

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

<https://neurodegenerationresearch.eu/survey/gene-environment-interactions-as-an-approach-to-modelling-parkinson%20s-disease/>

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### 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