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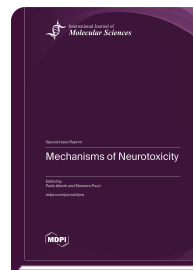
## **Mechanisms of Neurotoxicity**

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Edited by  
Paola Alberti  
Eleonora Pozzi

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An exciting and relevant topic is addressed in this paper collection encompassing both peripheral and central nervous system mechanisms of damage. This is of particular interest since neurons are a perennial cell population, and, therefore, neurotoxicity understanding and management is a relevant challenge to treat/prevent neurological disorders. There are many different potentially neurotoxic agents. Mechanisms of damage involved in the nervous system are explored to pave the way to potential treatment strategies relying on a robust biological rationale. Since neurons are excitable cells, ion channels/transporters can be a pivotal element leading to axonal damage and neuronal death. A clear-cut review of their involvement, exploiting as a playground chemotherapy-induced peripheral neurotoxicity, is provided as well as an in-depth reasoning on how ion channels/transporters are quite susceptible, in their functioning, to changes in the environment that the cell is exposed to, which can also be triggering neurotoxicity. Also, the central nervous system is not overlooked in this paper collection, and the role of excitotoxicity is also dissected in depth in neurodegenerative disorder and pain modulation. Another topic that is presented via research data is the role of oxidative stress in determining alterations of the nervous system, exploiting zebrafish models, as well as its role in determining neurotoxicity acting against glial cells. In addition, our Special Issue is enriched by a detailed review of mechanisms leading to an entity that is becoming more and more relevant: HIV-associated neurocognitive disorder.



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