Peptide-analogues of Cathepsin D as therapeutic agents in Alzheimer's Disease

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Patent pending GR20230101038

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Exploration of Cathepsin D-derived peptides: Novel therapeutic agents targeting Amyloid-β (Aβ) pathology in Alzheimer's disease

INVENTORS
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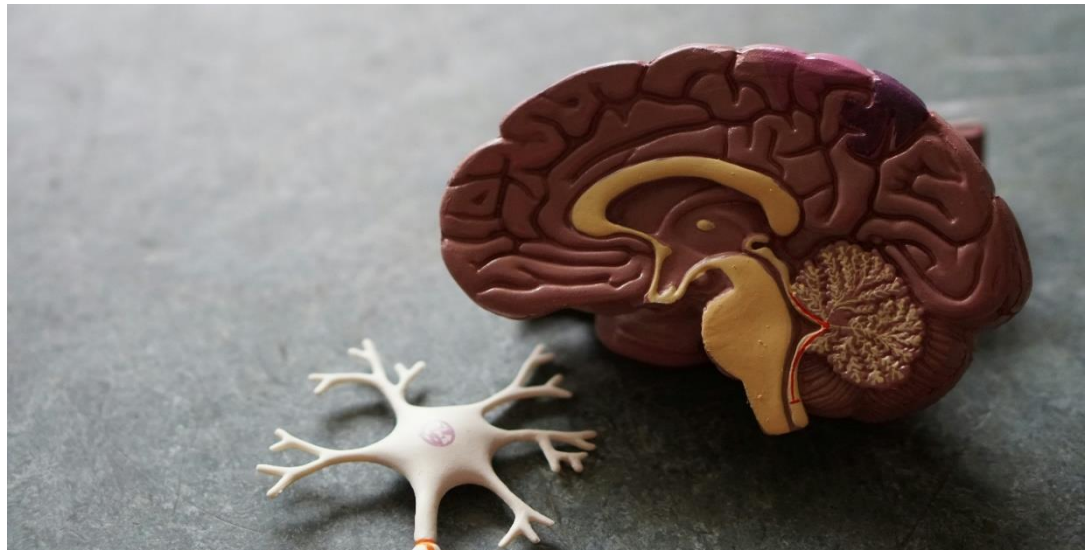

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MATURITY LEVEL
TRL 2 – technology concept formulated

THE PROBLEM

Global population ageing, notably in Greece, poses a significant healthcare challenge accompanied by immense economic and social impact. This is further aggravated by the rising prevalence of Alzheimer's disease and dementia, conditions for which ageing represents the main risk factor.

THE TECHNOLOGY

We have identified peptides that interfere with the formation of Aβ amyloid fibrils, which represent a key pathological feature in Alzheimer's disease. This discovery suggests their potential use in halting the disease's progression and offers promise for treatment.

ADVANTAGES

- Peptide inhibitors of Aβ fibril formation may be used for early intervention in Alzheimer's disease, potentially preventing or delaying the onset of cognitive decline
- Peptides are designed to specifically target and inhibit the formation of Aβ fibrils
- Peptides can be engineered to possess various properties, such as increased stability, enhanced blood-brain barrier penetration, and prolonged half-life
- Peptide inhibitors of Aβ fibrilogenesis may be used in combination with other Alzheimer's disease therapies for synergistic effects and improved clinical outcomes

APPLICATION AREAS: Development of treatment for the Alzheimer's disease

NEXT STEPS

- Transgenic Mouse Selection and Experimentation
- Human Cell Line Selection and Experimentation
- Peptides Optimization
- Dose Optimization
- Collaborative Partnerships

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