

Special Issue

Tau Pathobiology and Excitotoxicity in Neurodegeneration and Epilepsy

Message from the Guest Editor

Tau pathology and associated excitotoxicity are increasingly recognized as key contributors to several neurological conditions, including dementia, epilepsy, and stroke. Encouragingly, tau-targeting therapies have demonstrated promising results in disease models across these disorders.

Among these, epilepsy and dementia share a particularly strong bidirectional relationship. Seizures are a common and significant complication in Alzheimer's disease—the most prevalent form of dementia. Conversely, individuals with epilepsy are at an elevated risk of developing dementia, especially when seizures are poorly controlled.

Given these interconnections, it is essential to deepen our understanding of the tau-related mechanisms driving these conditions—both the shared pathways and those unique to each disorder. By integrating insights from research across these diseases, we can accelerate the development of more effective treatments, which are urgently needed.

This Special Issue will investigate the role of tau and its involvement in excitotoxic signalling across neurological disorders.

Guest Editor

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Cells has become a solid international scientific journal that is now indexed on SCIE and in other databases. We have successfully introduced a special issues format so that these issues serve as mini-forums in specific areas of cell science. *Cells* encourages researchers to suggest new special issues, serve as special issues editors, and volunteer to be reviewers. Our main focus will remain on cell anatomy and physiology, the structure and function of organelles, cell adhesion and motility, and the regulation of intracellular signaling, growth, differentiation, and aging. We are open to both original research papers and reviews.

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