Cohort to illuminate Neurodegeneration, Genetics, Imaging Associations and Leukoaraiosis (CONGENIAL)

https://www.neurodegenerationresearch.eu/survey/cohort-to-illuminate-neurodegeneration-genetics-imaging-associations-and-leukoaraiosis-congenial/

Principal Investigators

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Institution

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Contact information of lead PI
Country

Canada

Title of project or programme

Cohort to illuminate Neurodegeneration, Genetics, Imaging Associations and Leukoaraiosis (CONGENIAL)

Source of funding information

CIHR

Total sum awarded (Euro)

€ 597,613

Start date of award

01/07/2015

Total duration of award in years

4.0

The project/programme is most relevant to:

Neurodegenerative disease in general

Keywords
Research Abstract
For decades, conventional approaches to neurodegenerative research have not paid much attention to the diversity within clinical diagnostic groups when looking at brain-behavior

relationships. Analyzing correlations using discrete clinical diagnostic groups is limited as it fails to capture the entirety of an individual’s unique genome. The complex interplay between genetic and the clinical expression of the disease needs to be addressed by large-scale prospective clinical-imaging-genetic studies. In the last two decades, the Sunnybrook Dementia Study has been acquiring longitudinal data from consenting patients assessed in the Cognitive Neurology Memory clinics at Sunnybrook Health Sciences Centre, U of Toronto, who undergo standardized imaging, cognitive, mood and daily function measures and give blood samples for genetic testing. We have accumulated over 1200 participants, 830 blood samples and 170 autopsies. We propose to capitalize on this well-characterized group of patients to do clinical-imaging-genetic investigations with our collaborators at the Centre for Research in Neurodegenerative Disease (CRND), using our banked DNA samples, neuroimaging analysis and postmortem techniques. The main goal is to discover novel contributions of genetic variants to neuroimaging measures across the entire cohort blinded to clinical diagnosis. Other goals include evaluating the effects of genetic variation and small vessel disease burden on clinical progression rates, neuropsychiatric symptoms, and cognitive patterns. The results will provide new insights into correlations between genetic markers and areas of brain shrinkage associated with different types of dementia, as well as small vessel disease. Understanding these patterns may help to improve diagnosis, to customize treatment, and to better monitor disease-modifying therapies currently under investigation should they become applicable to everyday practice.

Lay Summary
Further information available at:

Types:
Investments > €500k

Member States:
Canada

Diseases:
Neurodegenerative disease in general

Years:
2016

Database Categories:
N/A

Database Tags:
N/A