

# Effects of Oxidative / Nitrosative Stress and Aging on Cholinergic Neuron Function

<https://www.neurodegenerationresearch.eu/survey/effects-of-oxidative-nitrosative-stress-and-aging-on-cholinergic-neuron-function/>

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### Country

Canada

## Title of project or programme

Effects of Oxidative / Nitrosative Stress and Aging on Cholinergic Neuron Function

## Source of funding information

CIHR

## Total sum awarded (Euro)

€ 405,262

## Start date of award

01/10/2011

## Total duration of award in years

5

## Keywords

### Research Abstract

The proposed studies investigate changes that occur in nerve cells due to chemical alterations in the aging brain caused by neurodegeneration, hypertension, blood vessel disease that leads to decreased oxygen and blood flow, or due to stroke. A consequence of these pathological changes is inability of nerve cells to effectively communicate information to fulfill their physiological functions. Cholinergic nerves in brain are particularly susceptible to damage by these pathological conditions, and dysfunction of these nerves can lead to memory loss, dementia, changes in control of blood vessels and blood flow. This could arise if cholinergic neurons are vulnerable to changes in the brain microenvironment that are increased during

aging. To illustrate this, amyloid peptide levels increase before cognitive deficits begin and are likely responsible for at least some of the oxidative stress that occurs very early in mild cognitive impairment or in AD.

**Further information available at:**

**Types:**

Investments < €500k

**Member States:**

Canada

**Diseases:**

N/A

**Years:**

2016

**Database Categories:**

N/A

**Database Tags:**

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