

Title: **Foldamers in the treatment of Alzheimer's disease (AD)**

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Nowadays, a lot of importance has been given to foldamers, which are artificial sequence-specific oligomers that can be folded into a well-defined structure and offer endless possibilities to synthesize molecules. The most important features of foldamers are their high folding stability, predictability and versatility. It is not new the fact that some foldamers have been designed for the treatment of Alzheimer's disease (AD). It is known that the main cause in the progression of AD is the tendency of amyloid β ($A\beta$) peptide to assemble into soluble oligomers, which afterwards can be converted into insoluble amyloid fibrils. Basically, the purpose of these foldamers is to antagonize $A\beta$ oligomerization, cytotoxicity and amyloid formation. Three foldamers have been highlighted in this review. All of them have been proved to give positives outcomes, and without any doubt they will help not only to create other improved foldamers, but also to extend the current understanding about the relation between the structures of the proteins and their abilities to mediate processes.

Keywords: foldamer, amyloid, fibrils, Alzheimer, antagonize, cytotoxicity