, Kirkpatrick CMJ, Ungerer J, McFarlane M, Patterson DL	Pilot study of pharmacokinetic and pharmacodynamic assessment of monotherapy versus combination therapy for the management of gram negative bacteraemia	RBWH Foundation	\$35,000	2011
Lipman J, Webb SAR, Roberts JA, Dulhunty J, Davis J, Gomersall C	A phase IIb randomised controlled trial of continuous beta-lactam infusion compared with intermittent beta-lactam dosing in critically ill patients with severe sepsis	NHMRC Project Grant	\$915,978	2011-2013
Mullany D, Shekar K, Roberts JA, Smith M, Fraser J, McDonald C, Wallis SC, Kramer H	Disposition of sedative, analgesic and antibiotic drugs during extracorporeal membrane oxygenation	ANZCA Australian and New Zealand Intensive Care Foundation	\$38,500 \$12,000	2011-2012 2011-2012
Dhanani JA, Fraser J, Chew M, Roberts JA, Paterson DL	Study of the pharmacokinetics on inhaled antibiotics in lung tissue using the microdialysis technique	The Prince Charles Hospital Foundation	\$60,234.79	2011-2012
Reade MC, Celenza T, Lipman J, Inglis T	A pilot observational study of the utility of point-of-care quantification of circulating human DNA as a predictor of mortality in severe sepsis	UQ/UWA Bilateral Research Collaboration Award	\$12,000	2011-2012

Publications

Lewis P, Bartlett H, Townsend S, Courtney M, Mullany D, Coyer F. A prospective pilot study evaluation the 'cardiac decompensation score' in the setting of intra-aortic balloon counterpulsation. *Intensive and Critical Care Nursing* 2011;27(1):31-36.

Coyer F, O'Sullivan J, Cadman N. The provision of patient personal hygiene in the intensive care unit: A descriptive exploratory study of bed-bathing practice. *Australian Critical Care* 2011;24(3):198-209.

Varghese JM, Roberts JA, Lipman J. Antimicrobial pharmacokinetic and pharmacodynamic issues in the critically ill with severe sepsis and septic shock. *Crit Care Clin.* 2011;27:19-34.

Roberts JA, Kirkpatrick CMJ, Lipman J. Monte Carlo simulations: Maximising antibiotic pharmacokinetic data to optimise clinical practice for critically ill patients. *J Antimicrob Chemother.* 2011;66:227-231.

Roberts JA, Kwa A, Montakantikul P, Gomersall C, Kuti JL, Nicolau DN. Pharmacodynamic profiling of intravenous antibiotics against prevalent Gram-negative organisms across the globe: the PASSPORT Program – Asia-Pacific Region. *Int J Antimicrob Agents.* 2011;37(3):225-229.

Ulldemolins M, Roberts JA, Lipman J, Rello J. Antibiotic dosing in multiple organ dysfunction syndrome. *Chest* 2011;139:1210-1220.

Ulldemolins M, Roberts JA, Rello J, Paterson DL, Lipman J. The effects of hypoalbuminaemia on optimising antibiotic dosing in critically ill patients. *Clin Pharmacokinet* 2011;50(2):1-12.

