115th Meeting of the British Neuropathological Society

SYMPOSIUM PROGRAMME

WEDNESDAY, 5th MARCH 2014

CHRONIC TRAUMATIC ENCEPHALOPATHY AND THE LONG TERM CONSEQUENCES OF BRAIN INJURY

Chair: Dr Willie Stewart, Southern General Hospital, Glasgow

13:15 **Registration**

14:00 **Welcome and introduction – Willie Stewart (*Southern General Hospital,* Glasgow, UK)**

14:15 **Chris Nowinski, Boston, USA**

Forgotten syndrome to front page news: bringing CTE to the 21st century

14:45: **Barry Jordan, New York, USA**

The long term consequences of sport-related traumatic brain injury

15:15: **Willie Stewart, Glasgow, UK**

The polypathologies of TBI survival: substrates of neurodegenerative disease?

15.45: **Tea break**

16:15: **David Loane, Baltimore, USA**

The role of neuroinflammation in post TBI pathology

16:45: **Dave Sharp, London, UK**

Imaging neurodegeneration after brain injury

17:15: **Tea break**

17:30: **Dorothy Russell Memorial Lecture**

Doug Smith, Philadelphia, USA

Tackling Concussion: Neuromechanics and Neuropathology

18:30: **RECEPTION**

THURSDAY 6th AND FRIDAY 7th MARCH 2013, MEETING OF THE BRITISH NEUROPATHOLOGICAL SOCIETY

Chris Nowinski – Boston, USA

Chris Nowinski is a co-director of the Boston University Center for the Study of Traumatic Encephalopathy and the co-founder and executive director of the Sports Legacy Institute, a non-profit organization dedicated to solving the sports concussion crisis through education, policy, and research.

A former Harvard football player and WWE professional wrestler, he is the author of *Head Games*, which was made into the 2013 documentary film *Head Games: The International Concussion Crisis*, directed by Steve James. He was named a 2011 Eisenhower Fellow and serves as an advisor to the NFL Players Association, The Ivy League, Major League Lacrosse, and South African Rugby Union.

Chris is a Ph.D. candidate in Behavioral Neuroscience at Boston University School of Medicine.

Barry D Jordan – New York, USA

Barry D. Jordan, M.D., M.P.H., is the assistant medical director of Burke Rehabilitation Hospital in White Plains, NY. He is also director of Burke's Brain Injury Program and the Memory Evaluation Treatment Service (METS). Dr. Jordan is a board certified neurologist with specialized interests in sports neurology, Alzheimer's disease, and traumatic brain injury.

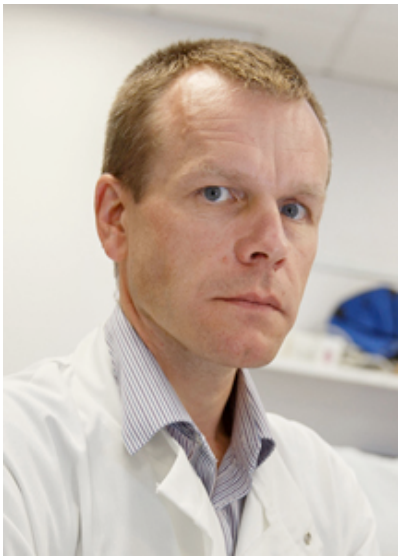
Dr. Jordan is currently the Chief Medical Officer of the New York State Athletic Commission and a team physician for U.S.A. Boxing. He is also an Associate Professor of Clinical Neurology at Weill Medical College of Cornell University.

Dr. Jordan graduated from the University of Pennsylvania with a B.A. in neurophysiology and obtained his M.D. degree from Harvard Medical School. Dr. Jordan completed an internship in internal medicine at U.C.L.A. Medical Center and performed his neurology residency training at the New York Hospital-Cornell University Medical Center.

Dr. Jordan has completed several fellowships including: a fellowship in public health at Cornell University Medical College, a clinical neurology fellowship at the New York Hospital-Cornell Medical Center, a fellowship in sports neurology at the Hospital for Special Surgery, and a fellowship in behavioral neurology at U.C.L.A. Medical Center. He also completed his Masters of Public Health at Columbia University.

Currently Dr. Jordan serves on the National Football League (NFL) Players Association Mackey-White Traumatic Brain Injury Committee and the National Football League (NFL) Neuro-Cognitive Disability Committee. He also serves on the National Collegiate Athletic Association (NCAA) Concussion Task Force and the Pop Warner Medical Advisory Committee.

