A special thanks to Dr Suraj Rajan, MSc, MD for his work on the title logo for Neurology 2016

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Welcome to Neurology 2016:  
Leading-edge Neurology for the Practising Clinician

30 March 2016

Dear Colleagues,

On behalf of the Executive Committee of UCL Institute of Neurology, it is a pleasure to welcome you to Neurology 2016: Leading-edge Neurology for the Practising Clinician

The aim of the course is to provide an update on the practical hospital management of common neurological diseases, with an emphasis on modern techniques and therapies. Its purpose is to be didactic, but also entertaining and informative.

This programme book contains speaker biographies and background reading, and full-text articles (reprinted with permission).

We hope the course will prove instructive, and we are keen to have feedback, so please do not hesitate to contact the organisers with any comments or suggestions. It is an annual event and your comments will be very helpful for planning for the future.

Many people have been involved in assisting with the organization. Particular thanks go to Daniel Cotfas and David Blundred in the Education Unit at the UCL Institute of Neurology for their tireless work in bringing this conference together in such a successful manner. Our sincere and grateful thanks also go to all the speakers and presenters. We would also like to gratefully acknowledge the support of our sponsors (listed at the end of the programme book) which has made this conference possible.

The title logo is kindly provided by Suraj Rajan, and the majority of speaker photos were provided by Medical Illustration.

With best wishes,

Simon Shorvon

(On behalf of the Conference Organising Committee: Dr Tabish Saifee, Mr David Blundred. Professor Simon Shorvon)
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Thursday, 31st of March, 2016
Treatment of Parkinson’s Disease

by Professor Anthony Schapira

Professor Anthony Schapira was appointed in 1990 as Chairman of the University Department of Clinical Neurosciences at the Institute of Neurology, Queen Square and Professor of Neurology at the National Hospital for Neurology and Neurosurgery and the Royal Free Hospital, London, UK. He is currently Vice Dean of the University College London and Director of the Royal Free Campus. He is a member of the Board of the Royal Free London NHS Foundation Trust and of the Ministry of Justice OPG.

Professor Schapira’s research interests include the molecular and clinical aspects of neurodegenerative diseases, with special emphasis on Parkinson’s Disease and other movement disorders. He has over 375 peer-reviewed publications with more than 30 in Nature or Lancet series journals, and has edited over 15 books on various aspects of neurology including the textbook *Neurology and Clinical Neuroscience*. His H-index is 81 and he has 8 Citation Classics (>400 papers). He is Editor-in-Chief of the *European Journal of Neurology* and is on the editorial boards of several neurology and neuroscience journals.

Professor Schapira is the recipient of the Harveian Medal, the Royal College of Physicians Clinical Science Prize, the European Prize for Clinical Science, the 1999 Opprech Foundation Award and the Duchenne Prize in 2005. He was elected a Fellow of the Academy of Medical Sciences in 1999. He was appointed a Senior Investigator at the National Institutes of Health Research in 2012.

Selected background reading:

Treatment of intractable epilepsy

by Professor Simon Shorvon

Professor Simon Shorvon is Clinical SubDean and Divisional Postgraduate Tutor at the UCL Institute of Neurology and Honorary Consultant Neurologist at the National Hospital for Neurology and Neurosurgery. He has specialised in the field of epilepsy throughout his career, and was a member of the international Executive Committee of the International League Against Epilepsy (ILAE) between 1993 and 2013, served as ILAE Vice-President, and as co-Editor-in-Chief of Epilepsia for eight years. He is recipient of lifetime achievement awards for work in epilepsy including 2008 European Epileptology Award and 2010 Lennox Prize of the American Epilepsy Society. His has published over 500 peer reviewed journal papers and chapters, and is author/editor of a number of monographs and textbooks including: The Treatment of epilepsy (Wiley: 4 editions, latest 2016), Handbook of Treatment of epilepsy (Wiley 4 editions, 4th to be published in 2016), Causes of epilepsy (CUP: 2011), Oxford Textbook of Epilepsy and Epileptic seizures (OUP: 2013), Neurology: A Queen Square Textbook (Wiley:2009, 2nd edition to be published 2016).

