PaMIR: Parkinson MR imaging repository

https://www.neurodegenerationresearch.eu/survey/pamir-parkinson-mr-imaging-repository/

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Title of project or programme

PaMIR: Parkinson MR imaging repository

Source of funding information

Parkinson's UK

Total sum awarded (Euro)

€ 890,903

Start date of award

14/01/2014

Total duration of award in years

3.0

The project/programme is most relevant to:

Parkinson's disease & PD-related disorders

Keywords
Research Abstract

There is a recognized need for novel biomarkers to improve early diagnosis and monitoring of Parkinson’s. Different technologies are currently being researched for identification and qualification of such biomarkers. We, and others have recently shown that magnetic resonance imaging (MRI) at 3 Tesla holds unique promise for direct visualization of substantia nigra (SN) degeneration as well as for the study of dysfunctional brain networks. Our preliminary results suggest that SN depigmentation and altered brain networks correlate with stage, severity and subtype of the disease. We hypothesize that multimodal MRI at 3T is ideally suited to improve

diagnosis and to monitor the progression of Parkinson’s . MRI biomarker research in Parkinson’s is an emerging field with limited and often controversial findings. To overcome this we propose to build a large dedicated MRI imaging repository in early Parkinson’s to assess the diagnostic accuracy and predictive power of novel MRI biomarkers. Candidate MRI markers were selected from meta-analyses of published evidence and our own pilot and proof of concept studies. We plan to collect neuromelanin, iron, diffusion tensor and resting state functional MRI at 3T in 300 people with early Parkinson’s co recruited from the Tracking Parkinson’s longitudinal cohort study. Control data will be included from 100 age matched healthy controls. 150 people with and 50 without the condition will be rescanned after 18 months to assess progression. This will allow creation of unique virtual Parkinson’s Brain Bank, which will be the largest repository of advanced MRI linked to clinical, genetic and potentially proteomic phenotyping.

Lay Summary
Further information available at:

Types:
Investments > €500k

Member States:
United Kingdom

Diseases:
Parkinson's disease & PD-related disorders

Years:
2016

Database Categories:
N/A

Database Tags:
N/A