

St. Vincent's Department of Anaesthesia houses the Centre for Anaesthesia and Cognitive Function and the Regional Anaesthesia Research Group, both at the global forefront of anaesthesia research.

About us

The Department of Anaesthesia conducts a diverse range of investigator-driven projects, encouraged and supported by the Director, Assoc Prof Michael Davies.

The cognitive research team currently comprises a team of four full-time scientists plus two Advanced Medical Science (AMS) students from the University of Melbourne. Another scientist is engaged full time with the regional research team and in addition we have a full-time departmental research nurse.

The Centre for Anaesthesia and Cognitive Function, led by Assoc Prof Brendan Silbert and Assoc Prof David Scott holds four major NHMRC project grants, an ANZCA project, academic enhancement grants and NHF grants, together with a number of smaller investigator grants.

The Centre is internationally renowned for its work and maintains a strong profile at the forefront of Cognition and Anaesthesia research with follow-up investigations reaching five years.

The Regional Anaesthesia Research Group has a primary focus on ultrasound and its use with regional anaesthesia and safety auditing of regional techniques. Led by Dr Michael Barrington, they hold an enviable reputation worldwide for their work in this area.

Projects in progress or completed

There are currently more than 25 clinical research projects being undertaken in the Department of Anaesthesia. This high output is indicative of the enthusiasm of the staff and the powerful research culture of the department.

The studies are being undertaken by members of the department ranging from more senior members to junior registrars, with the support of professional research staff. The scope of the projects is reflective of the main interests within the department. The echocardiography group is currently undertaking four large projects investigating cardiac performance. The ultrasound-guided regional anaesthesia group has embarked on a diverse research program incorporating more than 10 individual studies using sonography to improve the delivery of regional anaesthesia. The Centre for Anaesthesia and Cognitive Function has registered six clinical

studies. Importantly, some younger members of the department have instigated individual investigations on specific areas of clinical interest. These range from simple clinical audits to the investigation of complex issues such as continuous noninvasive cardiac output monitoring. In addition, St. Vincent's Department of Anaesthesia is participating in two multi-national prospective clinical trials.

Research applications in the clinical setting

Regional anaesthesia has undergone a revolution as anaesthetists can now reliably block peripheral nerves which can be visualised with ultrasonography.

Research outcomes in relation to patient care

Reliable peripheral nerve blockade means avoidance of general anaesthesia in many cases and improved postoperative pain relief.

The team

Assoc Prof Michael Davies, Director; Dr Kara Allen, Anaesthetic Registrar; Dr Michael Barrington, Senior Staff Anaesthetist; Dr John Cormack, Visiting Senior Staff Anaesthetist; Dr Tim Costello, Visiting Senior Staff Anaesthetist; Dr Brian Cowie, Staff Anaesthetist; Dr Roberta Deam, Visiting Anaesthetist; Lisbeth Evered, Research – Scientist/Clinical; Sam Gledhill, Research Assistant; Dr J Golshevsky, Anaesthetic Registrar; Dr Gaylene Heard, Visiting Anaesthetist;

Dr Simon Jones, Visiting Anaesthetist; Dr Mario Kalpokas, Visiting Anaesthetist; Dr Roman Kluger, Senior Staff Anaesthetist; Dr Sally Lacey, Anaesthetic Registrar; Dr Brad LaFerlita, Visiting Anaesthetist; Dr Bridget Langley, Staff Anaesthetist; Dr Mon Lee, Anaesthetic Registrar; Dr Tim Lee, Anaesthetic Registrar; Dr Lisa Lin, Anaesthetic Registrar; Dr Matthew Matusik, Staff Anaesthetist; Wendy McDonald, Acute Pain Nurse; Dr Des McGlade, Senior Staff Anaesthetist; Dr Tim McIvor, Anaesthetic Registrar; Dr Rowan Molnar, Senior Staff Anaesthetist; Dr David Olive, Visiting Anaesthetist; Simone Said, Research Nurse; Dr Christopher Scarff, Visiting Anaesthetist; Assoc Prof David A Scott, Deputy Director; Assoc Prof Brendan Silbert, Senior Staff Anaesthetist; Dr Gabe Snyder, Anaesthetic Registrar; Dr Michael Solly, Visiting Anaesthetist; Dr Jaclyn Soo, Anaesthetic Registrar; Dr Andrew Stewart, Senior Staff Anaesthetist; Dr Rowan Thomas, Senior Staff Anaesthetist; Tuyen Tran, Advanced Medical Science (AMS) Student; Dr Daniel Wong, Staff Anaesthetist

Grants

Barrington M

Regional Anaesthesia Database Project. Astra-Zeneca, (2008-2009), \$20,000

Kluger R, Kalpokas M

Comparison of 2D with real-time 3D transoesophageal echo for assessment of ventricular volumes

and mitral valve dimensions. Australia and New Zealand College of Anaesthetists, (2008-2009), \$21,000

Lee T, Barrington M, Gledhill S

Prospective trial of selective ultrasound-guided obturator nerve blockade for lower limb surgery, Pfizer Neurosciences Research Grant, (2008-2009), \$19,000

Scott D, Silbert B

Cardiac Interventions, Surgery and Cognitive Outcomes (CISCO) Study. Commonwealth Government – NHMRC, (2007-2009), \$323,375

Dementia In Response to Endovascular & Cardiac Surgical Therapies (DIRECT). Commonwealth Government – NHMRC, (2007-2009), \$390,000

