119th Meeting of the British Neuropathological Society
Institute of Child health

WEDNESDAY 28th February, 2018

Epilepsy Neuropathology Symposium
Chair: Professor Maria Thom, University College London, UK.

13:15  Registration

14:00  Welcome and introduction – Professor Maria Thom

14:00  Recent advances in low grade tumors causing epilepsy
       Tom Jacques, Institute of Child Health, UCL London

14:25: mTOR pathway-related malformations
       Eleonora Aronica, AMC, Amsterdam

14:50: Neuroimaging in focal epilepsy-from lesion to networks
       Neda Bernasconi, Montreal

15:15:  Tea break

15:45:  Genetic studies in lesional and non-lesional focal epilepsies
       Sanjay Sisodia, University College London

16:10:  Neuroinflammation and epilepsy; what’s new?
       Annamaria Vezzani, Milan

16:45:  SUDEP-the central role of neuropathology
       Maria Thom, University College London, introduced by Sanjoy Sisodia

17:00-17.10: Short break

17:10:  Dorothy Russell Memorial Lecture
       Future Challenges for the neuropathologist in the era of modern epilepsy surgical practice
       Professor Ingmar Blumcke, Erlangen, Germany

18:15:  RECEPTION
THURSDAY  1st MARCH 2018

08:00 - Registration

08:50 - Opening of meeting – Professor Paul Ince, BNS President

09:00 - 10:30  FIRST SCIENTIFIC SESSION – Neuropathology of Ageing and Vascular dementia

Chairs: Professor P. Ince and Professor R. Kalaria

9:00  C. Humphreys, S. Miners, J. Wardlow, C. Smith, S. Love
      Biochemical assessment of severity and mechanisms of white matter injury
      in human post-mortem white matter in neuroradiologically documented
      small vessel disease  O01

9:15  Y. Hase, L. Ryan, C. Bodman, W. Stevenson, K. Horsburgh, R. Kalaria
      White matter microglial pathology in post-stroke survivors and dementia  O02

      Pathways of communication between CSF and the brain parenchyma  O03

9:45  W. Stevenson, Y. Hase, E. Wilson, A. Hollins, M. Hase, L. Craggs, J. Slade,
      A. Oakley, R. Kalaria
      -  Hippocampal pathology and effects of enviornmental enrichment in a mouse
      model of chronic cerebral hypoperfusion  O04

10:00 A. Chambers, T Minett, F. Matthews, C. Brayne, P. Ince, P. Shaw, P. Heath,
      J. Simpson, S. Wharton
      Advanced glycosylated end products in the ageing brain  O05

10:15 S. Miners, R. Harris, S. Love
      Pericyte dysfunction in Alzheimer’s disease  O06

10:30 – 11:00  Coffee break

11:00 - 12:30  SECOND SCIENTIFIC SESSION –Neurodegenerative disorders and dementia

Chair: Professor J. Attems and Professor S. Wharton

11:00  B. Kramarz, P. Roncaglia, R. Bandopadhyay, D. Brough, M-J. Martin, N. M. Hooper,
       H. Parkinson, R.C. Lovering
       Neurological gene ontology development and annotation of dementia
       relevant proteins  O07

11:15  L. Walker, D. Smith, K. McAleese, M. Johnson, J. Attems
       Is pyroglutamylated beta-amyloid associated with tau hyperphosphorylated
       at tyrosine 18  O08

11:30  B. Tilley, M. Goldfinger, R. Pearce, S. Gentleman
       Locus Coeruleus pathology illustrates a continuum of Lewy Body Dementia  O09

11:45  S. Foti, S. Carrington, A. Kiely, H. Houlden, I. Hargreaves, J. Holton
Cerebral mitochondrial electron transport chain dysfunction in multiple system atrophy

The different pathological and proteomic properties of the presubiculum compared to the entorhinal cortex in neurodegeneration

Rapidly progressive corticobasal degeneration: an aggressive variant

12:30 - Lunch

13:00 –14.30 POSTER DISCUSSION

14.30-15.30 THIRD SCIENTIFIC SESSION – In vitro/experimental

**Chair:** Professor R. Carare and Dr J. Simpson

14:30 **C. Lovejoy**, S. Wray, C. Arber
3D cerebral organoids as in vitro models of Alzheimer’s disease

14:45 **R. S. Seehra**, S Wharton, P. Heath, P. Ince, M Muthana, C. Garwood, J. Simpson
Hypoxia-induced changes in astrocytes and their role in the formation of age-associated white matter lesions.

