

Liverpool Neuroscience Day, 2014



This was the second time the Liverpool Neuroscience Group had gathered for a day's celebration of local neuroscience prowess, the first being in January, 2013. Such was the success of our inaugural meeting that members were keen to repeat the format, and our event on 15th May this year did not disappoint.

Professor Bob Burgoyne welcomed delegates, speaking of our ambitions to use this forum not only as an educational tool, but also to foster collaborative ventures. Our membership is a broad sweep across the region and beyond, so this was a truly Liverpool-wide gathering and, though hosted at the University, it embraced all institutions with an interest in seeing neuroscience flourish locally.

We began our event, however, with a splendid plenary from Professor Bill Deakin (Manchester) speaking on '*Glutamate, inflammation and schizophrenia; therapeutic implications and the possibility of prevention*'. Acknowledging that effective treatments for the negative symptoms of schizophrenia were still elusive, there is clearly much to gain by viewing the disease as more than a problem with dopamine, he said. About 120 genes can now account for schizophrenia, many of which implicate impaired NMDA/PSD signalling, so there is much evidence to support a fundamental role for glutamate as well. And what of an immunological basis to schizophrenia? It is insightful that minocycline, a tetracycline with anti-inflammatory, anti-apoptotic effects, is also effective against negative symptoms. Could this provide a therapeutic window early on in the psychosis? Could minocycline and its derivatives prevent onset? Could statins one day have anti-psychotic prophylaxis too? The possibilities, he enthused, are tantalising.

For the remainder of the afternoon, speakers from the University of Liverpool, Liverpool John Moores, and the Walton Centre for Neurology and Neurosurgery were allowed 10 minutes each to describe their research interests and what expertise they could either provide or were seeking. The intention was to encourage as much collaboration at the clinical-basic neuroscience interface, so, for instance, Dan Roberts (LJMU) spoke about his interest in the neuropsychology of language, especially deficits after brain trauma. His call to find patients to assist his study was responded to immediately. Likewise, Michael Jenkinson (UoL) described the brain tumour biobank that has been established since 2010, and can provide all tumour types with matched clinical information and ethical approval for its use. So he called for more users of this invaluable resource.

Other contributions that afternoon were from Susannah Walker (LJMU) who spoke of the importance of touch and its role in social behaviour, especially in social development, and from Sally Williamson (LJMU) on 'spineless neuroscience', or rather her work with invertebrates, especially in

the development of pesticides that can kill caterpillars but not bees. Tony Plagge (UoL) then described the use of mouse models to analyse imprinted genes in neurodevelopmental disorders; and John Quinn (UoL) extolled the importance of 'junk DNA', namely the areas around genes that are constantly changing and evolving, but are able to regulate where, when and how our DNA is expressed – *'the DNA you are born with is not the DNA you end up with'*, he said.

There were a number of presentations on visual phenomena: Martyn Bracewell (Bangor/Walton) described his interest in visuospatial differences on Parkinson's patients; Felicity Wolohan (UoL) described her work on express saccades, and Marco Bertamini (UoL), for instance, told us of his electrophysiological studies on visual asymmetry. There were also presentations on neurodegeneration and repair mechanisms in the brain, first from Gareth Wright (UoL) and then Jerry Turnbull (UoL) on their molecular, biophysical and glycans-biochemical studies especially. Finally, Tom Solomon described the work of his *'Brain Infections UK Group'*, in particular their studies on herpes encephalitis, a serious problem in rural Asia. To this end, a recent collaboration with Bangalore has emerged with exchange programmes for visiting scientists and dual 4-year PhD opportunities. He called to the audience for neuronal culture expertise to help with these studies.

A pleasant Wine Reception concluded our Neuroscience Day, and encouraged much conversation and, undoubtedly, further collaboration. Our thanks to the BNA and to the Faculty of Health and Life Sciences, University of Liverpool, for financially supporting this important event for the region.

Yvonne Allen

BNA Local Group Representative