Selected background reading:

Indications for the surgical treatment of cranio-cervical junction

by Mr David Choi

David Choi graduated from Emmanuel College, Cambridge in 1989 with a first class BA degree in Medical Sciences, and studied clinical medicine in Edinburgh (MBChB 1992). He trained in general surgery at the Glasgow Royal Infirmary, and underwent specialist neurosurgical training at the Glasgow Institute of Neurological Sciences, Atkinson Morley’s hospital and the National Hospital for Neurology and Neurosurgery, London. He obtained a PhD in neuroregeneration, and was awarded the Hallett Prize medal from the Royal College of Surgeons, London. His clinical interests include complex spine surgery, spinal tumours, degenerative and congenital craniocervical junction abnormalities, skull base tumours and endoscopy. He holds an academic post at the UCL Institute of Neurology, where he is Reader in Neurosurgery with research interests including spinal tumours, cellular therapies and regenerative medicine.

Selected background reading:


Nobel lecture

The Hippocampus as a Cognitive Map: Past, Present and Future

by Professor John O’Keefe

John O’Keefe FRS is Professor of Cognitive Neuroscience at University College London where he works in the Department of Cell and Developmental Biology and is currently Director of the Sainsbury Wellcome Centre for Neural Circuits and Behaviour. He is interested in the role of the hippocampal formation in spatial memory and navigation. Using extracellular recording in behaving rats, O'Keefe discovered that hippocampal pyramidal cells respond selectively to an animal's spatial location. The discovery of 'place cells' suggested that this part of the brain might function as a cognitive map, a notion developed extensively by O'Keefe and Nadel in a book published in 1978 (www.cognitivemap.net). Strong support for this idea has come from the discovery of other spatial cells in the hippocampal formation, notably head direction, grid and boundary cells, and from deficits in spatial memory and navigation following hippocampal damage. The theory has been applied to the human hippocampus which acts as a more global episodic memory system in addition to its role in spatial memory. O'Keefe has recently turned his attention to the amygdala and its role in active memory for ethologically significant stimuli.

Prof O'Keefe is a Fellow of the Royal Society and the Academy of Medical Sciences. He has won numerous awards including most recently the Gruber Neuroscience prize (2008), Royal Society Ferrier Prize Lecture (2013), Horowitz Prize (2013), Kavli Prize in Neuroscience (2014) and the Nobel Prize in Physiology or Medicine (2014).

Selected background reading:
The genetic methodologies and their application in the clinic

by Professor Henry Houlden

Professor of Neurology and Neurogenetics and Head of the Neurogenetics Laboratory at The National Hospital for Neurology and Neurosurgery and UCL Institute of Neurology. He has developed a next generation sequencing facility bringing exome and genome sequencing to clinical practice. He also co-leads the Neurology Genomics England Clinical Interpretation Partnership (GeCIP). His main clinical interest is neurogenetics in a variety of disorders and the development of new diagnostic techniques.

Selected background reading:

The impact of pharmacogenetics in the neurological clinics

by Professor Nick Wood

Professor Nick Wood’s chief interests are the genetic variants which contribute to nervous system function and dysfunction. Over the last few years the laboratory has contributed to the finding of a number of genes which when mutated cause Parkinson’s disease and other neurological conditions. Following on from these discoveries he has built a group focussed on understanding the molecular pathogenesis of PD. This involves molecular and cellular biology and live cell imaging. One of the major challenges facing neuroscience is the genetic basis of normal and abnormal function. Over the past few years this lab and colleagues (within and outside UCL) have built a programme of research based around haplotype tagging of the human genome. Currently he is directly involved in 2 genome wide associations studies focussed on two common neurological diseases (Epilepsy and Parkinsons Disease).

Prof Wood qualified in medicine from the University of Birmingham. He went on to take a PhD in Cambridge. He was elected to the Fellowship of the Academy of Medical Science in 2004 and to senior investigator of the NIHR in 2008. He is currently Galton Professor of Genetics, a Consultant Neurologist and neuroscience programme director for UCLH NIHR Biomedical Research Centre (BRC).

