Special Issue

Astrocytes in Neurodegenerative Diseases

Message from the Guest Editor

"Neurodegenerative disease" usually refers to conditions like Alzheimer's disease, Huntington's disease, various ataxias and a vast number of rare genetic diseases that lead to progressive loss of neurons, loss of cognitive and motor functions and, in some cases, death, However, signs of neurodegeneration are also evident in disorders such as epilepsy and depression. Although the term "neurodegeneration" obviously implies a loss of viability of neurons, it is now generally acknowledged that astrocytes are intimately involved in such process. Astrocytes aid the resilience of neurons by various means. Some studies suggest that they may actually be a part of the pathological mechanism under certain conditions. We seek to publish studies looking at the interplay between astrocytes and neurons in all pathological states where the endpoint is neurodegeneration. Mechanisms by which astrocytes protect neurons from damage, the cooperation of astrocytes with microglia in dealing with degenerating neurons, and the plasticity of astrocytes in disease are potential topics in this volume.

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