

Special Issue

Molecular Pathogenesis of Neurodegenerative Diseases Targeting Diagnosis and Treatment

Message from the Guest Editor

Priorities in neuroscience include fundamental studies of the cellular and molecular mechanisms of progressing pathogenesis of neurodegenerative diseases (NDDs) and their systemic manifestations, with the aim of developing and / or improving early and differential diagnosis as well as preventive and symptomatic treatment. Given the limitations in patient examination, the main approach to studying the mechanisms of neurodegeneration and neuroplasticity in the central and peripheral nervous system, key processes in NDDs, is experimental modeling. However, non-invasive brain studies and the search for peripheral genetic and metabolic manifestations of NDDs as potential diagnostic biomarkers are available not only in animal models but also in patients and at-risk subjects. Most of these studies are focused on changes in the chemical composition of body fluids as well as changes in gene expression and the phenotype of peripheral cells. Fundamental knowledge of the cellular and molecular mechanisms of NDDs opens up broad prospects for the development of new research tools, diagnostics and treatment, which will improve the patient's quality of life.

Guest Editor

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