Selected background reading:


Channelopathies in the clinic
by Professor Michael Hanna

Professor Michael Hanna is Director of the UCL Institute of Neurology. He is Professor of Clinical Neurology and Consultant Neurologist specialising in neuromuscular diseases at the National Hospital Queen Square. He is Director of the MRC Centre for translational research in neuromuscular diseases, which was established in 2008 and renewed in 2013. This joint London- Newcastle MRC Centre links basic science advances to clinical trials in patients with a range of neuromuscular diseases. He also leads the Queen Square Centre provision of a nationally commissioned highly specialised clinical and genetic diagnostic service for mitochondrial diseases and muscle channelopathies.

Selected background reading:

For more information visit: www.tiny.cc/mhanna or scan the QR code
m.hanna@ucl.ac.uk
Update on diagnosis and management of paraneoplastic diseases affecting the nervous system

by Dr Jeremy Rees

Dr Jeremy Rees qualified in 1988 from University College and Middlesex Medical School with distinctions in Medicine, Surgery and Therapeutics. After postgraduate training, including a period at Memorial Sloan Kettering Hospital, New York, in 1999 he was appointed as Honorary Senior lecturer in Neuro-oncology and Consultant Neurologist at the National Hospital for Neurology and Neurosurgery. He specializes in the management of low-grade brain tumours and neurological complications of cancer.

He has been the Clinical Lead for the Brain Tumour Unit at NHNN and is the Pathway Director for Brain Cancer at London Cancer, an Integrated Cancer System. He has carried out extensive research into multimodality imaging of low-grade gliomas, has edited a textbook on Neuro-oncology, and written numerous peer-reviewed research papers and chapters on brain tumours.

Selected background reading:


Update on diagnosis and management of non-neoplastic autoimmune disorders affecting the nervous system

by Dr Michael Lunn

Dr Michael Lunn is a Consultant Neurologist, Clinical Lead in Neuroimmunology and Honorary Senior Lecturer at the National Hospital for Neurology, Queen Square.

His clinical and research interests are in the inflammatory neuropathies, particularly Guillain-Barré syndrome, CIDP, POEMS syndrome and other paraproteinaemic neuropathies. He also has an interest in clinical trials, in outcome measures used for measurement in clinical trials of neuropathic diseases and evidence synthesis and meta-analysis to improve future trial design and extract more information from trials with inadequate designs which together can suggest or confirm more significant clinical effects of therapy.

His out-patient practice as part of the Peripheral Nerve Service in the MRC Centre for Neuromuscular Disease at the National Hospital covers all inflammatory neuropathies with multidisciplinary support. Dr Lunn has published original papers, reviews and book chapters on aspects of inflammatory peripheral neuropathies, cited over 1100 times since 2009 and with an H-Index now at 20. He is Coordinating Editor of the Cochrane Neuromuscular Disease Group, managing, performing and publishing reviews of evidence based practice across the whole field of neuromuscular disease.

Selected background reading:
Friday, 1st of April, 2016
The design and delivery of stroke services

by Dr Nick Losseff

Dr Nick Losseff is consultant in neurology at the National Hospital and also works for NHS England as the London Clinical Director for Neuroscience. He has a sub-specialist interest in stroke medicine and has held several senior leadership positions in the NHS and is best known for his work improving stroke services in London and after starting the first 24/7 thrombolysis service for stroke in North London from UCH, he led the London Stroke Strategy for NHS London though its decision making phase. This team were later awarded the BMJ “Improving Patient Safety” prize and the Health Service Journal “Secondary Care Reorganisation” prize. He has led several other large health service improvements including the reorganisation of vascular surgery in North Central London and the controversial “BEH Clinical Strategy”. He is the author of several successful texts on stroke medicine.

