16-Mar-18

12th Congress of the World Federation of Nuclear Medicine and Biology

20-24 April 2018 **TRACK: Neurosciences**

Melbourne Convention and Exhibition Centre

Saturday 21 April 2018

1400-1530	Neuroscience1: Imaging in Neurology		
	Chair: A/Prof Victor Villemagne		
14:00-14:20	**Gold standard and simplified methods for assessing brain proteinopathies using Positron Emission Tomography** Learning objectives: (1) Recognize the importance of validating simplified methods using full kinetic modeling (2) Identify challenges associated with the validation of imaging agents (2) Recognize the advantages and caveats associated with simplified methods for assessing brain protein agregates.	Dr Pedro Rosa, McGill University Research Centre for Studies in Aging, Quebec, Canada	20 mins
14:20-14:40	**Appropriate Use of Amyloid PET and the IDEAS Study** Learning objectives: (1). Understand incidence and significance of "positive" amyloid imaging (2). Review SNMMI appropriate use criteria for amyloid imaging (3). Understand amyloid imaging characteristics in cognitive disorders (4). Review rationale and aims of the IDEAS study	Dr Kirk Frey, The University of Michigan, USA	20 mins
14:40-15:00	**Disease Modifying Trials in AD and the Role of PET Imaging** Learning objectives: (1) Develop knowledge of current trials of disease modifying agents in AD (2) Understand the use of PET ligands for AD, and scan features (3) Recognize the role of PET in AD therapy trials	Prof Christopher Rowe, Austin Health & University of Melbourne, Australia	20 mins
15:00-15:20	**Neuroinflammation and New tracers for Neuroscience** Learning objectives: (1) Gain knowledge of PET tracers used for imaging neuroinflammation (2) Understand the pitfalls of PET scans for neuroinflammation (3) Develop knowledge of new PET tracers for neuroscience studies	Prof. Michael Kassiou, The University of Sydney, Sydney Australia	20 mins
15:20-15:30	**Questions & Discussion**		

Sunday 22 April 2018

1400-1530	Neuroscience 2: Non-Alzheimer's Dementia Imaging		
	Chair: Dr Satoshi Minoshima		
14:00-14:20	**Stroke, vascular disease and dementia** Learning Objectives: 1) That cerebrovascular disease (CeVD) is highly prevalent in elderly people and make important contributions to cognitive impairment and dementia in later life 2) MRI can be used to demonstrate CeVD burden by use of established and novel imaging markers 3) Many people with dementia have mixed pathology (commonly AD and CeVD) and CeVD can be additive with AD pathology in impairing cognitive function and increasing the likelihood of dementia.	Prof Dr Christopher Chen, Singapore	20 mins
14:20-14:40	**Vascular Cognitive Impairment - What MRI can tell us**. Learning Objectives: 1) Use and misuse of MRI in understanding vascular cognitive impairment 2) schaemic and haemorrhagic vascular disease signatures on MRI.	Dr Nawaf Yassi, The Royal Melbourne Hospital, Australia	20 min
14:40-15:00	**Frontotemporal dementia - imaging and clinical updates** Learning objectives: -1) to develop a basic understanding of the clinical concepts including presenting symptoms and signs of the different types of frontotemporal dementia (FTD) -2) to develop an understanding of the patterns of imaging in various forms of frontotemporal dementia.	Dr Samantha Loi, University of Melbourne, Australia	20 mins
15:00-15:20	**Imaging in Dementia with Lewy bodies.** Learning objectives: 1) to develop an understanding of the clinical concepts and patterns of imaging change in dementia with Lewy bodies, and how it differs from other forms of dementia. 2)to develop an awareness for how imaging can be used to improve the clinical diagnosis of dementia with Lewy bodies.	Dr Rosie Watson, The Royal Melbourne Hospital , Australia	20 mins
15:20-15:30	**Questions & Discussion**		

