

Clinical Neuroscience Research: Methodology and Disease Applications Part 1

COURSE TIMETABLE 2007 (March 19th - 23rd)

2007 Date	Time	Session	Presenters
PART 1			
Monday	March 19th		
	8.45 - 9.15am	Subject Overview and participant introductions	Sam Berkovic
1.1	9.15 – 10.15am	Stroke: The current clinical research questions	Geoff Donnan
MORNING TEA	10.15 – 10.30am		
1.2	10.30 – 11.30am	Clinical Trials methods – part 1	Geoff Donnan
Short Break	11.30 – 11.40		
1.3	11.40 – 12.55pm	Clinical Trials methods – part 2	Geoff Donnan
LUNCH	12.55 – 1.40pm		
1.4	1.40 – 2.10pm	Group presentation info for all course participants (inc. assessment 1 info): How to do a critical appraisal & a presentation	Sam Berkovic Kathy Lefever
1.5	2.10 – 3.10pm	Genetics in clinical neurological research	Sam Berkovic
AFTERNOON TEA	3.10 – 3.25		
1.6	3.25 – 4.55pm	Of mice and men: meta-analysis and the interplay of basic and clinical research	David Howells

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2007 Date	Time	Session	Presenters
PART 1			
Tuesday	March 20th		
2.1	8.45 - 9.45am	Frontiers in clinical neuroscience research	Fred Mendelsohn
MORNING TEA	9.45 - 10.00am		
2.2	10.00 - 11.00am	Epilepsy: The current clinical research questions	Sam Berkovic
Short Break	11.00am - 11.10am		
2.3	11.10 - 12.40pm	Interface of basic science with clinical research: from basic scientist perspective	Steven Petrou
LUNCH	12.40 - 1.25pm		
2.4	1.25 - 1.55pm	Critical Appraisal & Research Literature Review	Kathy Lefevere
	1.55pm - 2.40pm	Group Work (all course participants)	
AFTERNOON TEA	2.40 - 2.55pm		
2.5	2.55 - 4.10pm	Developing neurorehabilitation research: an overview from the allied health perspective	Mary Galea
Short break	4.10pm - 4.20pm		
2.6	4.20 - 5.35pm	Neurorehabilitation research methodology	Mary Galea

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PART 1			
Wednesday (optional)	March 21 st	Two 'hands-on' computer tutorials @ Austin Hospital campus	
GROUP A	FREE		
3.1	9.00 – 10.30am	Searching electronic databases	Anne McLean
Short break			
3.2	11.00 – 12.30pm	Endnote referencing management	Anne McLean
GROUP B	FREE		
3.1	1.30 – 3.00pm	Searching electronic databases	Anne McLean
Short Break			
3.2	3.30 – 5.00pm	Endnote referencing management	Anne McLean

* Note, that the CCRE Neurosciences and the School of Enterprise reserve the right to change any order of proceedings or any presenter on the course.

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2006/7 Date	Time	Session	Presenters
PART 1			
Thursday	March 22nd		
4.1	8.45 - 9.45am	Neuro-epidemiology: disease burden and measures	Helen Dewey
MORNING TEA	9.45 - 10.00am		
4.2	10.00 - 11.00	Neuro-epidemiology: study types	Mandy Thrift
Short break	11.00 - 11.10am		
4.3	11.10 - 12.10pm	Neuro-epidemiology: disease causation and prevention	Mandy Thrift
LUNCH	12.10 - 12.55pm		
4.4	12.55 - 1.55pm	Group presentation preparation work	Groups
4.5	1.55 - 2.55pm	An introduction to health economics	Helen Dewey
AFTERNOON TEA	2.55 - 3.10pm		
4.6	3.10 - 4.40pm	Clinical Neuropharmacology Research Methodology	Terry O'Brien
4.7	4.40 - 5.30pm	Final group presentation preparation	Groups

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2007 Date	Time	Session	Presenters
PART 1			
Friday	March 23 rd		
5.1	8.45 – 9.45am	Multiple Sclerosis: The current clinical research questions	Trevor Kilpatrick
MORNING TEA	9.45 – 10.00am		
5.2	10.00 – 11.00am	Research methods of neuromuscular disorders	Richard Macdonell
Short break	11.00 – 11.10		
5.3	11.10 – 12.10pm	Clinical research applications of TMS	Richard Macdonell
LUNCH	12.10 – 12.55pm		
5.4	12.55 – 2.20pm	Translating clinical research findings into practice	Dominique Cadilhac
AFTERNOON TEA	2.20 – 2.35pm		
5.5	2.35 – 4.05pm	Group presentations (20+10 min. discussions) – Groups 1,2,3	Sam Berkovic
Short Break	4.05 – 4.15pm		
5.6	4.15 – 5.45pm	Group presentations (continued) – Groups 4,5,6	Sam Berkovic
5.7	5.45 – 6.00pm	Close + assignment questions	Sam Berkovic

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Professor Sam Berkovic is a clinical neurologist with over 20 years experience. He is an internationally recognised clinical researcher, with a special interest in establishing close research links with basic scientists. He is Director of the Comprehensive Epilepsy Program at Austin Health, Director of the Epilepsy Research Centre and Scientific Director of the Brain Research Institute. He holds a personal Chair in the Department of Medicine Austin Health/Northern Health at The University of Melbourne, and is an adjunct Chair in the Department of Neurology and Neurosurgery at McGill University, Montreal, Canada. He has won many prestigious prizes and awards and was elected as a Fellow of the Australian Academy of Science in 2005.

