

Technology Offer

First multi-target treatment for neurodegenerative diseases including Alzheimer's (by inhibiting the accumulation of Tau and Beta-amyloid proteins)

Alzheimer/ neurodegenerative disease/ multi-site treatment/ nervous system disease

CONTEXT

For people with Alzheimer's disease, it's the aggregates of Tau proteins and beta-amyloid peptides that is responsible of neuronal death. Currently the only drugs available are delisted for lack of efficacy and the fact that they target only the symptoms of neural degeneration (neurotransmitter deficiency) and not the cause directly.

DESCRIPTION

The innovation consists of a treatment that inhibits, among other things, the accumulation of Tau and Beta-amyloid proteins, making it applicable to a large number of neurodegenerative diseases, including Alzheimer's.

This treatment is composed of a single molecule which will act simultaneously on numerous targets at the source of the problem:

- Inhibition of the aggregation of β -amyloid peptide,
- Inhibition of TAU protein aggregation,
- Inhibition of monoamine oxidase B and cholinesterases
- Inhibition of glycogen synthase kinase 3,
- Blocking of calcium channels,
- Contribution of antioxidant activity
- And the recover of the memory deficit induced by scopolamine

This approach opens up possibilities for effective treatments to significantly slow down neurodegeneration.

COMPETITIVE ADVANTAGES

- Target simultaneously several causes of the disease, allowing to significantly increase the recovery of autonomy and even hope for a cure.
- The multi-target approach of the molecule allows simple treatment monitoring for patients who already are under multiple medications procedures
- These next-generation molecules can be produced profitably and industrially in a single step



Market & Application

Treatment of neurodegenerative diseases

➔ Treatment of Alzheimer's disease: first encouraging results on inhibition of beta-amyloid peptide and TAU

➔ Treatment of multiple sclerosis, Parkinson's disease, amyotrophic lateral sclerosis ...



Stage of development

Technology validated at laboratory scale (TRL 4)



Research team

EA 481 Neuroscience Laboratory
University of Franche-Comté



Intellectual property

Patent filing: in progress
Protection of a family of multi-target molecules



Partnership

Co-development to orient the technology according to the needs of manufacturers

CONTACT-US

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