

HTS – Maximising the value of MRC Brain Banks

<https://neurodegenerationresearch.eu/survey/hts-maximising-the-value-of-mrc-brain-banks/>

Principal Investigators

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Country

United Kingdom

Title of project or programme

HTS - Maximising the value of MRC Brain Banks

Source of funding information

MRC

Total sum awarded (Euro)

€ 2,333,226

Start date of award

01/09/2013

Total duration of award in years

3.3

The project/programme is most relevant to:

Neurodegenerative disease in general

Keywords

Research Abstract

The aim of this study to maximise the value of the brain tissue samples available to the research community in the four MRC-funded brain banks by the systematic analysis and integration of data from genomic studies on cases currently available for research in the banks. . All MRC brain banks have ethics approval to function as tissue banks and to collect, store and release tissue samples and data from consented donors. Consent/authorisation for genetic research is

recorded and will be used to identify cases for inclusion in this study. Governance mechanisms include local NHS governance, Human Tissue Authority licences and Healthcare Improvement Scotland accreditation, along with MRC policies on research governance. This study will involve the investigation of normal brains from a wide age range and brains from well-characterised disease cohorts in the MRC brain banks. We aim to genetically characterise 1500 representative brains with Alzheimer disease, dementia with Lewy bodies /Parkinson disease, vascular dementia, frontotemporal dementia/motor neurone disease, Creutzfeldt-Jakob disease and controls. The data generated will greatly enrich the clinical and neuropathological data currently associated with these samples. This work will therefore provide major added value to the existing brain banks, opening up totally new opportunities for mechanistic and translational research in neurodegeneration and brain aging. This work links strategic priorities of MRC and the NHS: understanding dementia and the role of genetics in disease. The MRC brain banks in Edinburgh, Kings College, Newcastle and Oxford will all contribute tissue samples to this study to maximise throughput. Rapid progress will be ensured by the experience of the investigators, the substantial research infrastructure in all four centres, the existing availability of very large numbers of high quality frozen and fixed tissue samples in the MRC Brain Banks, and by outsourcing both nucleic acid extraction and sequencing, with in-house bioinformatics. All raw data generated will be stored in a secure database and made openly available to researchers using samples from the brain banks. In the short term, the data generated is likely to lead to the identification of new highly-penetrant neurodegenerative disease genes and novel disease phenotypes. In the longer term, the data will also will provide a unique resource to help the international research community define the role and clinicopathological spectrum of known genetic causes of neurodegeneration, enable the genetic recall of brain tissue by international research groups studying neurodegeneration and allow researchers to formulate novel hypotheses based on the data from this “deep genotyping” approach.

Lay Summary

Further information available at:

Types:

Investments > €500k

Member States:

United Kingdom

Diseases:

Neurodegenerative disease in general

Years:

2016

Database Categories:

N/A

Database Tags:

N/A