

# Regulation of neuroinflammation in Alzheimer's disease by non-coding RNAs

<https://neurodegenerationresearch.eu/survey/regulation-of-neuroinflammation-in-alzheimer%c2%92s-disease-by-non-coding-rnas/>

## **Name of Fellow**

Malm Tarja

## **Institution**

## **Funder**

Academy of Finland

## **Contact information of fellow**

## **Country**

Finland

## **Title of project/programme**

Regulation of neuroinflammation in Alzheimer's disease by non-coding RNAs

## **Source of funding information**

Academy of Finland

## **Total sum awarded (Euro)**

€ 434,485

## **Start date of award**

01/09/16

## **Total duration of award in years**

5.0

## **The project/programme is most relevant to:**

Alzheimer's disease & other dementias

## **Keywords**

Microglia | Alzheimer's disease | phagocytosis | non-coding RNA | beta-amyloid | TREM2 | exosome | lentivirus | nuclear receptor | adenoassociated virus | neuroinflammation

## **Research Abstract**

Microglial dysfunction and inability to clear the toxic beta-amyloid accumulation is a significant contributor to neuronal death in Alzheimer's disease (AD). Prevention of the toxic cycle of neuroinflammation has been proposed to be an efficient treatment strategy for AD, yet targeting these pathways is difficult due to lack of knowledge in pathways regulating microglial functions at the level of gene transcription. This study aims at identifying the gene regulatory processes that take place specifically in microglia in healthy brain and during AD development by obtaining cutting-edge next generation sequencing data from non-coding RNA levels in microglia in situ in vivo by using state of art flow cytometric cell sorting techniques. We will elucidate whether non-coding RNA targeting could be used to modulate microglial functions for the disease benefit. This project is likely to reveal novel determinants of regulation of neuroinflammation in AD and yield novel therapeutic targets.

**Types:**

Fellowships

**Member States:**

Finland

**Diseases:**

Alzheimer's disease & other dementias

**Years:**

2016

**Database Categories:**

N/A

**Database Tags:**

N/A