Selected background reading:


The changing landscape of specialist training

by Dr Paul Jarman

Paul Jarman is a neurologist at the National Hospital for Neurology and Neurosurgery in Queen Square. He is the Training Programme Director for the north London Neurology Training Programme, with approximately 75 trainees in the programme, hosted by UCL Partners. He is a member of the SAC in neurology has an interest in medical education and training.
Overcoming the challenges of specialist commissioning in neurology

by Professor John Duncan

John Duncan graduated from Oxford University Medical School in 1979 and since 1989 has been an Academic Consultant Neurologist specialising in epilepsy, at the National Hospital for Neurology and Neurosurgery, Queen Square, London, and at Epilepsy Society in Chalfont St Peter, UK. He was appointed Professor of Neurology at the UCL Institute of Neurology in 1998, and in 2001 was appointed to be the inaugural head of the Department of Clinical and Experimental Epilepsy.

He chaired the Diagnostic Methods Commission of the International League Against Epilepsy (ILAE) from 2001 to 2005. In 2004 he received the annual Clinical Research recognition award of the American Epilepsy Society. He was President of the UK chapter of the ILAE from 2004 to 2008, and treasurer from 2009 to 2012.

In 2005 he was elected Ambassador for Epilepsy of the ILAE and International Bureau for Epilepsy, and to be a Fellow of the Academy of Medical Sciences. In 2010 he was appointed a Senior Investigator of the UK National Institute for Health Research.

In 2012 he was appointed Clinical Director of the National Hospital for Neurology and Neurosurgery, Queen Square, London.

Selected background reading:
https://www.rcplondon.ac.uk/projects/clinical-commissioning-hub/commissioning-neurology-services (tiny.cc/jduncanpaper1)
April Fools Day Debate, Battle of the Geraiants: Neurology and psychiatry should be a single discipline. For – Professor Geraint Rees, Against – Dr Geraint Fuller

Geraint Rees is Dean of the Faculty of Life Sciences at UCL and Director of the UCL/H Biomedical Research Centre Academic Careers Office, which provides strategic leadership for UCL’s biomedical and clinical academic training portfolio and active talent management. From 2009-2014 he directed the UCL Institute of Cognitive Neuroscience, a world-leading centre for research on mental processes in the human brain. His Wellcome Trust funded research group seeks to understand the neural basis of consciousness, and has delivered over 200 research publications including sixteen empirical papers in Science or Nature journals. His work has been (ISI) cited over 10,000 times and he has an h-index of 52. He is a member of the Francis Crick Institute Executive Team and of the Board of Directors of Imanova and UCL Business. His work has been recognised by award of the Royal Society Francis Crick medal and election to the Academy of Medical Sciences.

Geraint Fuller trained in neurology in London, mainly at Charing Cross after two years at the Institute of Neurology as an MRC Training Fellow. He has worked as a full time clinical neurologist at Gloucester Royal Hospital since 1994.

He has a longstanding interest in education in neurology since writing ‘Neurological examination made easy’ when a registrar. He currently co-edits Practical Neurology.

Dr Fuller has recently demitted as President of the Association of British Neurologists.
Dr Sofia Eriksson is a consultant neurologist and honorary senior lecturer at the National Hospital for Neurology and Neurosurgery in London specialising on epilepsy and neurological sleep disorders. She started her medical career in Göteborg, Sweden, before joining the Department of Clinical and Experimental Epilepsy (DCEE) in London in 1998 as part of her PhD after which she did a post doc in the DCEE.

She was appointed consultant Neurologist at the National Hospital for Neurology and Neurosurgery in 2008. Since then she has also developed a special interest in sleep disorders and she is the clinical lead for the sleep neurology services at the National Hospital for Neurology and Neurosurgery. She is a member of the European Academy of Neurology scientific panel for Sleep-Wake disorders and the joint European task force for the investigations of sleep related epilepsies.

Her initial research focused on brain malformations and epilepsy and the post doc on improving the understanding of magnetic resonance imaging (MRI) by correlations with histopathology. Her current research focuses on the relationship between epilepsy and sleep disorders and she also collaborated with Public Health England on a study of H1N1 pandemic vaccine and narcolepsy. She is currently undertaking a study of the natural course and influence on Quality of Life of NREM parasomnias and is developing a UK-wide study of treatment of NREM parasomnias such as sleep walking.