Monday 23 April 2018

10:30-1200	**Neuroscience 3: Epilepsy**		
	Chair: TBC		
10:30-11:00	**Presurgical evaluation of patients with focal epilepsy** Learning objectives: 1. What are the characteristics of the epilepsy patient population suitable for pre-surgical evaluation. 2. To understand the role of clinical, video-EEG monitoring, invasive EEG recordings, neuropsychological and psychiatric evaluation 3. To appreciate what the epileptologist requires from imaging investigations	Laureate Prof. Samuel Berkovic, Epilepsy Research Centre Melbourne Brain Centre, Austin H	30 min
11:00-11:30	**MRI in Focal Epilepsy** . Learning points 1.Optimizing MRI technique improves detection of subtle epileptogenic lesions. 2.Easily missed epileptogenic lesions have characteristic MRI appearances. 3.Integrating clinical information and functional imaging data improves detection of subtle MRI lesions.	Dr Greg Fitt, Austin Health, AU	30mins
11:30-12:00	**SPECT & PET in Focal Epilepsy** Llearning Objectives are 1. Understand the role of SPECT and PET in the presurgical workup of patients with focal epilepsy. 2. Recognise ictal SPECT blood flow patterns in temporal and extratemporal focal epilepsy. 3. Recognise FDG PET metabolic abnormalities in patients with focal epilepsy.	Dr Salvatore Berlangieri, Austin Health AU	30 mins
1400-1530	**Neuroloscience 4: Read with the Experts**		
	Chair: Dr Pedro Rosa		
14:00-14:20	**How to read brain FDG PET** Learning objectives: (1) Interpret normal and abnormal FDG PET brain scans (2) To recognize the scan appearance of different types of dementia (3) To understand differential diagnoses for FDG PET brain scans	Dr. Satoshi Minoshima, The University of Utah, USA	20 mins
14:20-14:40	**How to read brain Amyloid PET** Learning objectives: (1) Interpret normal and abnormal amyloid PET brain scans (2) To recognize the scan appearance of different types of dementia (3) To understand differential diagnoses for amyloid PET brain scans	Prof Christopher Rowe, Austin Health & University of Melbourne, Australia	20 mins
14:40-15:20	**Read with the experts: Dementia** Learning objectives: (1) Understand which scan should be used in different clinical scenarios (2) To interpret scans in different types of dementia (3) Recognize the limitations and pitfalls of scans in dementia	Prof Christopher Rowe Dr Kirk Frey Dr Satoshi Minoshima	20 mins
15:00-15:30	**Question & Discussion**		30 mins

Tuesday 23 April 2018

10:30-12:00	**Neuroscience 5: Parkinson's Disease**		
	Chair: Prof Christopher Rowe		
10:20-10:50	**F-18 FP-CIT PET in Parkinson's Disease and Atypical Parkinsonism** The intended learning objectives are: 1. Identify characteristic imaging features of Parkinson's disease and atypical parkinsonism on F-18 FP-CIT PET 2. Determine the most appropriate F-18 FP-CIT PET imaging protocol for the differential diagnosis of atypical parkinsonism.	Prof Jae Seung Kim, University of Ulsan College of Medicine, Seoul, Korea	30 min
10:50-11:10	**Update on Synaptic Neuroimaging: Neuroreceptors and Transporters** Learning Objectives:1. Understand types of neurochemical synaptic molecular imaging targets 2. Appreciate potential roles of targeted synaptic imaging 3. Understand use of receptor imaging for synaptic neurotransmitter level assessment 4. Describe current synaptic imaging tracers for clinical evaluation **s**	Dr Kirk Frey, The University of Michigan, USA	20 mins
11:10-11:30	**How to read DAT and VMAT Scans** Learning objectives: (1) Understand the principles of tracers used for DAT and VMAT scans (2) Determine imaging protocols appropriate for DAT and VMAT scans (3) Interpret normal and abnormal DAT and VMAT scans	Dr Kirk Frey, The University of Michigan, USA	20 mins
11:30-12:00	**Read with the Experts: DAT and VMAT Scan case studies** Learning objectives: (1) Understand which scan should be used in different clinical scenarios (2) To interpret normal and abnormal DAT and VMAT scans (3) Recognize the limitations and pitfalls of DAT and VMAT scans	Prof Jae Seung Kim, Dr Kirk Frey	30 mins