Willie Stewart – Glasgow, UK



Dr Willie Stewart is Consultant and Lead Neuropathologist at the Southern General Hospital, Glasgow, and holds honorary Associate Professor status at the University of Glasgow (School of Medicine) and the University of Pennsylvania (Department of Neurosurgery).

He trained in Glasgow and has subspecialty diagnostic and research interests in forensic neuropathology, in particular traumatic brain injury, and neuro-oncology, with a focus on molecular sub-typing of adult high-grade gliomas.

His research in TBI describes the range of pathologies encountered in acute and long term survivors of head injury, with reference to the association between TBI and neurodegenerative disease. In particular, his work details the polypathology of TBI survival featuring pathologies in tau, amyloid beta, TDP-43, neuroinflammation and white matter degradation.

In more recent work, these observations on the pathology of survival from TBI form the core for his collaborative clinical and imaging studies on the Glasgow longitudinal cohorts of TBI survivors and in retired athletes; work supported by major national and international grants from the US National Institutes of Health, the US Department of Defense and the Chief Scientist's Office in Scotland.

David Loane – Baltimore, USA

Dr. Loane is an Assistant Professor of Anesthesiology and Faculty Member at the Center for Shock, Trauma and Anesthesiology Research (STAR) at the University of Maryland School of Medicine, Baltimore, Maryland, USA.

Dr. Loane conducted his graduate studies at the Department of Pharmacology and MRC Center for Synaptic Plasticity, University of Bristol, England, and obtained his PhD in Neuroscience in 2005. He then pursued postdoctoral training with Dr. Marina Lynch at Trinity College Institute of Neuroscience, Trinity College Dublin, Ireland, where he studied neuroinflammatory changes in the aged and Alzheimer's disease brain.

In 2007 Dr. Loane joined the Laboratory for CNS Injury (Director: Dr. Alan I. Faden) at the Department of Neuroscience, Georgetown University, Washington D.C., and developed a research program on experimental models of traumatic brain injury (TBI).

He joined the faculty of the University of Maryland School of Medicine in November 2009, and is currently Assistant Professor of Anesthesiology.

Dr. Loane's research is focused on investigating the role of microglial activation phenotypes in response to TBI, with the aim of developing novel therapeutic strategies to modulate microglial form and function in the acute and chronic periods of recovery after TBI.

David Sharp – London, UK

David Sharp is a National Institute of Health Research Professor and consultant neurologist based at Computational, Cognitive and Clinical Neuroimaging Laboratory, Division of Brain Sciences, Imperial College London. He has a degree in Psychology, Physiology and Philosophy from the University of Oxford (1993), a degree in Medicine from the Universities of Oxford and London (1996), and a PhD from the University of London (2006).

He was appointed to an NIHR Professorship in 2012 and his programme of research aims to improve clinical outcome after traumatic brain injury. The work focuses on common cognitive impairments in domains such as memory and attention. These often limit recovery and are difficult to treat effectively. He uses advanced neuroimaging to diagnose the underlying cause of these cognitive problems, particularly focusing on the effect of brain injury on brain network function and the role of inflammation in brain repair.

His NIHR research programme will use changes in network function to guide the development of novel treatment strategies for cognitive impairment. He works with patients who have suffered various types of traumatic brain injury, and collaborates with The Royal Centre for Defence Medicine to study the effects of blast exposure in the soldiers returning from Afghanistan.

Dorothy Russell Award Medal

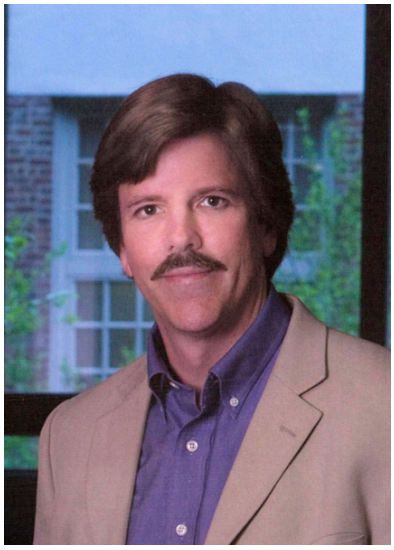
Dorothy Stuart Russell, c1940 (Courtesy of Royal London Hospital Archives)

Dorothy Russell (1895-1983), one of the leading figures in the brief history of British neuropathology, is remembered by the Society in a biennial Memorial lecture. So rapid is progress in the Neurosciences and so short our memories, that for a younger generation of neuropathologists she is probably no more than a name associated with a large recently revised textbook on brain tumours. However, together with Godwin Greenfield, Dorothy Russell had a profound and lasting influence on the development and practice of Neuropathology throughout the world.

