Imaging the Retina for Early Alzheimer Diagnosis (I-READ)

https://neurodegenerationresearch.eu/survey/imaging-the-retina-for-early-alzheimer-diagnosis-i-read/

Principal Investigators

Prof. dr. Johannes de Boer

Institution

VU University of Amsterdam, Dept. of Physics and Astronomy

Contact information of lead PI
Country

Netherlands

Title of project or programme

Imaging the Retina for Early Alzheimer Diagnosis (I-READ)

Source of funding information

STW

Total sum awarded (Euro)

€ 749,267

Start date of award

01/06/2015

Total duration of award in years

5.0

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords
Research Abstract

Pre-clinical studies have demonstrated that amyloid beta (A?) plaques, a well-known hallmark of AD, can be optically detected in the retina of live mouse models and in post-mortem human eyes of AD patients using curcumin as fluorescent dye. A major challenge in translating these preclinical results to use in patients is the presence of strong autofluorescence in the retina which leads to a poor signal-to-background ratio. We propose to develop a multi-wavelength,

depth-sensitive confocal fluorescence scanning laser ophthalmoscope for efficient, non-invasive imaging of A? plaques in the human retina. The use of dual wavelength excitation and depth-sensitive detection will allow discrimination of curcumin labeled A? and autofluorescence background. The method will be evaluated in a proof of principle study in 20 subjects at the Alzheimer Center of the VU University medical center.

Lay Summary
Further information available at:

Types:
Investments > €500k

Member States:
Netherlands

Diseases:
Alzheimer's disease & other dementias

Years:
2016

Database Categories:
N/A

Database Tags:
N/A