

# Novel Detection of Early Cognitive and Functional Impairment in the Elderly

<https://neurodegenerationresearch.eu/survey/novel-detection-of-early-cognitive-and-functional-impairment-in-the-elderly/>

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### Country

USA

## Title of project or programme

Novel Detection of Early Cognitive and Functional Impairment in the Elderly

## Source of funding information

NIH (NIA)

## Total sum awarded (Euro)

€ 2,455,669.72

## Start date of award

01/02/2015

## Total duration of award in years

2

## The project/programme is most relevant to:

Alzheimer's disease & other dementias

## Keywords

Acquired Cognitive Impairment... Aging... Alzheimer's Disease... Alzheimer's Disease including Alzheimer's Disease Related Dementias (AD/ADRD)... Basic Behavioral and Social Science... Behavioral and Social Science... Brain Disorders... Clinical Research... Clinical Research - Extramural... Dementia... Minority Health for IC Use... Neurodegenerative... Neurosciences... Prevention... Rehabilitation

### **Research Abstract**

? DESCRIPTION (provided by applicant): There is growing recognition that conditions such as Alzheimer's disease (AD) occur years before a formal diagnosis is rendered and that available cognitive and functional assessment measures are not sufficiently sensitive to detect early changes associated with the condition. This is critical since new treatment approaches are likely to be most effective in the earliest stages of disease. Further, FDA guidelines indicate that changes in biomarker measures will not be considered as surrogate outcomes in clinical trials of emerging therapies for early AD, unless they are also shown to have a clinical impact. The proposed investigation is highly innovative and designed to examine the efficacy of the newly developed and novel cognitive tests of cued recall and semantic interference (LASSI-L), time and event related prospective memory (MPMT), and novel computer-based functional task simulations (FTS) in detecting subtle cognitive and functional impairments, and progression of these impairments over time. Our sample will include Spanish-speaking and English-speaking older adults diagnosed with traditional neuropsychological measures and clinical evaluations as: amnesic MCI (aMCI), pre-clinical MCI (PreMCI), or cognitively normal (NC). In the proposed investigation, we will further establish the reliability and validity of our novel cognitive and functional measures in distinguishing between diagnostic groups and predicting progression of cognitive and functional decline over time. We also predict that among aMCI and PreMCI subjects, baseline and change scores on the LASSI-L, MPMT, and FTS will exhibit stronger associations with increasing MRI atrophy over a minimum three-year period relative to traditional neuropsychological measures. An exciting exploratory aim of the study will be the exploration, among a subsample of PreMCI and aMCI participants, the association between amyloid, tau, and phosphorylated tau biomarker levels in the CSF and performance on the LASSI-L, MPMT and FTS.

### **Lay Summary**

PUBLIC HEALTH RELEVANCE: This is an innovative longitudinal study that will examine the utility of two novel cognitive measures (LASSI-L; MPMT) and a series of newly developed computer-based functional task stimulations (FTS) in the detection of amnesic mild cognitive impairment (aMCI) and PreMCI versus normal elderly subjects. We will examine performance on these novel measures with changes in brain MRI volumes over time as well as associations with amyloid, tau, and phosphorylated tau biomarker levels in the CSF.

### **Further information available at:**

#### **Types:**

Investments > €500k

#### **Member States:**

United States of America

#### **Diseases:**

Alzheimer's disease & other dementias

**Years:**

2016

**Database Categories:**

N/A

**Database Tags:**

N/A