



**119<sup>th</sup> Meeting of the British Neuropathological Society  
Institute of Child health**

**WEDNESDAY 28<sup>th</sup> 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 1<sup>st</sup> 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
- 9:30 *N. Albargothy*, D. Johnston, R. Weller, A. Verma, C. Hawkes, R. Carare  
**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 environmental 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** O10
- 12:00 *T. Lashley*, C. Murray, P. Gami-Patel, E. Gkanatsiou, G. Brinkman, E. Portelius, K. Blennow, O. Wirths, J. Ghiso, J. Holton, W. Heywood, K. Mills, H. Zetterberg, T. Revesz  
**The different pathological and proteomic properties of the presubiculum compared to the entorhinal cortex in neurodegeneration** O11
- 12:15 *H. Ling*, K. Davey, Z. Jaunmuktane, S. Brandner, J. Attems, E. Gelpi, G. Halliday, D. Mann, J. Holton, T. Revesz  
**Rapidly progressive corticobasal degeneration: an aggressive variant** O12
- 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** O13
- 14:45 *R. S. Seehra*, S Wharton, P. Heath, P. Ince, M Muthana, C. Garwood, J. Simpson<sup>1</sup>  
**Hypoxia-induced changes in astrocytes and their role in the formation of age-associated white matter lesions.** O14
- 15:00 *I. Nazish*, T. Warner, J. Hardy, P. Lewis, J. Pocock, R. Bandopadhyay  
**Investigation of the role of LRRK2 in murine macrophage RAW264.7 cells** O15
- 15:15 *A. Keable*, R. O’Neill, D. Johnston, R. Weller, N. Smith, R. Carare  
**The pattern of distribution of extracellular matrix in ApoE2, ApoE3 and ApoE4 astrocytes. Relevance for Alzheimer’s disease** O16
- 15:30 *J. Cooper*, G. Portlock, A. Guyot, T. Vargova, C. Kerridge, T. Murray, M. Ward, A. Cavallini, M. Goedert, M. Hutton, S. Bose, M. O’Neill, Z. Ahmed  
**Developing an *in vivo* model of tau propagation using tau aggregates derived from Alzheimer's Disease brain tissue** O17
- 15:45 **Coffee break**
- 16:15 **BUSINESS MEETING**
- 17:15 – 18:15 **PROFESSIONAL AFFAIRS MEETING**
- 19:30 **SOCIETY DINNER AT THE CRYPT**

**FRIDAY 2<sup>nd</sup> 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. Jaunmuktane, N. Suraweera, M. Dutt, V. Smith, S. Brandner  
**Molecular classification of CNS tumours with conventional and advanced technologies** O21
- 10.00 J. C. Pickles, A. R Fairchild, A. Avery, S. A Yasin, C. Reeves, T. J. Stone, L. Wilkhu, J. Chalker, M. Kristiansen, P. O'Hare, E. Tan, J Anderson, D. Hargrave, T. Jacques  
**Characterising rare childhood brain tumours** O22
- 10:15 J. C. Pickles, L. Brownlee, T. J. Stone, S. A. Yasin, L. Wilkhu, J. Chalker, M. Kristiansen, D Capper, D. T.W. Jones, M. Sill, V. Hovestadt, A. Von Diemling, S. M. Pfister, D. Hargrave, S. Brandner, T. Jacques  
**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 Y-F Li, F. Scarif, S. Picker, M. Tisdall, A. Avery, A. R. Fairchild, J.C. Pickles, H. Cross, D. Hargrave, T. Jacques  
**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. Farrell  
**Biopsy proven cerebral hemispheric demyelination: homogenous pathology with heterogeneous clinical outcomes.** O26
- 11:45 R. Bevan, R. Evans, L. Griffiths, M. Rees, D. Fitzgerald, I. Allen, R. Reynolds, J. Neal, O. Howell.  
**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
- 14.45 *S. Coelho*, R. Highley, J. Pozo, M. Costantini, M. Mozumder, J. Simpson, P. Ince, A. Frangi  
**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  $\alpha$ -synuclein are directly related to Lewy body pathology** O30
- 15.15 *S. Selvackadunco*, K. Langford, Z. Shah, S. Hurley, I. Bodi, J. Neal, A. King, D. Aarsland, C. Troakes, S. Al-Sarraj  
**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**

*K. McAleese*, E. Johnson, L. Walker, M. Johnson, S. Graham, M. Dey, D. Erskine, J. Attems

**Amyloid-beta in the insular cortex is associated with cognitive fluctuations in dementia with Lewy bodies** P02

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

**Heterogeneous nuclear ribonucleoprotein R in frontotemporal lobar degeneration.** P03

*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** P04

*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.** P05

*R. Owasil*, R. O'Neill, A. Keable, J. Nimmo, J. Simpson, R. Weller, C. Smith, J. Attems, S. Wharton, R. Carare

**Mutational landscape of primary and recurrent glioblastoma reveals potentially actionable single nucleotide variants (SNVs) highlighting the DNA damage response pathway including BRCA1/2.** P06

*H. Ellis*, A. Daniels, D. Chrif, F. Sahn, D. Mcart, A. Stupnikov, M. Wadsley, C. Wragg, K. Kurian

**Clusterin (ApoJ) is more sensitive than beta amyloid precursor protein ( $\beta$ APP)** P07

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

**A rare case of a triple collision tumour in the spinal cord associated with neurofibromatosis type 2** P08

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

**The relationship between tumour-associated macrophages and glioblastoma growth** P09

*M. Kvisten*, S. Helge

**The use of machine learning to develop a robust predictor of glioneuronal tumour molecular subtype** P10

*T. J. Stone*, J.C. Pickles, A.R. Fairchild, M. Kristiansen, J. Chalker, L. Wilkhu, D. Hargrave, T. Jacques

