

Parkinson's Disease: Genes, Environments and their Interplay

<https://neurodegenerationresearch.eu/survey/parkinsons-disease-genes-environments-and-their-interplay/>

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Country

Sweden

Title of project or programme

Parkinson's Disease: Genes, Environments and their Interplay

Source of funding information

Swedish Research Council

Total sum awarded (Euro)

€ 565,832

Start date of award

01-01-2014

Total duration of award in years

4

The project/programme is most relevant to:

Parkinson's disease & PD-related disorders

Keywords

Research Abstract

The primary purposes of the proposed research are 1) to examine the importance of environmental risk factors such as smokeless tobacco use, physical activity, personality, and stress in Parkinson's disease (PD), 2) to assess whether psychiatric conditions, such as depression, contribute to developing the disease, and 3) to examine the role of interactions between genes and environmental exposures in Parkinson's disease. This project builds on our

previous project by evaluating new exposures and medical conditions. It extends the work based on the Swedish Twin Registry to the entire Swedish population. Taking advantage of the Multi-Generation Register, we keep the familial study design. We previously identified 132 twins with a clinical PD diagnosis. There are 74 new twins with suspected PD. In addition, there are almost 800 twins with a PD diagnosis in the national Patient Register. Using the entire Swedish population as the source population, we have identified almost 19,000 PD cases between 2001-2007. For the twin studies, we will use a co-twin control design that controls for familial factors. For the national register-based studies, we will use a prospective cohort design. We will perform genome-wide analyses of DNA methylation in twin pairs discordant for PD. Potential candidate genes and gene-environment interactions will be further evaluated in collaboration with the Genetic Epidemiology of PD (GEO-PD) consortium in a sample of 34,000 PD cases and 31,000 controls.

Lay Summary

Further information available at:

Types:

Investments > €500k

Member States:

Sweden

Diseases:

Parkinson's disease & PD-related disorders

Years:

2016

Database Categories:

N/A

Database Tags:

N/A