

# Characterizing Cognitive Decline in Late Life Depression: The ADNI-D Project

<https://www.neurodegenerationresearch.eu/survey/characterizing-cognitive-decline-in-late-life-depression-the-adni-d-project/>

## Principal Investigators

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### Country

USA

## Title of project or programme

Characterizing Cognitive Decline in Late Life Depression: The ADNI-D Project

## Source of funding information

NIH (NIA)

## Total sum awarded (Euro)

€ 3,164,688.99

## Start date of award

01/08/2013

## Total duration of award in years

1

## The project/programme is most relevant to:

Alzheimer's disease & other dementias

## Keywords

geriatric depression, Impaired cognition, Amyloid deposition, Cerebrovascular Circulation, brain abnormalities

## Research Abstract

DESCRIPTION (provided by applicant): The overall goal of this program of research is to

identify the neurobiological substrates of cognitive impairment (CI) in late life depression (LLD). CI represents one of the most debilitating and costly aspects of LLD and occurs in up to 60% of depressed older adults. While it is recognized that: 1) LLD is a relapsing-remitting disorder, 2) CI in some cognitive domains improves following remission of LLD (remediable CI) but the majority of CI persist, 3) LLD is a commonly co-occurring feature of several neurodegenerative diseases in older adults, and 4) LLD is associated with accelerated cognitive decline in older adults; the cause(s) of CI in LLD are not well understood. Therefore the identification of neurobiological substrates of CI represents a significant opportunity to improve health and disability outcomes for older adults with depression. Previous work has focused primarily on the association of white matter signal hyperintensities (WMSH) and CI in LLD but recent findings demonstrating prominent cortical thickness and cerebral blood flow abnormalities in LLD suggest these brain abnormalities may also be primary mechanisms contributing to CI. However, differentiating the impact of concurrent neurodegenerative disease(s) such as cerebrovascular disease and incipient Alzheimer's disease (AD) on CI in LLD has represented a significant obstacle. With the advent of new MRI techniques, including radioligands to evaluate amyloid deposition in vivo and the establishment of national research consortiums developed to identify neural substrates of CI in older adults there is now a tremendous opportunity to clarify the neurobiological substrates of CI in LLD. The specific goals of this investigation are: 1) To clarify the impact of cerebral blood flow, cortical thickness, and amyloid deposition on CI in LLD, and 2) To determine the impact of depression on course of cognitive decline in older adults. These goals will be achieved by enrolling 120 subjects with LLD into an adjunct arm of the Alzheimer's Disease Neuroimaging Initiative study (ADNI-II). ADNI-II is a five-year 69 million dollar study conducted to identify neuroimaging abnormalities and biomarkers of Alzheimer's disease and cognitive decline in older adults. For the proposed five year study, 120 LLD subjects will be enrolled at three recruitment sites and will participate in two evaluations. At baseline LLD participants will be evaluated to obtain neuroimaging and clinical data (depression, cognitive, genetic). After 2.5 years a clinical follow up assessment (cognitive, depression) will be conducted. Data from 300 non-depressed and non-demented older adults will be obtained from the ADNI-II study for between group comparisons. All data collected would be made available to scientists worldwide.

### **Lay Summary**

**PUBLIC HEALTH RELEVANCE:** Cognitive impairment (CI) represents one of the most debilitating and costly aspects of late life depression (LLD) and CI occurs in up to 60% of depressed older adults. The purpose of this project is to identify the impact of specific neurobiological characteristics on CI and accelerated cognitive decline in LLD, including cerebral blood flow, cortical atrophy, and amyloid deposition. The information obtained from this study will lead to improved diagnostic approaches and treatment trials aimed at cognitive impairment and LLD, which will ultimately lead to improved health outcomes and reduced healthcare costs.

### **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