Publications

- McGloughlin S, Roberts JA, O'Donoghue S, Martin J, Briscoe S, Lipman J. Ganciclovir pharmacokinetics and suggested dosing in continuous veno-venous haemodiafiltration. *Int J Antimicrob Agents* 2011;37(1):90-92.
- Williams J, Greenslade J, Chu K, Brown AFT, Paterson D, Lipman J. Prior statin use is not associated with improved outcome in emergency patients admitted with infection: A prospective observational study. *Acad Emerg Med*. 2011;18:127-134.
- Paratz J, Kayambu G. Early exercise and attenuation of myopathy in the patient with sepsis in ICU. *Physical Therapy Reviews* 2011; 16(1):58-65(Invited).
- Bellapart J, Chan GS, Tzeng YC, Ainsley P, Barnett AG, Dunster KR, Boots R, Fraser JF. The effect of ventricular assist devices on cerebral autoregulation: a preliminary study. *BMC Anesthesiol*. 2011;Feb22:11(1):4.
- Baba H, Nimmo GR, Allworth AM, Boots RJ, Hayashi Y, Lipman J, Paterson DL. The role of surveillance cultures in the prediction of susceptibility patterns of Gram-negative bacilli in the intensive care unit. *Eur J Clin Microbiol Infect Dis*. 2011;30:739-744.
- Stockton KA, Wrigley TV, Mengersen KA, Kandiah DA, Paratz JD, Bennell KL. Test-retest reliability of handheld dynamometry and functional tests in systemic lupus erythematosus. *Lupus* 2011;Feb20(2):144-50.
- Stockton KA, Mengersen K, Paratz JD, Kandiah D, Bennell KL. Effect of vitamin D supplementation on muscle strength: a systematic review and metaanalysis. *Osteoporos Int* 2011;Mar 22(3):859-71.
- Hosein S, Udy AA, Lipman J. Physiological changes in the critically ill patient with sepsis. *Curr Pharm Biotechnol*. 2011;10(12):1991-1995.
- Udy AA, Boots RJ, Putt MT, Lipman J. ARC - Augmented Renal Clearance. *Curr Pharm Biotechnol* 2011;May (12):2020-2029.
- Dulhunty JM, Paterson D, Webb SA, Lipman J. Antimicrobial utilisation in 37 Australian and New Zealand intensive care units. *Anaesth Intensive Care* 2011 Mar;39(2):231-7.
- Roberts JA, Taccone FS, Udy AA, Vincent JL, Jacobs F, Lipman J. Vancomycin dosing in critically ill patients: robust methods for improved continuous-infusion regimens. *Antimicrob Agents Chemother* 2011; Jun55(6):2704-9.
- Douglas A, Altukroni M, Udy AA, Roberts MS, Taraporewalla K, Jenkins J, Lipman J, Roberts JA. The pharmacokinetics of cefazolin in patients undergoing elective & semi-elective abdominal aortic aneurysm open repair surgery. *BMC Anesthesiol*. 2011;11:5.
- Roberts JA, Mehta RL, Lipman J. Sustained low efficiency dialysis allows rational renal replacement therapy, but does it allow rational drug dosing? *Crit Care Med* 2011;Mar39(3):602-3.
- Myburgh J, Bellomo R, Cass A, Finfer S, French J, Gattas D, Glass P, Lee J, Lipman J, Liu B, McArthur C, McGuinness S, Rajbhandari D, Taylor C, Webb A. The Crystalloid versus Hydroxyethyl Starch Trial (CHEST): Protocol for a randomised controlled trial of fluid resuscitation in intensive care patients. *Intensive Care Med*. 2011;37(5):816-23.
- Dulhunty JM, Boots RJ, Paratz JD, Lipman J. Determining authorship in multicentre trials: a systematic review. *Acta Anaesthesiol Scand*. 2011;55:1037-1043.
- Bellapart J, Chan GSH, Tzeng Y-C, Ainslie PN, Dunster KR, Barnett AG, Boots RJ, Fraser JF. The effect of ventricular assist devices on cerebral blood flow and blood pressure fractality. *Physiol Meas* 2011;32:1361-1372.
- Roberts JA, Metha R, Lipman J. SLED - allows rational renal replacement therapy, but does it allow rational drug dosing? *Crit Care Med* 2011;39(3):602-603.
- Roberts JA, Roberts MS, Semark A, Udy AA, Kirkpatrick CMJ, Paterson DL, Roberts MJ, Kruger P, Lipman J. Antibiotic dosing in the at risk critically ill patient: Linking pathophysiology with pharmacokinetics/pharmacodynamics in sepsis and trauma patients. *BMC Anesthesiology*. 2011; 11: 3.
- Ulldemolins M, Roberts JA, Lipman J, Rello J. Antibiotic dosing in multiple organ dysfunction syndrome. *Chest* 2011;139:1210-1220.
- Higgins AM, Pettila V, Harris AH, Bailey M, Lipman J, Seppelt IM, Webb SAR on behalf of the ANZIC influenza investigators. The critical care costs of the Influenza A/H1N1 2009 epidemic in Australia and New Zealand. *Anaesth Intens Care*. 2011;39:384-391.
- Boots R, Singh S, Tereblanche M, Widdicombe N, Lipman J. Remote Care for an ICU – Many models of care can be effective. *Curr Opin Crit Care* 2011;17(6):634-640.
- Hanberger H, Walther S, Leone M, Barie PS, Rello J, Lipman J, Marshall JC, Anzueto A, Sakr Y, Pickkers P, Felleiter P, Engoren M, Vincent JL, EPIC II Group of Investigators. Increased mortality associated with methicillin-resistant staphylococcus aureus (MRSA) infection in the Intensive Care Unit: Results from the EPIC II study. *Int J Antimicrob Agents* 2011;38:331-335.
- Udy A, Roberts J, Lipman J. Implications of augmented renal clearance in critically ill patients. *Nat Rev Nephrol*. 2011;7:539-543.
- Zhang L, Gowardman J, Rickard C. The impact of microbial attachment on intravascular catheter-related infections. *Int J Antimicrob Agents*. 2011;38(1):9-15.
- Rolley L, Bandeshe H, Boots RJ. 'Safe' methaemoglobin concentrations are a mortality risk factor inpatients receiving inhaled nitric oxide. *Anaesth Intens Care*. 2011;39:919-925.

