The cellular basis of neurovascular coupling in the cerebral cortex.

https://neurodegenerationresearch.eu/survey/the-cellular-basis-of-neurovascular-coupling-in-the-cerebral-cortex/

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Canada

Title of project or programme

The cellular basis of neurovascular coupling in the cerebral cortex.

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CIHR

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€ 501,861

Start date of award

01/07/2015

Total duration of award in years

5.0

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords
Research Abstract

Blood supply to the brain is highly regulated and is distributed where neurons are active at performing a task. This control is so precise that it is used to map neuronal activity in brain imaging techniques under both health and disease conditions. However, how the brain can direct blood to the active neurons is still poorly understood and, particularly, in disease conditions when the dialogue between neurons and blood vessels is jeopardized. Our work will

focus on the cerebral cortex, a region important in attention, cognition, perception and many other functions. We will study the role of specific groups of neurons within the cortex, and we will evaluate how modulating cortical activity acutely or chronically like in disease conditions will affect this tight coupling between blood supply and neuronal activity. Our findings should help understand and interpret normal and pathological brain imaging data, and show how diseases, such as Alzheimer’s disease, can alter the dialogue between neurons and blood vessels.

Lay Summary
Further information available at:

Types:
Investments > €500k

Member States:
Canada

Diseases:
Alzheimer's disease & other dementias

Years:
2016

Database Categories:
N/A

Database Tags:
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