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Tau oligomerization and Alzheimer's disease

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The abnormal aggregation of proteins is associated with several neurological diseases. Here, we will focus on the aggregation in the human brain of the microtubule-associated protein tau, a process associated with Alzheimer's disease and other forms of dementia. In healthy individuals, tau is fundamental for the formation and pruning of connections between neurons making its strict regulation necessary for development and maintenance of the brain. Mutations, as well as post-translational modifications, affect the behavior of tau. We will review recent findings about how these alterations of the molecular structure of tau allow novel conformations to appear that are associated with enhanced aggregation propensity and neurotoxicity.