

Cognitive resilience to Alzheimer neuropathologic changes in the Honolulu-Asia Aging Study and the Nun Study

<https://neurodegenerationresearch.eu/survey/cognitive-resilience-to-alzheimer-neuropathologic-changes-in-the-honolulu-asia-aging-study-and-the-nun-study/>

Principal Investigators

WHITE, LON RAY

Institution

PACIFIC HEALTH RESEARCH/ EDUCATION INST

Contact information of lead PI

Country

USA

Title of project or programme

Cognitive resilience to Alzheimer neuropathologic changes in the Honolulu-Asia Aging Study and the Nun Study

Source of funding information

NIH (NIA)

Total sum awarded (Euro)

€ 2,422,645.87

Start date of award

01/09/2016

Total duration of award in years

1

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)... Behavioral and Social Science... Brain

Research Abstract

PROJECT SUMMARY/ABSTRACT Autopsy research has demonstrated that some individual who appeared to be cognitively normal in their final years had sufficient brain lesions at death to support a diagnosis of Alzheimer's disease (AD). Clearly the clinical and pathologic markers of the disease are not perfectly concordant. This phenomenon has been interpreted as implying that some individuals possess a special resilience to the cognitive decline commonly caused by the brain disease process. It suggests that clinical dementia might be prevented, delayed, or ameliorated even after the brain lesions have developed, if we could identify and cultivate those characteristics responsible for resilience. The basis of resilience could be one or a combination of several factors, including: (i) greater numbers of neurons and more extensive connectivity, (ii) a superior system of cognitive resources, including learned skills, (iii) having avoided certain aspects of the AD process, or of other structural brain disease distinct from AD that independently lead to cognitive decline and dementia. The proposed research will examine each of these alternatives in depth, employing a wealth of already available information accrued over the past 25 years of Nun Study and the Honolulu-Asia Aging Study research, plus new data to be generated with further detailed examination of Nun Study brains. Results are expected to inform the development of new and novel strategies for dementia prevention and illness amelioration.

Lay Summary

PROJECT NARRATIVE This project will utilize already available health, functional, and lifestyle information, together with repeated cognitive assessments and brain autopsy data for 505 participants from the Nun Study and 774 participants from the Honolulu-Asia Aging Study to develop a better understanding of how and why some individuals appear resilient to the brain lesions of Alzheimer's disease (AD). Advanced biostatistical analysis methods will be employed to examine associations of cognitive functioning prior to death with brain abnormalities and patterns of cognitive decline. Results are expected to suggest new public health strategies that may be effective in preventing, ameliorating, or delaying cognitive decline, even in individuals whose brains may already have lesions of AD present.

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