Publications

- Venkatesh B, Cohen J. Adrenocortical (dys)function in septic shock – A sick eudrenal state. *Best Pract Res Clin Endocrin Metab.* 2011; 25(5):719-733.
- Martin JH, Fay MF, Udy A, Roberts JA, Kirkpatrick CMJ, Ungerer J, Lipman J. Pitfalls of using estimations of glomerular filtration rate in an intensive care population. *Intern Med J.* 2011;41(7):537-543.
- Roberts JA, Taccone FS, Udy AA, Vincent JL, Jacobs F, Lipman J. Vancomycin dosing in critically ill patients: Robust methods for improved continuous infusion regimens. *Antimicrob Agents Chemother.* 2011;55(6):2704-2709.
- Holley AD, Osland E, Barnes J, Krishnan A, Fraser JF. Scurvy: Historically a plague of the sailor that remains a consideration in the modern intensive care unit. *Int Med J.* 2011;Mar 41;(3):283-285.
- Walsh J, Paratz J, McKeough ZJ, Morris NR. Investigation of criteria used in participant selection of pulmonary rehabilitation programs in Australia. *Respirology.* 2011;16(S1):34.
- Agarwal S, O'Donoghue S, Gowardman J, Kennedy G, Bandeshe H, Boots R. Intensive Care Unit experience of hematopoietic stem cell transplant patients. *Intern Med J.* 2011; Jun1.doi: 10.1111/j.1445-5994.2011.02533.x.
- Baldwin C, Paratz J, Bersten A. Diaphragm and peripheral muscle thickness on ultrasound: Intra-rater reliability and variability of a methodology using non-standard recumbent positions. *Respirology.* 2011;16:1136-43.
- Caruana L, Paratz J, Chang A, Fraser JF. Electrical impedance tomography in the clinical assessment of lung volumes following recruitment manoeuvres. *Phys Ther Rev.* 2011;16: 66-73.
- Winzer BM, Whiteman DC, Marina M, Reeves MM, Paratz JD. A systematic review of exercise controlled trials measuring biomarkers of cancer risk and prognosis. *Cancer Causes Control.* 2011; 22: 811-26.
- Stockton KA, Kandiah DA, Paratz JD, Bennell KL. Fatigue, muscle strength and vitamin D status in women with systemic lupus erythematosus compared to health controls. *Lupus.* 2011; online.
- Hanekom S, Berney S, Morrow B, Ntoumenopoulos G, Paratz J, Patman S, Louw Q. The validation of a clinical algorithm for the prevention and management of pulmonary dysfunction in intubated adults - a synthesis of evidence and expert opinion. *J Eval Clin Pract.* 2011;17:801-10.
- Zhou Y, Windsor C, Theobald K, Coyer F. The concept of difference and the experience of China-educated nurses working in Australia: A symbolic interactionist exploration. *Int J Nurs Stud.* 2011;48(11):1420-8.
- Ranse K, Yates P, Coyer F. End-of-life care in the intensive care setting: A descriptive exploratory qualitative study of nurses' beliefs and practices. *Australian Critical Care.* 2011; Accepted online: doi:10.1016/j.aucc.2011.04.004.
- Al Balushi RM, Paratz JD, Cohen J, Banks M, Dulhunty J, Roberts J, Lipman J. Effect of intravenous glutamine supplementation in trauma patients receiving enteral nutrition: A prospective, double-blind, randomised, placebo-controlled clinical trial. *BMJ Open.* 2011;1:e000334.
