# Tau Protein: Molecular Abnormality and Pathologic Features in Alzheimer's Disease



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It is currently an urgent and important issue to elucidate the mechanism of development of Alzheimer's disease and devise therapeutic methods. Tau is a microtubule-associated protein that occurs mainly in neurons and is involved in neurite extension and maintenance. Although tau is a highly soluble protein and has a natively unfolded structure, tau generates insoluble and hyperphosphorylated aggregates in Alzheimer's disease, which is characterized by degenerating neurons. Several insights have been accumulated in recent years on the self-assembly and phosphorylation of tau protein. However, we are still far from fully understanding the relationship between the abnormality of tau and its pathology and do not yet have any useful approach for its clinical treatment.

In this symposium, five leading scientists who are actively studying the pathologic and structural changes, phosphorylation, and insoluble filament formation of tau protein will provide updates on these topics. Through these presentations, we will examine the biological meaning of the abnormality of tau protein. The aim of this symposium is to open the door for developing drugs to treat Alzheimer's disease, based on the understanding and analysis of the neuropathologic formation mechanism by tau protein.