Regulation of neuronal resilience in Alzheimer’s disease by the STI1/Prion protein complex

https://neurodegenerationresearch.eu/survey/regulation-of-neuronal-resilience-in-alzheimers-disease-by-the-sti1prion-protein-complex/

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Canada

Title of project or programme

Regulation of neuronal resilience in Alzheimer's disease by the STI1/Prion protein complex

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CIHR

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5.0

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords
Research Abstract

Increased life expectancy of the Canadian population has led to catastrophic predictions regarding the rise in the number of individuals with dementia. The Alzheimer’s Society of Canada has estimated that the number of Canadians with Alzheimer’s and related dementia will

increase substantially from 500,000 people to 1.1 million in the next 30 years. Mitigating the burden of neurodegenerative diseases is considered the next challenge to improve health in the aging population. For that, it is imperative to understand how brain cell toxicity is modulated in Alzheimer’s disease and related dementia and to identify novel ways to prevent or cure these diseases. Our work has identified a novel feature in neurons that can be used to protect these brain cells against toxic insults in Alzheimer’s disease. By genetically manipulating mice we have obtained evidence that support the role of a new protein in mitigating death of neurons induced by an Alzheimer’s disease toxin. In this proposal, we will test the hypothesis that this novel protein can be used to regulate how neurons respond to Alzheimer’s disease-related toxic insults. For that, we will use both neurons cultured in a dish and mouse models that mimic the pathological hallmarks of Alzheimer’s disease. Our work will contribute to the understanding of how one can increase the resistance of neurons to Alzheimer’s disease and will test the possibility that these novel findings can be used to develop new therapeutic approaches in dementia.

Lay Summary
Further information available at:

Types:
Investments > €500k

Member States:
Canada

Diseases:
Alzheimer's disease & other dementias

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N/A

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