- Cohen J, Lassig-Smith M, Deans RV, Pretorius CJ, Ungerer JPI, Tan T, Jones M, Venkatesh B. Serial changes in plasma total cortisol, plasma free cortisol and tissue cortisol activity in patients with septic shock: An observational study. *Shock* 2011;37(1):28-33.
- Gutierrez-Bernays D, Guy L, Kattikiredi VS, Butler J, Gowardman J. A 17-year-old woman with severe respiratory failure and circulatory shock. *Med J Aust.* 2011;195:414-5.
- Lipman J, Udy AA, Roberts JA. Do we understand the impact of altered physiology, consequent interventions, and resultant clinical scenarios in ICU? The antibiotic story. *Anaesth Intens Care.* 2011;999-1000.
- Patel K, Roberts JA, Tett S, Deldot M, Lipman J, Kirkpatrick CMJ. Population pharmacokinetics of fluconazole in clinically ill patients receiving continuous venovenous hemodiafiltration - using Monte Carlo Simulations to predict doses for specified pharmacodynamic targets. *Antimicrob Agents Chemother* 2011;55(12):5868-5873.
- Sinnollareddy M, Peake SL, Roberts MS, Playford EG, Lipman J, Roberts JA. Pharmacokinetic evaluation of fluconazole in critically ill patients. *Expert Opin Drug Metab Toxicol.* 2011;7(11):1431-40.
- Douglas A, Udy AA, Wallis SC, Jarrett P, Stuart J, Lassig-Smith M, Deans R, Roberts MS, Taraporewalla K, Jenkins J, Medley G, Lipman J, Roberts JA. Plasma and tissue pharmacokinetics of cefazolin in patients undergoing elective and semi-elective abdominal aortic aneurysm open repair surgery. *Antimicrob Agents Chemother.* 2011;55(11):5238-42.
- Baptista JP, Udy AA, Sousa E, Pimentel J, Wang L, Roberts JA, Lipman J. A comparison of estimates of glomerular filtration in critically ill patients with augmented renal clearance (ARC). *Crit Care.* 2011;15(3):R139.
- Boots R, Lipman J, Lassig-Smith M et al. Experience with high frequency oscillation ventilation during the 2009 H1N1 influenza pandemic in Australia and New Zealand. *Anaesth Intens Care.*

Professor Tess Cramond Multidisciplinary Pain Centre

Overview

The Professor Tess Cramond Multidisciplinary Pain Centre is a tertiary centre at RBWH offering assessment and care to patients with persistent pain, malignant pain and burns pain. Research is focussed around the assessment and optimal management of pain, factors contributing to persistent pain and the consequences of persistent pain.

In 2011, the Centre became part of the Statewide Persistent Pain Health Services Strategy with funding to establish four new multidisciplinary pain centres in Queensland, to form a collaborative network of five pain services in the state, with public health research related to pain and outcomes of treatment being one goal of the strategy.

The collaborative research program within the Professor Tess Cramond Multidisciplinary Pain Centre continues to examine pharmacological strategies for pain control, the role of the physical therapies in rehabilitation, attitudes towards patients with chronic pain, and assessment tools to identify the outcomes of pain management strategies and programs.