15:00 **I. Nazish**, T. Warner, J. Hardy, P. Lewis, J. Pocock, R. Bandopadhay
Investigation of the role of LRRK2 in murine macrophage RAW264.7 cells

The pattern of distribution of extracellular matrix in ApoE2, ApoE3 and ApoE4 astrocytes. Relevance for Alzheimer’s disease

Developing an in vivo model of tau propagation using tau aggregates derived from Alzheimer's Disease brain tissue

15:45 Coffee break

16:15 BUSINESS MEETING

17:15 – 18:15 PROFESSIONAL AFFAIRS MEETING

19:30 SOCIETY DINNER AT THE CRYPT
FRIDAY 2nd MARCH 2018

9:00 – 10:30 FOURTH SCIENTIFIC SESSION – CNS Neoplasia

Chairs: Professor S. Marino and Professor T. Jacques

9:00  
A. Merve, X. Zhang, A. Dumas, S. Acquati, J. Jeyapalan, A. Sabo, B. Amati, A. Behrens, S. Marino  
c-Myc overexpression induces choroid plexus tumours and modulates inflammatory pathways O18

9:15  
M. Clarke, D. T.W. Jones, D. Carvalho, A. Mackay, E. Izquierdo, D. Hargrave, A. S. Moore, S. Popov, T. Jacques, C. Jones  
The molecular pathology of infant gliomas O19

9.30  
H. Kearney, J. Cryan, A. Beausang, S. Looby, F. Brett.  
Reactive gliosis mimicking tumour recurrence – a case series documenting MRI abnormalities and neuropathological correlates O20

9:45  
Z. Jaummuktane, N. Suraweera, M. Dutt, V. Smith, S. Brandner  
Molecular classification of CNS tumours with conventional and advanced technologies O21

10.00  
Characterising rare childhood brain tumours O22

10:15  
Diagnostic utility of DNA methylation arrays in neuropathology: a service evaluation O23

10:30 – 11:00 Coffee break

11:00 – 12:00 FIFTH SCIENTIFIC SESSION-Epilepsy and neuroinflammatory conditions

Chairs: Professor M. Thom and Professor K. Smith

11:00  
J. Liu, B. Al-kaaby, S. Sisodia, M. Thom  
Proteomic analysis of hippocampal granule cells in patients with temporal lobe epilepsy O24

11:15  
Identifying cellular diversity in developmental cortical lesions using models of cell-cell interactions in the focal cortical dysplasia O25

11:30  
H. Kearney, T. Price, J. Cryan, A. Beausang, S. Looby, F. Brett, M. Farell  
Biopsy proven cerebral hemispheric demyelination: homogenous pathology with heterogeneous clinical outcomes. O26

11:45  
Meningeal inflammation and cortical demyelination in early multiple sclerosis O27
12.00 - **DIAGNOSTIC SLIDE SESSION** (INCORPORATING EQA)

13:00 - Lunch

13:30 - **POSTER DISCUSSION**

14:30 – 16:15 **SIXTH SCIENTIFIC SESSION** – Miscellaneous

**Chairs:** Professor J. Holton and Professor C. Smith

14:30  **L. Patterson**, C. Morris, M. Firbank, A. Thomas, S. Colloby  
Neuropathological basis of the cingulate island sign  
O28

Local volume fraction distribution of axons, astrocytes, and myelin in deep subcortical white matter lesions and normal white matter in the ageing brain.  
O29

15.00  **D. Erskine**, L. Patterson, A. Alexandris, P. Hanson, C. Morris, J. Attems  
Expression levels of physiological α-synuclein are directly related to Lewy body pathology  
O30

Comparison of clinical and neuropathological diagnoses of neurodegenerative diseases in two centres from the Brains for Dementia Research (BDR) cohort  
O31

15.30  **C. Troakes**, S. Sarmiento, S. Walton, A Hye, R. Killick, A. King, S. Al-Sarraj  
Investigating the association between head injury and neurodegeneration through the examination of Wnt pathway components implicated in Alzheimer’s disease neuropathology  
O32

15:45  **N. Willumsen**, N. Ryan, T. Lashley  
Cortical Abeta pathology in familial Alzheimer’s disease  
O33

16.00  **M. Goldfinger**, B. Tilley, S. Mediratta, M. Sastre, S. Gentleman  
Boxing and the brain: Disruption of the neurovascular unit in chronic traumatic encephalopathy  
O34

16.15  Announcement of the poster prize winners and closure of the meeting

**POSTERS:**

White matter lesions in Alzheimer’s disease are not associated with  
P01
blood-brain-barrier dysfunction


Amyloid-beta in the insular cortex is associated with cognitive fluctuations in dementia with Lewy bodies

A. Oliver-Evans, D. Erskine, M. Johnson, J. Attems, A. Khundaker, A. Thomas

Heterogeneous nuclear ribonucleoprotein R in frontotemporal lobar degeneration.

