

Neurology

<https://www.neurodegenerationresearch.eu/survey/neurology/>

Title of project or programme

Neurology

Principal Investigators of project/programme grant

Title	Forname	Surname	Institution	Country
Professor David	Brooks		MRC Clinical Sciences Centre	UK

Address of institution of lead PI

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Country

- United Kingdom

Source of funding information

Medical Research Council

Total sum awarded (Euro)

12862766.93

Start date of award

01-04-2005

Total duration of award in months

60

The project/programme is most relevant to

- Parkinson's disease
- Huntington's disease

Keywords

Research abstract in English

To investigate in vivo with PET/MRI activation and PET ligand studies:

- * The functional anatomy of motor control in health and disease and its modulation by incentives and aversive stimuli.
- * Changes in release of dopamine and other modulatory neurotransmitters, and opening of voltage gated ion channels during different aspects of motor function.
- * The dysfunctional anatomy and transmitter release underlying bradykinesia and involuntary movements in Parkinson's and Huntington's diseases and dystonias.
- * Central mechanisms of adaptation to lesions of the basal ganglia and motor pathways.
- * Resting patterns of altered dopa and glucose metabolism and receptor binding underlying idiopathic and genetic forms of Parkinson's disease, atypical parkinsonian disorders, and involuntary movement disorders
- * The glial response to cortical and subcortical neurodegenerations.
- * Levels of abnormal protein aggregation (beta amyloid, tau, synuclein deposition) in cortical and subcortical dementias. Using PET as a biomarker, to determine in vivo the efficacy of:
- * Putative neuroprotective agents in modifying progression of subcortical degenerations disorders and influencing glial activation and amyloid deposition.
- *Nerve growth factors in restoring function in Parkinson's disease and, in the future, other subcortical neurodegenerations.
- * Cell implants (fetal midbrain and striatal/retinal pigment epithelial/carotid body/transformed fibroblasts/neural progenitor) in restoring function in Parkinson's and Huntington's diseases.

Lay Summary