

R.P. CHEN

Peptide therapy for the prevention of Alzheimer's disease

Key words: Alzheimer's disease, peptide combining polyarginines, segment derived from the core region of A β amyloid

Alzheimer's disease (AD) is the most common neurodegenerative disease. Imbalance between the production and clearance of amyloid β (A β) peptides is considered the primary cause for the pathogenesis of AD. In this study, a peptide combining polyarginines (PolyR) (for charge repulsion) and a (for sequence recognition) was designed. The efficacy of the designed peptide, R8-A β (25-35), on amyloid reduction and cognitive ability improvement was evaluated using the APP/PS1 double transgenic mice. Daily intranasal administration of PEI-conjugated R8-A β (25-35) peptide significantly reduced A β amyloid accumulation and ameliorated the memory deficits of the transgenic mice. Intranasal administration is a feasible way in peptide delivering. The modular design combining polyR and aggregate-forming segment produced a desirable therapeutic effect and could be easily adopted to design therapeutic peptides for other proteinaceous aggregate-associated diseases [1]

REFERENCES:

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* CHEN Rita Pei-Yeh – PhD, Researcher (Institute of Biological Chemistry, Academia Sinica, Taipei, Taiwan)
*E-mail: pyc@gate.sinica.edu.tw