

Profiling dementias using complex sound: from symptoms to brain networks.

<https://www.neurodegenerationresearch.eu/survey/profiling-dementias-using-complex-sound-from-symptoms-to-brain-networks-2/>

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Institution

Funder

Wellcome Trust

Contact information of fellow

Country

United Kingdom

Title of project/programme

Profiling dementias using complex sound: from symptoms to brain networks.

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01/08/10

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6.0

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords

Alzheimer | Cognitive impairment | Dementia | Neurodegen

Research Abstract

Detailed pathophysiological understanding of dementias is essential for development and

evaluation of therapies. Here I will adopt a multi-disciplinary behavioural and neuroimaging approach that uses an important and general class of symptoms impaired complex sound processing to probe brain structure and function in two common dementias, Alzheimer's and frontotemporal lobar degeneration. Key goals are to characterise deficits of complex sound (environmental sounds, music, voices, speech); and to relate behavioural signatures to structural and functional MRI changes, cross-sectionally and longitudinally, in patients compared with healthy older controls and individuals at-risk of familial dementias. The emerging paradigm of neurodegenerative network dysfunction will be explored. Subjects will have annual clinical and neuropsychological assessments, structural-volumetric and functional MRI paradigms designed to test specific hypotheses about brain bases for disordered complex sound processing in neurodegenerative dementias, motivated by previous normal and clinical work. MRI data will be analysed with unbiased techniques including morphometric and registration algorithms, statistical parametric mapping, cortical thickness and connectivity measures, and findings integrated with behavioural, genetic and pathological data using parametric and non-parametric statistics. Translational opportunities include improved clinical understanding of key dementia diseases, new diagnostic and progression biomarkers, and identification of pathophysiological mechanisms that could become therapeutic targets.

Types:

Fellowships

Member States:

United Kingdom

Diseases:

Alzheimer's disease & other dementias

Years:

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Database Categories:

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