A new Generation of Drugs for ALzheimer’s disease based on in vitro and in silico experiments of beta-amyloid oligomers and in vivo tests

https://neurodegenerationresearch.eu/survey/a-new-generation-of-drugs-for-alzheimer%c2%92s-disease-based-on-in-vitro-and-in-silico-experiments-of-beta-amyloid-oligomers-and-in-vivo-tests/

Principal Investigators

DERREUMAUX Philippert

Institution

LBT Paris

Contact information of lead PI
Country

France

Title of project or programme

A new Generation of Drugs for ALzheimer’s disease based on in vitro and in silico experiments of beta-amyloid oligomers and in vivo tests

Source of funding information

ANR

Total sum awarded (Euro)

€ 584,927

Start date of award

01/01/2013

Total duration of award in years

4.0

The project/programme is most relevant to:

Alzheimer's disease & other dementias

Keywords
Research Abstract

GRAL: Generation of efficient drugs against Alzheimer’s disease
Alzheimer’s disease is affecting more than 24 million people worlwide and represents a 1000 billion dollars cost to our society. Thus far, no disease-modifying treatments exist.
A scientific challenge: determination of the first 3D structures of the amyloid-beta protein complexed by inhibitors to discover efficient drugs
The GRAL project, which integrates different and complementary expertises from chemistry, biophysics, structural biology, computer simulations, in silico design and screening of compounds to transgenic flies and mice, aims at discovering efficient therapeitic agents against Alzheimer’s disease.
State of the art in vitro, in silico and in vivo methods
Low-resolution experimental methods used: DLS, SEC, AUC, TEM, ESI-MI, Spectroscopies (CD, FTIR, Fluorescence).
Insights into atomic information from NMR, and spin labels followed by EPR.
Multi-scale computer simulations (all-atom, coarse grained OPEP)
Discovery of very efficient drugs validated by tests on transgenic flies and mice.

Lay Summary
Further information available at:

Types:
Investments > €500k

Member States:
France

Diseases:
Alzheimer's disease & other dementias

Years:
2016

Database Categories:
N/A

Database Tags:
N/A