

# Role of translational mechanisms in the retrograde regulation of Synaptic homeostasis

<https://neurodegenerationresearch.eu/survey/role-of-translational-mechanisms-in-the-retrograde-regulation-of-synaptic-homeostasis/>

## Principal Investigators

Cooper, Ellis J

## Institution

McGill University

## Contact information of lead PI

### Country

Canada

## Title of project or programme

Role of translational mechanisms in the retrograde regulation of Synaptic homeostasis

## Source of funding information

CIHR

## Total sum awarded (Euro)

€ 525,413

## Start date of award

01/10/2012

## Total duration of award in years

5.0

## The project/programme is most relevant to:

Parkinson's disease & PD-related disorders

## Keywords

### Research Abstract

It has been recognized for some time that the stability of neuronal activity in the nervous system hinges on a coordinated action of different molecular mechanisms that respond to changes in synaptic activity. We provide evidence that de novo protein synthesis in response to changes in synaptic activity leads to generation of a signal that feeds back to the nerve terminals to regulate the level of neurotransmitter release. We propose to use the powerful genetic tools

available in *Drosophila* to unravel the molecular mechanisms that participate in the regulation of this process. Our preliminary findings suggests that genes that have been associated with human disease, namely Parkinson's disease, may play an important role in this process. Therefore, our findings may provide important steps towards our understanding of how neuronal activity is regulated and how it could be affected during disease.

### **Lay Summary**

**Further information available at:**

#### **Types:**

Investments > €500k

#### **Member States:**

Canada

#### **Diseases:**

Parkinson's disease & PD-related disorders

#### **Years:**

2016

#### **Database Categories:**

N/A

#### **Database Tags:**

N/A