



Hamilton Institute

Can't move to the rhythm?

Inappropriate neuronal synchrony and oscillations in Parkinson's disease

Dr. Peter Magill
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Abstract:

The overall objective of the Magill Group's research is to provide new insights into the functions and mechanisms of neuronal network activity in the basal ganglia, with a focus on elucidating how mutual interactions between these nuclei, as well as inputs from key extrinsic sources like the cerebral cortex and thalamus, orchestrate the activity patterns that are generated therein. Electrophysiological and anatomical techniques are used to dissect the normal and pathological (Parkinsonian) interactions of neurons within these circuits. This multidisciplinary approach, and the use of two complementary *in vivo* preparations, anaesthetised and freely-moving rodents, enables the group to elucidate the importance and substrates of neuronal network activity at several functional levels.

Bio:

After graduating in Biochemistry at the University of Bath, Dr. Peter Magill joined the MRC Anatomical Neuropharmacology Unit, University of Oxford, to study for his D.Phil. with Dr. Mark Bevan and Professor Paul Bolam in the basal ganglia research group. Following the award of his doctorate in 2001, for which he received the British Neuroscience Association's 2001 Postgraduate of the Year Prize, Dr. Magill remained in the MRC Unit to continue with his studies on the physiological and anatomical properties of the basal ganglia. In 2002, Dr. Magill was elected to a *Fellowship by Examination* at Magdalen College, Oxford, and then, in 2005, to a *Senior Demyship* at the same college. Dr. Magill was appointed to a MRC Senior Scientist position in 2006 and promoted to tenured Programme Leader in 2009.

Venue: Seminar Room, Hamilton Institute, Rye Hall, NUI Maynooth

Time: 2.00 - 3.00pm (followed by tea/coffee)

Travel directions are available at www.hamilton.ie