**Modelling high-risk paediatric brain tumours** P11

*A.R. Fairchild*, J.C. Pickles, Y-F. Li, A. Avery, T.J. Stone, L. Wilkhu, J. Chalker, P.O'Hare, J. Anderson, D. Hargrave, T. Jacques

**Identification of miRNA and mRNA regulatory networks in the ageing blood-brain barrier: Comparative gene expression studies in human and mouse** P12

*V. Leach*, E. Goodall, J. Cooper-knock, J. Wang, J. Simpson, D. Baker, D. Drew, J. Saffrey, I. Romero, P. Heath, S. Wharton

**Pleomorphic angiomatoid fibrous histiocytoma mimicking CNS infection in a young patient** P13

*M. Aizpurua*, B. Zebian, V. Minchini, H. Sanghvi, C. Dudau, C. Fisher, A. King

<b>Extensive calcifying CNS microangiopathy in a patient with scleroderma</b>	<b>P14</b>
<i>M. Aizpurua</i> , D. Marques-Dias, C. Traokes, I. Bodi	
<b>Hyaline astrocytic inclusions in paediatric onset intractable epilepsy</b>	<b>P15</b>
<i>A. Merve</i> , S. Nagaraju	
<b>Microglial gene expression in glioblastoma using data from the Ivy Glioblastoma Atlas Project</b>	<b>P16</b>
<i>K. Sidlauskas</i> , M Fabian, J.A.R. Nicholl, D. Boche	
<b>The effect of immersion in Fluorinert on the histological properties of fixed human brain tissue.</b>	<b>P17</b>
<i>S. Crampsie</i> , C. Strand, M. Tachrount, D. Thomas, S. Ourselin, J.U. Iglesias, J. Holton	
<b>DNA Methylation in Amyotrophic Lateral Sclerosis</b>	<b>P18</b>
<i>C. Appleby-Mallinder</i>	
<b>Medullary astrocytic populations in Sudden Unexpected Death in Epilepsy</b>	<b>P19</b>
<i>S. Patodia</i> , M. Ellis, S. Sisodia, M. Thom	
<b>Connexins, Aquaporin 4 and PDGFR<math>\beta</math> expression patterns in glioneuronal tumours</b>	<b>P20</b>
<i>J. Liu</i> , C. Reeves, M. Thom	
<b>Identifying the unique vascular response to brain injury in children and adolescents</b>	<b>P21</b>
<i>J. Fullerton</i> , J. Hay, V. Johnson, D. Smith, W. Stewart	
<b>Coexisting Diffuse Lewy Body Disease and Progressive Supranuclear Palsy pathology with partially co-localising tau and alpha-synuclein positive oligodendroglial inclusions</b>	<b>P22</b>
<i>A. Quaegebeur</i> , D. Marques-Dias, C. Troakes, I. Bodi	
<b>A 3D intact tissue analysis approach for the cellular and molecular dissection of a novel BMI1/Ephrin connection in human glioblastomas (GBM)</b>	<b>P23</b>
<i>T. Millner</i> , B. Ricci, S. Marino	
<b>Two cases of low grade astrocytoma with MYB/MYBL1 alterations in patients with refractory epilepsy</b>	<b>P24</b>
<i>A. Kumar</i> , Z. Jaunmuktane, R. Phadke, V. Wykes, A. Miserocchi, A. McEvoy, S. Brandner, M. Thom	
<b>Mild malformation of cortical development with oligodendroglial hyperplasia in temporal lobe epilepsy</b>	<b>P25</b>
<i>A. Kumar</i> , J. Liu, R. Jager, M. Thom	
<b>Cortical demyelination and ‘affected’ normal grey matter in progressive multiple sclerosis</b>	<b>P26</b>
<i>L. Griffiths</i> , R. Evans, M. rees, J. Neal, D. Geveric, R. Reynolds, O. Howell	
<b>The impact of the new WHO 2016 molecular classification on brain tumour diagnoses: a 1-year retrospective audit</b>	<b>P27</b>
<i>O.E.Curran</i> , A. Torgersen, C. Smith	
<b>Grey matter demyelination and synaptopathy in multiple sclerosis</b>	<b>P28</b>

*L. Zoupi*, S. Sekizar, T. Spires-Jones, A. Williams

**Large artery atheromatous disease and cerebral small vessel disease: a post mortem study** P29

*R. Geraldes*, M Eisirri, J. Palace, G. Deluca

**Expression of Ki67 and p53 in a surgical biopsy of progressive multifocal leukoencephalopathy** P30

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

**Gene expression profiling of patient-matched initial and recurrent glioblastoma** P31

*A. Roddy*, P. Stewart, E. Healy, C. Lewis, M. Alderdice, P. Dunne, M. Salto-tellez, T. Flannery, K. Prise, D. Mcart.

**Ectopic lymphoid structures in muscle and PM/Scl autoantibodies in a patient with severe bulbar weakness** P32

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

**Whole genome methylation analysis of CNS tumours: A Study** P33

*R. Laxton*, L. Doey, J. Singh, I. Bodi, A. King, L. Brazil, R. Beany, R. Bhangroo, C. Chandler, K. Ashkan, S. Al-saraj

**Differential synaptic and endosomal changes in the expression of lymphocyte-activation gene3 in Lewy body disorders** P34

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