

## **Symposium 19: Neurobiological roots of brain tumours**

**Sponsored by the British Neuropathological Society and the British Neuro-Oncology Society**

**Theme: Developmental neuroscience**

**Tuesday 11<sup>th</sup> April, 13:20 – 15:00**

Brain cancer represents a major cause of cancer-related mortality and morbidity in young adults and children. There has been very little or no progress with respect to survival rates in the last 20 years for many subtypes of brain cancer (e.g. glioblastoma multiforme). In recent years however, insights into the developmental neurobiology of brain tumours has had a significant impact on our understanding of the molecular and cellular pathogenesis of these tumours. In particular, it has informed the development of new strategies to better classify and stratify these tumours. It is important to stress that some of the candidate tumour drivers and altered cellular processes implicated in brain cancer pathogenesis have been involved also in other nervous system conditions (e.g. RAS/PI3K signalling, machinery controlling cell migration, epigenetic regulators), suggesting potentially common neurobiological roots of different diseases in the nervous system. The current hypothesis is that the context of such alterations is different, thus likely underlying the differential impact on tissue development/homeostasis. Investigating neurobiological roots of one type of disease may therefore inform the other and vice versa. This could have multiple implications ranging from our understanding of disease etiology to selection of druggable targets. There is growing excitement in the field that this knowledge is now on the verge to translate into new therapeutic approaches to tackle these devastating cancers.

Chair: Professor Silvia Marino (Barts and The London Medical School)

Co-chair: Professor Paolo Salomoni (University College London)

Speaker 1: Professor David Rowitch (University of Cambridge)

'Mechanisms of CNA gliogenesis and angiogenesis with links to CNS cancer'

Speaker 2: Professor Paolo Salomoni (UCL)

'Common pathway controlling cell migration in normal and neoplastic neural stem cells'

Speaker 3: Dr David Jones (German Cancer Research Centre - DKFZ, Germany)

'Genomics of brain tumours and its implication for classification and treatment'

Speaker 4: Professor Silvia Marino (Barts and London)

'Epigenetic regulation of gene expression in glioblastoma and neural stem cells'