Selected background reading:
Progressive weakness and wasting

by Dr Katie Sidle

Dr Sidle is a consultant neurologist specializing in the field of Motor Neurone Disease (MND). She is the Co-Director of the NHNN MND Association Regional Care and Research Centre for patients with MND and she is responsible for the care of patients with MND in the weekly MND clinic. She has a background in molecular genetics and is an Honorary Senior lecturer in the neighbouring Institute of Neurology where she is currently researching on disease mechanisms in MND.

Selected background reading:


Beck J…, Sidle K, Mead S. Large C9orf72 hexanucleotide repeat expansions are seen in multiple neurodegenerative syndromes and are more frequent than expected in the UK population. Am J Hum Genet. 2013 Mar 7;92(3):345-53.
Dizziness and vertigo

by Professor Linda Luxon

Linda M. Luxon trained in Medicine and Neurology at St Thomas’ Hospital, the Middlesex Hospital and Queen Square. In 1980, she was appointed Consultant Physician in Neuro- otology at the National Hospital and, in 1982, undertook a Fellowship at UCLA. In 1991, she was appointed to the Chair of Audiovestibular Medicine at the University of London, based at UCL. She has been Chairman/ President of a number of national and international professional bodies and has been particularly involved in the development of audiovestibular medicine and neuro-otology in the UK and worldwide. Her research interests include both peripheral and central auditory and vestibular disorders and she is currently the Principal Investigator of a seven country EU grant. She serves as a Trustee of three medical charities and has been Treasurer at the Royal College of Physicians since 2010.

Selected background reading:


Changes in personality, language and behaviour

by Dr Alex Leff

I am Reader in Cognitive Neurology and an Honorary Consultant Neurologist at Queen Square. My main clinical and academic interest is in cognitive rehabilitation, especially in the field of acquired language disorders. I am developing mechanistic accounts of how language disorders can be improved by different types of therapy, both pharmacological and behavioural, using functional and structural brain imaging.

I have developed two web-based rehabilitation tools that can be used to by therapists and patients with hemianopia, and am working on four other electronic therapy projects sponsored by the MRC, NIHR and The Stroke Association. I think that web-based applications are a good way to make scientifically proven behavioural therapies available to suitable patients and their therapists.

At the National Hospital for Neurology and Neurosurgery I have a general neurology out-patient clinic and also run two specialist out-patient MDT assessment clinics: one for patients with hemianopia and/or higher disorders of vision, and another for patients with acquired brain injury causing cognitive impairment.

Selected background reading:

The optimal approaches to neurovascular imaging and the indications for intravascular treatment

by Dr Thomas Solbach

Consultant in Interventional and Diagnostic Neuroradiology at the National Hospital for Neurology and Neurosurgery at Queen Square.

Selected background reading:
Emerging imaging modalities - what is their added value for common clinical problems?

*by Dr Sotirios Bisdas*

Sotirios Bisdas is Consultant Neuroradiologist in the Department of Neuroradiology at the National Hospital for Neurology and Neurosurgery and Professor of Radiology at Eberhard-Karls-University of Tübingen, Germany. He is also a Senior Honorary Lecturer at UCL IoN. He was trained in Radiology and Neuroradiology in the Hannover, Frankfurt, and Tübingen, which joined in 2009 after his post-doctoral fellowship in the Medical University of South Carolina, USA. He has a MSc. degree in “Advanced Oncology” from the University of Ulm, Germany and his fields of expertise include functional CT and MR imaging in various neurological disorders with focus on oncology. He has authored or co-authored more than 110 peer-reviewed publications and 8 book chapters. Dr. Bisdas is actively involved in advanced MRI and clinical MR-PET neuroimaging, in intraoperative MR imaging and ultra-high-field brain MR spectroscopy. He is member of the editorial board of European Radiology, Neuroradiology, BioMed Research and lead section editor in European Journal of Radiology. He serves as member of the Executive Committee of the European Society of Head and Neck Radiology as well as member of the Head and Neck Committee of the European Society of Neuroradiology. He is also member of the Research Committee of the European Society of Radiology.

