

METABOLIC BASIS OF NEURODEGENERATIVE DISEASE

<https://www.neurodegenerationresearch.eu/survey/metabolic-basis-of-neurodegenerative-disease/>

Principal Investigators

Institution

Contact information of lead PI

Country

European Commission

Title of project or programme

METABOLIC BASIS OF NEURODEGENERATIVE DISEASE

Source of funding information

European Commission FP7-Seventh Framework Programme

Total sum awarded (Euro)

€ 2,415,229

Start date of award

01/02/2014

Total duration of award in years

5.0

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords

Research Abstract

Alzheimer disease (AD) is the most common form of age-related dementia affecting millions of patients worldwide. Disturbingly, disorders of lipid and glucose metabolism emerge as major risk factors for onset and progression of neurodegeneration in the human population. Thus, an increasing life expectancy combined with an observable rise in metabolic disturbances is expected to turn AD into one of the most serious health problems for future generations. Still, the molecular mechanisms whereby dysregulation of glucose and lipid homeostasis elicits noxious insults to the brain remain poorly understood. We characterized a novel class of intracellular sorting receptors, termed VPS10P domain receptors with dual roles in regulation of neuronal viability and function, but also in modulation of glucose and lipid homeostasis. Our proposal aims at elucidating an important yet poorly understood link between metabolism and neurodegeneration that converges on these receptors. Our approach is unique and novel in

several ways. Thematically, our studies focus on a novel class of receptors previously not considered. Based on the receptors' ability to act as sorting proteins, we propose faulty protein trafficking as a major unifying concept underlying neurodegenerative and metabolic disorders. Conceptually, our approach relies on the interdisciplinary effort of neuroscientists and metabolism researchers working jointly on pathophysiological pathways converging on these receptors. Through this effort, we are confident to gain important insights into the crosstalk between brain and peripheral tissues, and to elucidate pathways common to metabolic disturbances and dementia, two prevailing degenerative disorders inflicting our societies.

Lay Summary

Further information available at:

Types:

Investments > €500k

Member States:

European Commission

Diseases:

Alzheimer's disease & other dementias

Years:

2016

Database Categories:

N/A

Database Tags:

N/A