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Neurodegenerative Diseases: Molecular Mechanisms and Therapeutic Applications

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Deadline for manuscript
submissions:

closed (31 October 2022)

Message from the Guest Editors

Neurodegenerative disease is a group of heterogeneous neural disorders, characterized by the progressive dysfunction and death of neurons. Most neurodegenerative diseases are complex diseases, associated with both genetic and environmental factors. Major neuron death pathways include apoptosis, necroptosis, pyroptosis and ferroptosis. Accumulated data from in vitro and in vivo studies suggest that oxidative stress, endoplasmic reticulum (ER) stress and inflammation contribute to neuron loss. A number of small chemicals and natural products have shown therapeutic potential for neurodegenerative diseases, while cell replacement and gene therapy have shown promise for certain types of condition. However, a more comprehensive understanding of the pathogenesis and the development of new strategies for their treatment are urgently needed.

The purpose of this special issue is to collect recent developments in the elucidation of the pathophysiology of different neurodegenerative diseases and in the appraisal of therapeutic options. It provides an opportunity for researchers in the field to submit their invaluable studies. We look forward to receiving your contribution.



mdpi.com/si/56963

Special Issue



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