Multiregional rtfMRI Neurofeedback for the Prevention of Alzheimer's Disease

Fact Sheet

Project information

**NPAD**

Grant agreement ID: 707730

[Project website](#)

Status
Closed project

Start date 1 May 2016 End date 30 April 2018

Funded under: H2020-EU.1.3.2.

Overall budget: € 158 121,60

Coordinated by: FUNDACIO BARCELONABETA BRAIN RESEARCH CENTER Spain

EU contribution € 158 121,60

Objective

This project aims at predicting early cognitive decline using a neurofeedback performance endophenotype based on realtime functional magnetic resonance imaging in a population at risk for Alzheimer's Disease (AD). It has been proven that AD biomarkers change decades before the development of symptoms. In addition, there is a lack of robust hypersensitive methods capable of predicting impending cognitive decline in healthy subjects at risk. This constitutes a crucial obstacle for the implementation of AD prevention trials. To address this, we will identify and characterize a novel neurofeedback performance endophenotype in a subsample from a cohort of 2743 cognitively healthy volunteers at risk for AD. This will be based on state-of-the-art neuroimaging technology, in combination with a novel sensitive neuropsychological test that detects subtle alterations in episodic memory, which has been validated for our cohort. Then, we will evaluate the impact on our newly developed neurofeedback performance endophenotype of factors known to be related to AD such as various clinical and lifestyle variables, amyloid deposition, genetic background (including, but not restricted to APOE4) and most importantly cognitive reserve. A specific aim is to test the hypothesis that neurofeedback performance can become a reliable proxy to measure cognitive reserve. Finally, we will develop a novel statistical predictive model, featuring all the relevant genetic and clinical variables and will assess the capacity of neurofeedback performance for predicting impending cognitive decline during a two-year period in AD descendants.
Field of Science
magnetic resonance imaging
alzheimer

Programme(s)
H2020-EU.1.3.2. - Nurturing excellence by means of cross-border and cross-sector mobility

Topic(s)
MSCA-IF-2015-EF - Marie Skłodowska-Curie Individual Fellowships (IF-EF)

Call for proposal
H2020-MSCA-IF-2015

See other projects for this call

Funding Scheme
MSCA-IF-EF-ST - Standard EF

Coordinator
FUNDACIO BARCELONABETA BRAIN RESEARCH CENTER
Address
Calle Wellington 30
08005 Barcelona
Spain

Activity type
Research Organisations

EU Contribution
€ 158 121,60

Website
Contact the organisation

Share this page

Last update: 4 May 2017
Record number: 203100