An account of Dorothy Russell's life has been published by Dr. Jennian Geddes in Neuropathol Appl Neurobiol. Geddes (1998) Neuropathology and Applied Neurobiology 24 (4), 268–270.

This lecture is delivered every second year by a distinguished speaker, invited to present the lecture at one of the annual meetings of the Society.

Douglas H Smith – Philadelphia, USA



Prof. Douglas H. Smith, M.D. serves as Director of the Center for Brain Injury and Repair (CBIR) and is the Robert A. Groff Endowed Professor and Vice Chairman for Research and Education in Neurosurgery at the University of Pennsylvania.
Penn's multidisciplinary CBIR includes over twenty-five principal investigators and their laboratory staff collectively studying mechanisms, diagnosis and potential treatments of traumatic brain injury (TBI).

Dr. Smith is also director of a multi-center U.S. National Institutes of Health (NIH) program grant on mild traumatic brain injury as well as director of multi-investigator NIH and U.S. Department of Defense grants on TBI and neurodegeneration. Demonstrating his dedication to teaching, Dr. Smith additionally oversees an NIH training grant to support post- and pre-doctoral fellows studying brain injury.

The research of his individual laboratory has primarily focused on the effects of mechanical stretch of axons that results in either damage or growth.

They have found fundamental mechanical mechanisms that underlie selective injury to axons in the white matter during TBI. His group has also identified the aberrant genesis and accumulation of proteins in the damaged axons after TBI that can lead to neurodegenerative changes similar to those found in Alzheimer's disease.

In addition, Dr. Smith's laboratory has also recently discovered that slow continuous stretching of axon tracts in culture can stimulate enormous growth, creating transplantable living nervous tissue constructs. These tissue engineered constructs have shown promise for repairing large lesions in the nervous system. These collective efforts have resulted in over 160 published reports.

The Meeting will be held at the Institute of Child Health, London

Registration fee: £50

Free for undergraduate students and trainees

Registration can be done online following the link

http://www.ucl.ac.uk/ich/education-ich/events/Event_115th_meeting_of_the_British_Neuropathological_Society

For further information please contact Ms Danielle Dansey, ICH Event at d.dansey@ucl.ac.uk; Dr Federico Roncaroli BNS Programme Secretary at f.roncaroli@imperial.ac.uk

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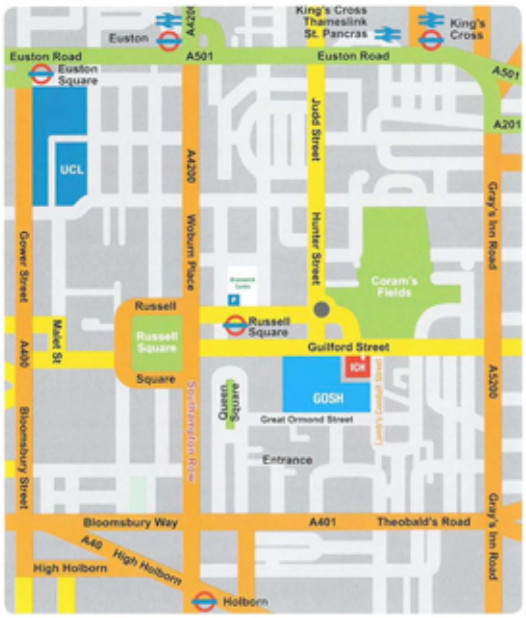

HOW TO GET TO THE INSTITUTE

- **Underground**: The nearest underground station is Russell Square, which is served by the Piccadilly Line and approximately 5 minutes' walk from the Institute.
  Kings Cross Station serves the Piccadilly, Victoria, Northern, Hammersmith & City, Circle and Metropolitan lines and is approximately 10 minutes' walk from the Institute; Holborn is served by the Piccadilly and Central Lines and is approximately 10 minutes' walk from the Institute.
- **British Rail**: Euston, King's Cross & St. Pancras stations are all within walking distance of the Institute, approximately 15/20 minutes' walk.
- **Car Parking**: The Institute does not have car-parking facilities; there are two NCP car parks in the area: Brunswick Square and Southampton Row.