

Special Issue

Molecular Pathogenesis and Treatment in Neurodegeneration: Current Evidence and Future Directions

Message from the Guest Editor

Neurodegeneration is a typical pathological condition of aging characterized by synaptic impairment, neuronal death, and cognitive decline. The formation of amyloid deposits in specific areas of the brain has been reported to be responsible for neuronal death. However, several events participate in cell apoptosis, including deregulation of calcium homeostasis, neuroinflammation, mitochondrial dysfunction, and oxidative stress. The involvement of multiple cellular and molecular mechanisms hinders the development of strategies to counter and/or diagnose the cognitive decline underlying neurodegenerative diseases. Moreover, in the absence of a direct cause–effect link between potential risk factors and cognitive decline, the development of preventive approaches to minimize the impact of neurodegeneration still requires further investigation. Therefore, this Special Issue aims to gather information regarding the molecular mechanisms underlying neurodegeneration to identify new potential diagnostic, therapeutic, and preventive strategies to counteract cognitive decline.

Guest Editor

Dr. Virginia Tancredi

1. Department of Systems Medicine, University of Rome “Tor Vergata”, 00133 Rome, Italy
2. Centre of Space Biomedicine, University of Rome “Tor Vergata”, 00133 Rome, Italy

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MDPI, Grosspeteranlage 5
4052 Basel, Switzerland
Tel: +41 61 683 77 34
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Prof. Dr. José L. Quiles
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Avda. Conocimiento s/n, 18100 Armilla, Granada, Spain

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