

Gene-environment interactions as an approach to modelling Parkinson's disease

<https://www.neurodegenerationresearch.eu/survey/gene-environment-interactions-as-an-approach-to-modelling-parkinson%c2%92s-disease/>

Principal Investigators

Kiah McCabe

Institution

National University of Ireland, Galway

Contact information of lead PI

Country

Ireland

Title of project or programme

Gene-environment interactions as an approach to modelling Parkinson's disease

Source of funding information

Irish Research Council

Total sum awarded (Euro)

€ 87,000

Start date of award

09/01/2013

Total duration of award in years

4

Keywords

Research Abstract

If funded, this project will address a major issue in Parkinson's disease research which is the limitations of the current animal models of the human condition. In humans, Parkinson's disease is caused by interactions between underlying genetics and environmental risk factors. However, in preclinical models, the disease is widely modelled using a single genetic or environmental insult. Unfortunately, this single-insult approach has limited these models on a number of important measures of validity, and has been proposed as one of the reasons underlying the high failure rate of experimental anti-Parkinsonian compounds in clinical trials. The limitations of existing models have led to a drive to develop more relevant models of Parkinson's disease with

improved validity. Therefore the aim of this project is to develop and characterise novel models of human Parkinson's disease in the rat using relevant gene-environment interactions. To do so, rats will be exposed to relevant disease-associated genetic and environmental risk factors, and the impact on motor function and underlying neuropathology will be assessed. Our ultimate aim is to generate a relevant model of Parkinson's disease that will provide novel insights into the pathogenesis of the human condition and facilitate the development of novel treatments for it.

Further information available at:

Types:

Investments < €500k

Member States:

Ireland

Diseases:

N/A

Years:

2016

Database Categories:

N/A

Database Tags:

N/A