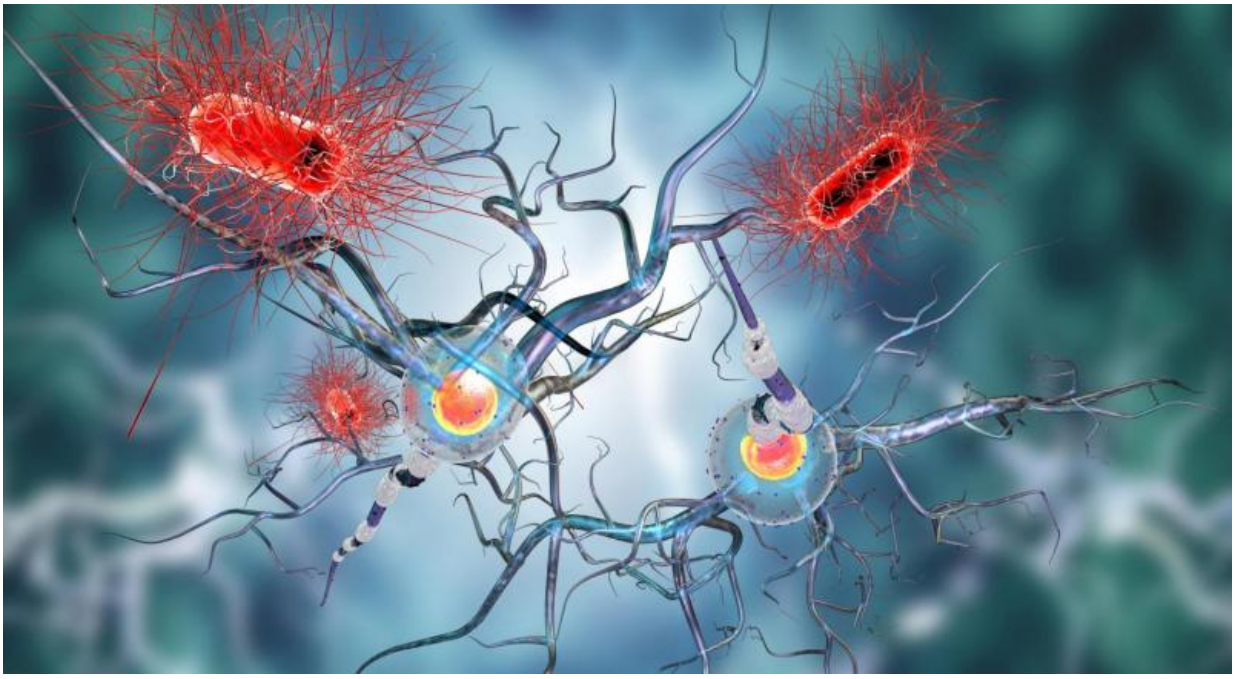
Genetic clue to how patients respond to treatment for Parkinson's Disease

June 23 2016



Researchers have identified a gene variant which explains why some patients with Parkinson's Disease respond well to drug treatment and other do not.

The findings could help to predict treatment responses and tailor therapy to individuals.

Dr Joanne Knight from the Data Science Institute and Faculty of Health and Medicine at Lancaster University was a senior author of the research, featured in Nature Reviews Neurology.

The drug Rasagiline is used to treat the symptoms of Parkinson's Disease which include muscle tremors and stiffness.

The response to the drug is typically good in the early stages of the disease but diminishes over time for reasons that are not understood.

The researchers analysed the genetic data from 692 participants of the ADAGIO trial, the largest published trial to look at clinical responses to rasagiline.

With her expertise in handling large genetic datasets, Dr Knight helped identify the two gene variants associated with improved responses to rasagiline in early Parkinson disease (PD).

She said: "It was exciting to be able to examine data from a clinical trial. Genetic studies of drug response are often based only on memory of the response rather than systematically recorded data. These findings need to be interpreted with caution, as in all studies replication is needed. However, we hope that such studies will encourage other companies to make data from clinical trials available to researchers."

More information: Ian Fyfe. Parkinson disease: Dopamine receptor variants improve response to rasagiline in PD, *Nature Reviews Neurology* (2016). DOI: 10.1038/nrneurol.2016.83

Provided by Lancaster University