In addition to the ongoing PhD studies, Honours students in the Allied Health sciences undertake supervised projects in the pain centre and undergraduates undertake quality assurance projects related to quality use of medicines in the centre.

The future holds potential for further expansion of clinical research collaborations across the state into public health issues in persistent pain, opioid tolerance and dependency, clinical outcomes, burns pain, neuropathic pain, pain imaging and spinal pain.



Prof. Julia Fleming
Director, Professor Tess Cramond Multidisciplinary Pain Centre

Research staff

Name	Qualifications	Position	Interests/specialities
Prof. Julia Fleming	MBBS, PhD, FANZCA FFPMANZCA, DipMed (PainMngmt)	Director, Professor Tess Cramond Multidisciplinary Pain Centre	neurobiology of spinal sensory inhibition, neuropathic and metastatic bone pain, public health issues relating to persistent pain, including outcome measures and models of care, analgesic pharmacology
Dr Paul Gray	MBBS, FANZCA FFPMANZCA	Senior Staff Specialist (Pain Medicine and Anaesthesia)	specialisation in anaesthesia and pain medicine, pain of burn injury, vascular anaesthesia, management of persistent cancer and non-cancer pain including interventional pain medicine
Nicole Andrews	BOccThy (Hons I)	Occupational Therapist, Cramond Fellow	chronic pain management, CRPS, activity patterns in chronic pain
Karl Bagraith	BOccThy (Hons I)	Senior Occupational Therapist	outcome measurement in persistent pain and the clinical application of the International Classification of Functioning, Disability and Health
Michael Deen	BOccThy (Hons), MPhil	Occupational Therapist, Clinical Coordinator	pain assessment, life participation
Dr Sara Olsen	BPsycholSc (Hons), PhD	Psychologist	sleep and pain
Dr Bryce Clubb	MBBS, FRACR, FFPMANZCA, FACHAM, RACP	Staff Specialist (Pain and Addiction Medicine)	optimising care for pain with drug dependency

Supervised postgraduate students

Name	Current studies	Research topic
Gray P	PhD	The pain of burn injury with a focus on the neuropathic element
D'Arrigo R	Occupational Therapy Honours Student	Predictors of sleep quality in persons with chronic pain: A momentary within-persons perspective
Donohue G	Occupational Therapy Honours Student	Adult attachment and approach to activity in chronic pain

Research grants

Investigators	Project title	Granting body	Amount awarded	Years of funding
Deen M, Fleming J	Can we improve access and patient outcomes with a more integrated and efficient allied health service in persistent pain? Development and evaluation of a new model of care	Allied Health Workforce Advice and Coordination Unit, Queensland Health	\$130,000	2011-2012
Silcock R, Barr J, Welsh A, Francis-King D	Exploring the experiences of those living with chronic pain compared to those caring for those with chronic pain in an inpatient pain management program in the acute hospital setting	RBWH Foundation	\$30,000	2011
Andrews N, Meredith P, Strong J	Approach to activity and determinants of daily function in patients with chronic pain: a momentary within-persons perspective	RBWH Foundation	\$20,000	2011
Andrews N, Meredith P, Strong J	Approach to activity and determinants of daily function in patients with chronic pain: A momentary within-persons perspective	Occupational Therapist Board of Queensland	\$15,000	2011-2012
Fleming J, Williams B, Silcock R, Walker P, Kubler P	Intra-brachial arterial guanethidine injection as prevention against painful ischaemia of the hands in winter, in patients with Raynaud's phenomenon or other vasospastic conditions	ANZCA Pilot Grant	\$5,000	2011

Publications

Gray P, Kirby J, Smith MT, Cabot PJ, Williams B, Doecke J, Cramond T. Pregabalin in severe burn injury pain: A double-blind, randomised placebo-controlled trial. *Pain*. 2011;152:1279-88.

Andrews, N, Meredith, P, Strong, J. Adult attachment and reports of pain in experimentally-induced pain. *European Journal of Pain*. 2011;15:523-530.

Chardon L, Bagraith KS, King RJ. Counselling activity in single-session online counselling with adolescents: An adherence study. *Psychother Res*. 2011 Sep;21(5):583-92.