Scott D, Silbert B, Evered L

Coronary Angiography, Transcranial Doppler and Cognitive Health (CATCH) Study. National Research Foundations – National Heart Foundation, (2007-2008), \$53,070

Silbert B, Scott D, Evered L

ANZCA Academic Enhancement Grant (transcranial doppler in surgery and cognitive outcome five years post cardiac surgery). Australia and New Zealand College of Anaesthetists, (2008) \$90,000

Anaesthesia, Cognition, Evaluation (ACE) Study. Commonwealth Government – NHMRC, (2007-2008), \$418,675

Selected international presentations

Barrington M

– Speaker, ‘Safety of regional anaesthesia in the ultrasound ERA’, Australian Society of Anaesthetists/New Zealand Society of Anaesthetists Combined Scientific Congress, Wellington, New Zealand, October 2008

Langley B

– Speaker, ‘Anaesthetic complications 1992-2006 at St. Vincent’s Hospital Melbourne’, Australian Society of Anaesthetists/New Zealand Society of Anaesthetists Combined Scientific Congress, Wellington, New Zealand, October 2008

Lee T

– Speaker, ‘Evaluation of posterior and subcostal ultrasound guided TAP block’, Australian Society of Anaesthetists/New Zealand Society of Anaesthetists Combined Scientific Congress, Wellington, New Zealand, October 2008

Molnar R

– Invited speaker, ‘Anaesthesia for hemiplectomy’, Annual Scientific Congress of the Royal Australian College of Surgeons and the College of Surgeons of Hong Kong, Hong Kong, April 2008

– Speaker, ‘Passive observation on high fidelity simulation does not improve performance of medical students in a cardiac arrest scenario’, 8th International Meeting on Simulation in Healthcare, San Diego, USA, March 2008

Scarff C

- Invited speaker, 'Regional anaesthesia for breast surgery', Annual Scientific Congress of the Royal Australian College of Surgeons and the College of Surgeons of Hong Kong, Hong Kong, April 2008

Scott D

- Invited speaker, 'Antifibrinolytics and procoagulants in cardiac surgery – separating myths from reality' and 'TOE and outcome in cardiac surgery – is it now the standard of care?', Annual Scientific Congress of the Royal Australian College of Surgeons and the College of Surgeons of Hong Kong, Hong Kong, April 2008

Silbert B

- Speaker, 'Prospective assessment of cognitive function during elective diagnostic coronary angiography', Israeli Society of Anaesthetists, Tel Aviv, Israel, September 2008

Wong D

- Speaker, 'Sonographic location of the radial nerve by confirmed nerve stimulation during brachial plexus blockade', European Society of Regional Anaesthesia Conference, Genoa, Italy, September 2008
- Speaker, 'Ultrasound-guided axillary supraclavicular, femoral and sciatic nerve blocks', Teikyo University Hospital, Japan, December 2008

Collaborations

National

- Alfred Hospital
- Monash Medical Centre
- Monash University
- Royal Melbourne Hospital

Publications

Barrington MJ, Scott DA 2008, 'Do we need to justify epidural analgesia beyond pain relief?' *Lancet*, 372, 9638, 514-6

Barrington MJ, Lai SL, Briggs CA, Ivanusic JJ, Gledhill SR 2008, 'Ultrasound-guided mid thigh sciatic nerve block – a clinical and anatomical study', *Reg Anesth Pain Med*, 33, 4, 369-76

Barrington MJ, Olive DJ, McCutcheon CA, Scarff C, Said S, Kluger R, Gillett N, Choong P 2008, 'Stimulating catheters for continuous femoral nerve blockade after total knee arthroplasty: a randomised, controlled, double-blinded trial', *Anesth Analg*, 106, 4, 1316-21,

Chia AC, Irwin MG, Lee PW, Lee TH, Man SE 2008, 'Comparison of stress in anaesthetic trainees between Hong Kong and Victoria, Australia', *Anaesth Intensive Care*, 36, 6, 855-62

Myles PS, Smith J, Knight J, Cooper DJ, Silbert B, McNeil J, Esmore DS, Buxton B, Krum H, Forbes A, Tonkin A 2008, 'Aspirin and tranexamic acid for coronary artery surgery (ATACAS) trial: rationale and design', *Am Heart J*, 155, 2, 224-30

Phan TD, Ismail H, Heriot AG, Ho KM 2008, 'Improving perioperative outcomes: fluid optimisation with the esophageal Doppler monitor, a meta-analysis and review', *J Am Coll Surg*, 207, 6, 935-41

Rozen WM, Tran TM, Ashton MW, Barrington MJ, Ivanusic JJ, Taylor GI 2008, 'Refining the course of the thoracolumbar nerves: a new understanding of the innervation of the anterior abdominal wall', *Clin Anat*, 21, 4, 325-33

Scott D, McDonald W 2008 'Assessment measurement and history', *Acute Pain. Clinical Pain Management*, Hodder Arnold

Silbert BS, Evered LA, Scott DA, Cowie TF 2008, 'The apolipoprotein E epsilon4 allele is not associated with cognitive dysfunction in cardiac surgery', *Ann Thorac Surg*, 86, 3, 841-7

Silbert B, Evered L, Scott DA, McCutcheon C, Jamrozik K 2008, 'Homocysteine and C-reactive protein are not markers of cognitive impairment in patients with major cardiovascular disease', *Dement Geriatr Cogn Disord*, 25, 4, 309-16

Wong D 2008, Post Anaesthesia Care Unit *Essentials of Neuroanaesthesia and Neuro Intensive Care*