

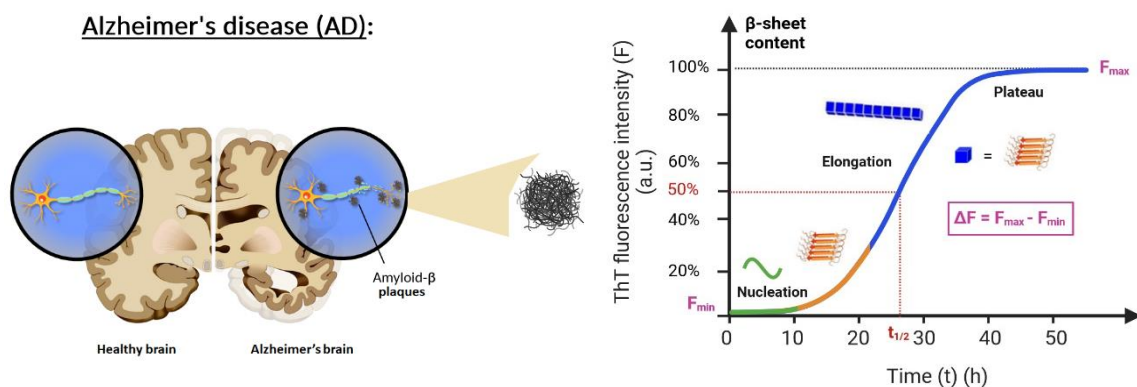


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Influence of metal ions and complexes on the aggregation of amyloid- β peptides

The development of Alzheimer's disease is mainly linked to the overproduction of a peptide called amyloid- β (A β), which accumulates in the form of extracellular oligomers, then fibrils, and finally amyloid plaques.¹ This accumulation disrupts synaptic connections and leads to neuronal death. In addition to the full-length amyloid- β peptide (1-40/1-42), several truncated variants are generated by enzymatic cleavages.² These variants exhibit different aggregation and toxicity properties, influencing the development of pathology.^{3,4}

This internship will explore the impact of various ions and metal complexes on the aggregation process of different amyloid- β peptides. Aggregation kinetics will be monitored using a fluorescent probe, and analysis of the results will enable structure/activity relationships to be determined, allowing to identify the most effective modulators among those tested. In order to understand how the peptides interact with the modulating molecules, spectroscopic studies will also be carried out, for instance using fluorescence, NMR, EPR, circular dichroism and UV-vis spectroscopies, as well as AFM and TEM imaging.



Références

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