His main research interest is the genetics of epilepsy, and his group has been involved in the discovery of eight genes for idiopathic epilepsy so far. His other research interests include drug therapy of epilepsies, neuroimaging of epilepsy, surgical treatment of epilepsy and management of new onset epilepsy. He has published over 250 papers largely related to epilepsy and has a major interest in post-graduate teaching and teaching of clinical research.



Professor Frederick Mendelsohn is Director of the Howard Florey Institute and R Douglas Wright Professor of Experimental Physiology and Medicine at the University of Melbourne. He held a Personal Chair in Medicine at the University of Melbourne until 1996 and was Senior Physician at the Austin & Repatriation Medical Centre.

The Howard Florey Institute is now the major medical research institute focussing on neuroscience, including its molecular and cellular aspects as well as human studies in functional brain imaging. The Institute's research is devoted to improved understanding of normal brain function, as well as neurological and psychiatric disorders including developmental disorders, stroke, neurodegenerative disorders, addiction, epilepsy and multiple sclerosis.

His research focuses on neuropeptides and their receptors. He initiated studies on the localisation of angiotensin receptor subtypes in the brain that triggered a large body of work in his own laboratory, and by groups around the world, on the local actions of these peptides in the brain. More recently his group discovered that the AT₄ receptor is a transmembrane spanning enzyme that has prominent effects in memory and learning.

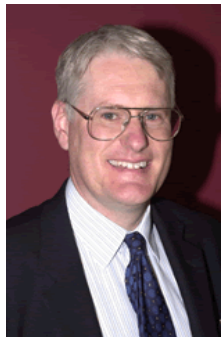
He was a Chairman of the Angiotensin Gordon Conference USA (1998), Member of the Wills Committee on Health and Medical Research Strategic Review (1998-2000) and was the Eccles Lecturer to the Australian Neuroscience Society (2001). He was elected a Fellow of the Australian Academy of Science in 2003 and is a Past President of the Australian Neuroscience Society. He received the Order of Australia, Officer in the General Division in 2004.

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Dr Steven Petrou obtained his PhD in Physiology and spent 10 years in the US studying ion channel biophysics prior to returning to Australia to establish a “channelopathies” laboratory. He is a Senior Research Fellow at The Howard Florey Institute and is the Head of the Laboratory of Ion Channels and Human Disease with a multidisciplinary staff of around 20 individuals. He is a consultant Vice President of CNS Research for Bionomics Limited and other Pharmaceutical companies where he advises drug discovery and development programs. With over 35 publications in the area of ion channel physiology he has published on the role of ion channels in a number of diseases including epilepsy, cardiac disease, cystic fibrosis and chronic lymphocytic leukemia..



Professor Trevor Kilpatrick graduated with his Bachelor of Medicine, Bachelor of Surgery from the University of Melbourne in 1982 as the top of his year. Following training in neurology, he embarked on postgraduate research studies towards a Doctor of Philosophy, under the supervision of Sir Gustav Nossal and Dr Perry Bartlett of the Walter & Eliza Hall Institute for Medical Research. Professor Kilpatrick has been the recipient of the Sunderland Award (1994), AMRAD Postdoctoral Award (1995) and inaugural Leonard Cox Award (2000). He has published widely, primarily in the area of MS, and continues to be an external assessor and Member of the Discipline Panel for the NH&MRC and to serve on other granting bodies.

Currently, in collaboration between the Centre for Neuroscience and the Howard Florey Institute, Professor Kilpatrick leads a research group focused on MS.



Professor Mary Galea is a physiotherapist and neuroscientist appointed to the Foundation Chair of Clinical Physiotherapy at the University of Melbourne and Austin Health in 2001. Her research program includes both laboratory-based and clinical projects with the overall theme of control of voluntary movement by the brain, and factors that promote recovery following nervous system damage. Professor Galea has recently established the Rehabilitation Sciences Research Centre based at the Royal Talbot campus of Austin Health. Professor Galea is one of the chief investigators in an NH&MRC-funded Centre of Clinical Research Excellence in Neurosciences at Austin Health.

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Associate Professor David Howells started his career as a biochemist with a specific interest in the regulation of dopamine and serotonin metabolism in genetic diseases which cause paediatric parkinsonism. His laboratory has demonstrated that BDNF depletion can cause parkinsonism and that Parkinson's disease patients are deficient in BDNF as well as discovering a new population of dopaminergic neurons in the Parkinson's disease striatum. Current work is exploring how macrophage and microglial function is regulated in concert with neural activity and how this knowledge will impact on restoration of function after stroke and spinal cord injury.