Selected background reading:

NEUROLOGY 2016:
Leading-edge Neurology
for the Practising Clinician

All articles included in the booklet have been reprinted with permission. The editors would like to thank all the journals for allowing us to reprint these articles for our booklet.
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The sponsors have had no input on the scientific content of this meeting
Interactions should be avoided during apomorphine HCl therapy. Pregnancy and lactation should be monitored for potential interactions during initial stages of therapy in elderly and/or debilitated patients. Since apomorphine may produce hypotension, care should be exercised in patients with cardiac disease or who are taking vasoactive drugs, particularly when pre-existing postural hypotension is present. Neuropsychiatric disturbances are common in Parkinsonian patients. APO-go should be used with special caution in these patients. Apomorphine has been associated with somnolence and episodes of sudden sleep onset, particularly in patients with Parkinson’s disease. Patients must be informed of this and advised to exercise caution whilst driving or operating machines during treatment with apomorphine. Haematology tests should be undertaken at regular intervals, as with levodopa, when given concomitantly with apomorphine. Patients should be regularly monitored for the development of impulse control disorders. Patients and carers should be made aware that behavioural symptoms of impulse control disorders, including pathological gambling, increased libido, hypersexuality, compulsive spending or buying, binge eating and compulsive eating, can occur in patients treated with dopamine agonists, including apomorphine. Dose reduction/hyperdopaminergic therapy should be considered if such symptoms develop. Since apomorphine, especially at high dose, may have the potential for QT prolongation, caution should be exercised when treating patients at risk for torsades de pointes arrhythmias. Apomorphine has been associated with local subcutaneous effects that can be reduced by rotation of injection sites or use of ultrasound on areas of nodularity and induration. Contains sodium metabisulphite which rarely causes bronchospasm. Side Effects Local induration and nodules (usually asymptomatic) often develop at subcutaneous site of injection, leading to areas of erythema, tenderness, induration and paraesthesia. Inflammation, itching, bruising and pain may also occur. Rarely, injection site necrosis and ulceration have been reported. Priapism may occur at the site of injection. Drug-induced dyskinesia during “on” periods can be severe, and in a few patients may result in cessation of therapy. Postural hypotension is seen infrequently and is usually transient. Transient sedation following each dose of apomorphine may occur at the start of therapy, but this usually resolves after a few weeks of treatment. Dizziness and light-headedness have also been reported. Nausea and vomiting may occur, particularly when APO-go treatment is initiated, usually as a result of the omission of domperidone. Neuroleptic malignant syndrome (including transient mild confusion and visual hallucinations) have occurred during apomorphine therapy and neuroleptic malignant syndrome may be exacerbated by apomorphine. Positive Coombs’ tests, haemolytic anaemia and thrombocytopenia have been reported in patients receiving apomorphine. Local and generalised rashes have been reported. Isolated syncope has occurred in only a few patients during treatment with apomorphine HCl. Patients treated with dopamine agonists, including apomorphine, have been reported as exhibiting signs of pathological gambling, increased libido and hypersexuality, compulsive spending or buying, binge eating or compulsive eating, especially at high doses. Apomorphine is associated with somnolence. Yawning and breathing difficulties have been reported, as has peripheral oedema. Apomorphine has been associated with sudden sleep onset episodes. Prescribers should consult the Summary of Product Characteristics in relation to other side effects. Presentation and Basic NHS Cost: APO-go ampoules contain apomorphine hydrochloride 10mg/ml as follows: 20mg in 2ml – basic NHS cost £123.91 per carton of 5 ampoules. 50mg in 5ml – basic NHS cost £73.11 per carton of 5 ampoules. APO-go pens (dispensable multiple dosage injector system) contain apomorphine hydrochloride 10mg/ml as follows: 20mg in 2ml – basic NHS cost £27.96 per carton of 5 ampoules. 50mg in 5ml – basic NHS cost £73.11 per carton of 5 ampoules. APO-go pens (dispensable multiple dosage injector system) contain apomorphine hydrochloride 10mg/ml, as follows: 20mg in 2ml – basic NHS cost £123.91 per carton of 5 ampoules. 50mg in 5ml – basic NHS cost £73.11 per carton of 5 ampoules. 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