**New research suggests bowel cancer medication could help combat early-onset Parkinson’s disease**

Posted by [**ap507**](http://www2.le.ac.uk/author/ap507) at Mar 14, 2017 09:26 AM | [**Permalink**](http://www2.le.ac.uk/offices/press/press-releases/2017/march/new-research-suggests-bowel-cancer-medication-could-help-combat-early-onset-parkinson2019s-disease)

**Issued by University of Leicester Press Office on 13 March 2017**

**Images of the research team and fruit flies are available here:**[**https://www.dropbox.com/sh/l0uknlo02pnko3w/AAD7lGwiNDHqswS7v0j54sSNa?dl=0**](https://www.dropbox.com/sh/l0uknlo02pnko3w/AAD7lGwiNDHqswS7v0j54sSNa?dl=0)

Medical Research Council-funded University of Leicester study shows folinic acid can protect neurons in fruit flies

People with certain forms of early-onset Parkinson’s disease could potentially benefit from taking a medication used to treat certain forms of cancer, according to new research by University of Leicester scientists and funded by the Medical Research Council.

The study, which has been published in *Science Matters*, suggests that folinic acid, which is used in medications to treat bowel cancer, could also potentially protect neurons associated with Parkinson’s disease.

Dr Miguel Martins from the MRC Toxicology Unit at the University of Leicester explained: “Parkinson’s disease is a disabling disorder for which no cure is yet available; further, after dopaminergic neurons are lost, only a few palliative treatment options for Parkinson’s symptoms are available. Therefore, treatments that either prevent or delay the onset of the disease at an early stage are needed.

“Folinic acid is already approved and used for applications in the clinic as an adjuvant during chemotherapy and can be administered orally, as a dietary supplement, or intravenously.

“Thus, the drug safety risk is low, and drug development for repurposing folinic acid as a treatment for Parkinson’s disease would be faster than for a novel drug.

“With this in mind, it seems worthwhile to further test the supplementation of folinic acid in clinical trials as a potential preventative or palliative therapeutic for PD and to expand the repertoire of treatment options.”

The researchers studied fruit flies with faulty mitochondria caused by a mutation that mimics Parkinson’s disease in humans.

Previous research by the team has shown that folic acid protects neurons in models of Parkinson’s disease. Folinic acid is related to folic acid but is metabolically more active.

In contrast to folic acid, folinic acid taken orally can penetrate into the human brain.

The paper, ‘Folinic acid is neuroprotective in a fly model of Parkinson’s disease associated with pink1 mutations’, published in *Science Matters,* is available here: [**https://sciencematters.io/articles/201702000009**](https://sciencematters.io/articles/201702000009)

**ENDS**

**Notes to editors:**

For more information and to arrange interviews contact Dr Miguel Martins on [**lmm24@leicester.ac.uk**](mailto:lmm24@leicester.ac.uk).

The **Medical Research Council** is at the forefront of scientific discovery to improve human health. Founded in 1913 to tackle tuberculosis, the MRC now invests taxpayers’ money in some of the best medical research in the world across every area of health. Thirty-one MRC-funded researchers have won Nobel prizes in a wide range of disciplines, and MRC scientists have been behind such diverse discoveries as vitamins, the structure of DNA and the link between smoking and cancer, as well as achievements such as pioneering the use of randomised controlled trials, the invention of MRI scanning, and the development of a group of antibodies used in the making of some of the most successful drugs ever developed. Today, MRC-funded scientists tackle some of the greatest health problems facing humanity in the 21st century, from the rising tide of chronic diseases associated with ageing to the threats posed by rapidly mutating micro-organisms. [**www.mrc.ac.uk**](http://www.mrc.ac.uk/)