

Role of HO-1 in Aging & Parkinsonian Neural Tissues III

<https://neurodegenerationresearch.eu/survey/role-of-ho-1-in-aging-parkinsonian-neural-tissues-iii/>

Principal Investigators

Schipper, Hyman M

Institution

Jewish General Hospital (Montreal)

Contact information of lead PI

Country

Canada

Title of project or programme

Role of HO-1 in Aging & Parkinsonian Neural Tissues III

Source of funding information

CIHR

Total sum awarded (Euro)

€ 490,048

Start date of award

01/04/2013

Total duration of award in years

5

Keywords

Research Abstract

Parkinson disease (PD) is the second most common neurodegenerative disorder in the developed world. Although several drugs are available to alleviate some of the symptoms of PD (such as tremor or stiffness), we sorely lack medications which slow the destruction of nerve cells in the affected brain regions. Two abnormalities observed in the PD brain which are thought to contribute to nerve cell damage in this disease are 1) the excessive accumulation of iron and 2) injury to mitochondria, the cells' power generators. Our laboratory has collected evidence that both of these abnormalities may be caused by an enzyme called heme oxygenase-1 (HO-1) which is overactive in the brains of PD patients. We recently created a mouse model that mimics the increased brain HO-1 seen in individuals with PD. In the current

proposal, we will document the deleterious effects of this excessive HO-1 on the structure and chemistry of the brain and the behaviour of the animals. We will then try to cure these mice and other experimental models of PD with medications that purge the brain of excess iron and a new drug we are developing that blocks the action of HO-1. If successful, this study may herald a novel and rational approach to the prevention of brain cell loss in PD and provide fresh hope to sufferers of this debilitating condition.

Further information available at:

Types:

Investments < €500k

Member States:

Canada

Diseases:

N/A

Years:

2016

Database Categories:

N/A

Database Tags:

N/A