

## **Symposium 30: Bad Pharma? Improving CNS drug discovery and development with live human CNS tissue**

**Theme: Novel treatments and translational neuroscience**

**Wednesday 12<sup>th</sup> April, 13:20 – 15:00**

**Sponsored by Takeda**

Disorders of the human brain place a significant burden on society and economies on a global scale. The failure of translation of biological effects from preclinical animal models to humans is a major barrier to the development of new and effective medicines for CNS disorders. One reason for this failure is that human cortical microcircuits are more complex and exhibit different physiology and pharmacology to rodent neuronal circuits. As such, performing research in rodent systems has significant limitations and to reduce the risk of failure in the clinic it would be highly preferable to perform basic research in adult human brain tissue to eliminate species difference confounds and develop medicines in assays that are directly derived from the target organ that they are intended to treat. With speakers from industry and academia this symposium will highlight the importance of using live human brain tissue for functional studies in drug discovery and development.

Chair: Professor Roland Jones (University of Bath)

Speaker 1: Professor Ceri Davies (Takeda Pharmaceuticals Ltd, Japan)

'CNS Medicine Discovery: Starting and Finishing with the Patient in Mind'

Speaker 2: Dr Mariana Vargas-Caballero (University of Southampton)

'Aging of cortical synapses: understanding synaptic composition and synaptic loss in adult human neurons'

Speaker 3: Professor Gavin Woodhall (Aston University)

'Network rhythmogenesis in refractory paediatric epilepsy in vitro'

Speaker 4: Dr Mark Cunningham (University of Newcastle)

'Experimental models of cortical rhythms in live human brain tissue: translational biomarkers for CNS drug development'