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(54) Title: IMMUNOGENIC PEPTIDE COMPOSITION FOR THE PREVENTION AND TREATMENT OF ALZHEIMER'S DISEASE

(57) Abstract: The present invention relates to a composition comprising a peptide immunogen useful for the prevention and treatment of Alzheimer's Disease. More particularly, the peptide immunogen comprises a main functional/regulatory site, an N-terminal fragment of Amyloid ß(Aß) peptide linked to a helper T cell epitope (Th) having multiple class II MHX binding motifs. The peptide immunogen elicit a site-directed immune response against the main functional/regulatory site of the Aß peptide and generate antibodies, which are highly cross-reactive to the soluble $A\beta_{1-42}$ peptide and the amyloid plaques formed in the brain of Alzheimer's Disease patients. The antibodies elicited being cross reactive to the soluble $A\beta_{1-42}$ peptide, promote fibril disaggregation and inhibit fibrillar aggregation leading to immunoneutralization of the "soluble Aß-derived toxins"; and being cross-reactive to the amyloid plaques, accelerate the clearance of these plaques from the brain. Thus, the composition of the invention comprising the peptide immunogen is useful for the prevention and treatment of Alzheimer's Disease.