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High Mobility Group Box-1 (HMGB1) in a Neuroimmune Crosstalk

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Message from the Guest Editors

Dear Colleagues,

High-mobility group box 1 (HMGB1), a nuclear protein, is passively released from dying cells, actively secreted by certain cells, and functions as a damage-associated molecular pattern protein. Extracellular HMGB1 directly or indirectly activates some pattern recognition receptors (PRRs), such as Toll-like receptors (TLR) 2 and 5, the receptor for advanced glycation end product (RAGE), CXC chemokine receptor 4 (CXCR4), etc., and plays multiple roles in health and disease. Given the release of HMGB1 from immune cells, including macrophages and also neurons that express HMGB1-targeted PRRs, HMGB1 is considered a mediator in the communication between immune cells and neurons. Such a neuroimmune crosstalk is essential for neuroinflammation, and is involved in the inception and/or progression of various CNS and PNS diseases, such as stroke, neurodegenerative and psychiatric disorders, and neuropathic pain. Therefore, this Special Issue focuses on the role of HMGB1 in neuroimmune interactions













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