

Special Issue

Molecular Mechanisms and Signaling Pathways in Alzheimer's Disease

Message from the Guest Editor

Alzheimer's disease (AD) is considered the most prevalent neurodegenerative disease and the leading cause of dementia worldwide. The clinical symptoms are characterised by memory loss, temporal disorientation, language and personality disturbances, hallucinations and aggressiveness. The major molecular hallmarks of AD are the extracellular deposits of β -amyloid ($A\beta$), forming amyloid plaques, and the intracellular accumulation of hyperphosphorylated tau protein in neurofibrillary tangles (NFT). In addition, AD is characterized by the loss of synaptic function, vascular alterations, neuroinflammation, mitochondrial dysfunction, oxidative stress and alteration in lipid homeostasis. It should be noted that all these mechanisms have been correlated across different works. However, the molecular mechanism and signalling pathways underlying these processes are not fully understood. The characterization and understanding of the processes underlying AD are crucial to determining new relevant biomarkers and therapeutic targets. In this Special Issue, we aim for potential authors to contribute original and/or review articles that provide a new perspective on this topic.

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