

Luminescent polymers for in vivo imaging of amyloid signatures

<https://neurodegenerationresearch.eu/survey/luminescent-polymers-for-in-vivo-imaging-of-amyloid-signatures/>

Title of project or programme

Luminescent polymers for in vivo imaging of amyloid signatures

Principal Investigators of project/programme grant

Title	Forname	Surname	Institution	Country
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Source of funding information

European Commission

Total sum awarded (Euro)

4978094

Start date of award

01-11-2009

Total duration of award in months

36

The project/programme is most relevant to

- Alzheimer's disease and other dementias
- Prion disease

Keywords

Research abstract in English

In this project we seek to develop new smart imaging molecular tools for combating neurodegenerative diseases such as Alzheimer.

The LUPAS project seeks to bridge the gap between diagnosis and treatment of both Alzheimer disease and prion diseases. By developing novel agents and methods for diagnostic imaging of accumulations of misfolded proteins so called amyloid plaque it is possible to improve quality of diagnosis as well as facilitate monitoring and understanding of the disease progression. The novel molecular imaging tools are based on luminescent conjugated polymers, LCPs, a material normally used for electronic applications, such as light emitting diodes (LEDs). It was discovered by the researchers forming the LUPAS consortium that these molecules bind effectively to amyloid plaques. Through the specific a luminescent fingerprint of the LCPs, the amyloid plaques can easily be visualized and recognized. Moreover, the molecular scaffolds will be tested as therapeutically active agents for prevention of protein aggregation diseases and could possibly facilitate treatment of AD and prionoses in the future.

Lay summary