Professor Geoff Donnan, MD is Professor of Neurology, University of Melbourne and Director of the National Stroke Research Institute in Australia. He was co-founder of the Australian Stroke Trials Network (ASTN) within which there have been conducted numerous investigator driven and other stroke trials. He is Past President of the Stroke Society of Australasia and Past President of the Australian Association of Neurologists. He has over 300 peer reviewed journal publications, 51 book chapters, edited 15 proceedings of national meetings, edited/authored 3 books, editorial boards of 7 international journals including Lancet Neurology, Section Editor for Stroke and Associate Editor of Cerebrovascular Diseases.

Research interests include neuroimaging and clinical stroke trials including acute studies and secondary prevention. He has been involved in the conduct of numerous international stroke trials as either Chair of Steering Committee, Steering Committee Member or Chair of DSMB.

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Associate Professor Helen Dewey, MBBS, PhD, FRACP, FAFRM(RACP) is Associate Director of the National Stroke Research Institute; Head of Inpatient Stroke Services and Consultant Neurologist at Austin Health, Melbourne; Associate Professor, Department of Medicine AH/NH, The University of Melbourne and NHMRC Practitioner Fellow, National Stroke Research Institute, Melbourne, Australia. In 2000, Helen completed her PhD thesis entitled, 'Comparing the costs of stroke subtypes: a cost of illness study.' Her research interests include the epidemiology, rehabilitation and health economics of stroke. Current research work is centred around the use of an economic model for stroke (MORUCOS) as a tool for comparing the cost-effectiveness of stroke interventions and for assisting priority setting in stroke care. Helen is an investigator for the North East Melbourne Stroke Incidence Study (NEMESIS) and for a multi-centre, randomised controlled trial of very early rehabilitation after stroke (AVERT). She has authored or co-authored numerous articles in peer-reviewed medical journals, particularly in the areas of stroke epidemiology and costs of stroke.



Ms Dominique Cadilhac (BNurs, MPubHlth) is Manager, Public Health Division, National Stroke Research Institute. She has been involved in stroke research for more than 10 years. Between 1994 and 1998, she coordinated clinical trials in both acute and secondary prevention therapies. Since 1998, she has been a career researcher mainly focussed on health services research with a particular emphasis on models of stroke care delivery and evaluations of evidence based practice. She works closely with the National Stroke Foundation, and is also a member of national committees providing advice on policy for stroke. She has authored numerous publications, abstracts, policy reports and poster presentations.



Associate Professor Richard Macdonell, MD, FRACP, FAFRM (RACP) is Deputy Director of Neurology at Austin Health, Melbourne. He is a Clinical Neurophysiologist with a particular interest in Nerve conduction studies, Electromyography and Evoked Potentials. He is also in charge of the Neuroimmunology Clinic, which manages patients at Austin Health with Multiple Sclerosis and other Neuroimmunological Diseases, such as Myasthenia Gravis, Polymyositis and the Inflammatory Neuropathies.

He is currently involved in NHMRC-funded stroke research and is also involved in a number of clinical trials in multiple sclerosis. He has over 50 peer-reviewed publications in the areas of peripheral nerve and muscle disease, multiple sclerosis and stroke.

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Dr Mandy Thrift is an NHMRC Senior Research Fellow. She has recently been appointed Head of Population Health Research at the Baker Heart Research Institute in Melbourne. Prior to this she was Head of Epidemiology at the National Stroke Research Institute for approximately 7 years. During this time she led the North East Melbourne Stroke Incidence Study, a large epidemiological study of stroke. This is the largest natural history study of stroke ever conducted in Australia, including more than 1,600 patients with stroke. Dr Thrift has published more than 60 journal articles and book chapters.



A/Professor Terence J. O'Brien, MBBS *Melb.* MD *Melb.* FRACP FRCPA, is a specialist in both neurology and clinical pharmacology, with particular research and clinical expertise in epilepsy and anti-epileptic drugs. After completing his training in neurology at St Vincent's and Royal Melbourne Hospitals, he spent three years (1996-98) at the Mayo Clinic, USA, undertaking advanced neurology and epilepsy/electrophysiology fellowships. This included research and clinical involvement in neuropharmacological related areas, in particular anti-epileptic drugs and blood flow radiopharmaceuticals for brain SPECT studies. In 1998 he undertook a two-year fellowship in neuropharmacology at St Vincent's Hospital. In 2000 he was appointed Deputy Director of the Australian Centre for Neuropharmacology and Senior Lecturer in the Department of Medicine, St Vincent's Hospital, The University of Melbourne, where he developed a successful research program in neuropharmacology. In 2002 he was appointed to the position of Associate Professor in the Department of Medicine (RMH/WH) where he has established a laboratory utilising animal epilepsy models, as well as a number of clinical, imaging and genetic- based research projects.

A/Professor O'Brien has published 97 peer-reviewed original papers in top-line neurological, pharmacological and imaging journals, over 200 published abstracts and six book chapters. He has been an invited lecturer at 42 national and international scientific conferences, and received seventeen awards for research and research presentations, including the Department of Neurology Research Award, The Mayo Clinic (1998) and The Dreifuss-Penry Epilepsy Award from the American Academy of Neurology (2006).