L. Gittings, B. Benson, A. Issacs, T. Lashley

Unusual Annexin A11 immunopositivity in a case of Amyotrophic Lateral Sclerosis with an Annexin A11 p.D40G mutation

A. King, C. Troakes, B. Smith, S. Topp, D. Marques-Dias, S. Al-Sarraj, C. Shaw

The pattern of expression of AQP4 in the ageing human brain and in cerebral amyloid angiopathy.


Mutational landscape of primary and recurrent glioblastoma reveals potentially actionable single nucleotide variants (SNVs) highlighting the DNA damage response pathway including BRCA1/2.


Clusterin (ApoJ) is more sensitive than βeta amyloid precursor protein (βAPP)

S. Al-sarraj, C. Troakes, D. Marques-dias, A. Mold, A. King, G. Rutty

A rare case of a triple collision tumour in the spinal cord associated with neurofibromatosis type 2

Z. Reisz, M. Balazsfi, L. Tiszlavicz, A. Dobi, A. Csomor

The relationship between tumour-associated macrophages and glioblastoma growth

M. Kvistien, S. Helge

The use of machine learning to develop a robust predictor of glioneuronal tumour molecular subtype


Modelling high-risk paediatric brain tumours


Identification of miRNA and mRNA regulatory networks in the ageing blood-brain barrier: Comparative gene expression studies in human and mouse


Pleomorphic angiomatoid fibrous histiocytoma mimicking CNS infection in a young patient

M. Aizpurua, B. Zebian, V. Minchini, H. Sanghvi, C. Dudau, C. Fisher, A. King
Extensive calcifying CNS microangiopathy in a patient with scleroderma
*M. Aizpurua*, D. Marques-Dias, C. Trookes, I. Bodi

Hyaline astrocytic inclusions in paediatric onset intractable epilepsy
*A. Merve*, S. Nagaraju

Microglial gene expression in glioblastoma using data from the Ivy Glioblastoma Atlas Project
*K. Sidlauskas*, M Fabian, J.A.R. Nicholl, D. Boche

The effect of immersion in Fluorinert on the histological properties of fixed human brain tissue.

DNA Methylation in Amyotrophic Lateral Sclerosis
*C. Appleby-Mallinder*

Medullary astrocytic populations in Sudden Unexpected Death in Epilepsy
*S. Patodia*, M. Ellis, S. Sisodia, M. Thom

Connexins, Aquaporin 4 and PDGFRβ expression patterns in glioneuronal tumours
*J. Liu*, C. Reeves, M. Thom

Identifying the unique vascular response to brain injury in children and adolescents
*J. Fullerton*, J. Hay, V. Johnson, D. Smith, W. Stewart

Coexisting Diffuse Lewy Body Disease and Progressive Supranuclear Palsy pathology with partially co-localising tau and alpha-synuclein positive oligodendroglial inclusions
*A. Quaegebeur*, D. Marques-Dias, C. Troakes, I. Bodi

A 3D intact tissue analysis approach for the cellular and molecular dissection of a novel BMI1/Ephrin connection in human glioblastomas (GBM)
*T. Millner*, B. Ricci, S. Marino

Two cases of low grade astrocytoma with MYB/MYBL1 alterations in patients with refractory epilepsy

Mild malformation of cortical development with oligodendroglial hyperplasia in temporal lobe epilepsy
*A. Kumar*, J. Liu, R. Jager, M. Thom

Cortical demyelination and ‘affected’ normal grey matter in progressive multiple sclerosis

The impact of the new WHO 2016 molecular classification on brain tumour diagnoses: a 1-year retrospective audit
*O.E. Curran*, A. Torgersen, C. Smith

Grey matter demyelination and synaptopathy in multiple sclerosis
L. Zoupi, S. Sekizar, T. Spires-Jones, A. Williams

Large artery atheromatous disease and cerebral small vessel disease: a post mortem study

R. Geraldes, M Esisri, J. Palace, G. Deluca

Expression of Ki67 and p53 in a surgical biopsy of progressive multifocal leukoencephalopathy

M. Aizpurua, J. Shiwen-Koay, E. Sanchez, G. Hotton

Gene expression profiling of patient-matched initial and recurrent glioblastoma


Ectopic lymphoid structures in muscle and PM/Scl autoantibodies in a patient with severe bulbar weakness

E. Healy, J. Campbell, J. Gilliland, L. Travers, B. Kelly, J. Mcconville

Whole genome methylation analysis of CNS tumours: A Study


Differential synaptic and endosomal changes in the expression of lymphocyte-activation gene3 in Lewy body disorders

A. Alexandris, D. Erskine, L. Walker, C.M. Morris