BRIDGET: BRain Imaging, cognition, Dementia and next generation GEnomics: a Transdisciplinary approach to search for risk and protective factors of neurodegenerative disease

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France|Austria|Canada|Germany|Netherlands|United Kingdom

Title of project or programme

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Source of funding information

JPND-JPcofuND

Total sum awarded (Euro)

€ 3,111,460

Start date of award

01/01/2016

Total duration of award in years

3.0

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords
Research Abstract
Establishing efficient prevention strategies for dementia and Alzheimer's disease is a major health priority. Since the cascade of events leading to Alzheimer's disease begins many years before the disease is de- tected, efficient prevention should be initiated early. This requires identifying individuals in the general pop- ulation who are at high risk of developing dementia. Studying markers of brain structure using magnetic resonance imaging (MRI), which can show early alterations in advance of clinical symptoms, can facilitate this process. Exploring the genes contributing to changes in brain structure is also an essential step for identifying novel drug targets. We will use studies from Europe, Japan and the United States comprising >35,000 voluntary participants who underwent brain MRI, evaluation of memory and intellectual abilities, and continued monitoring to detect dementia. We will use next-generation sequencing to decipher the participants' genetic make-up. We aim to identify genes influencing subtle changes in brain structure, e.g. the change in volume and shape of the hippocampus, a brain structure where memories are "stored". We will use elaborate methods to account for the influence of factors that we are exposed to in the environment. Finally, we will examine whether identified genes predict decline in memory performance and an increased risk of Alzheimer's disease.

Lay Summary
Further information available at:

Types:
Investments > €500k, JPND Projects

Member States:
Austria, Canada, France, Germany, JPND, Netherlands, United Kingdom

Diseases:
Alzheimer's disease & other dementias

Years:
2016

Database Categories:
N/A

Database Tags:
N/A