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Role and Dynamics of Extracellular Vesicles in Central Nervous System Diseases

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Deadline for manuscript submissions: closed (31 January 2021)

Message from the Guest Editors

A collection of manuscripts will encompass a range of topics with the common denominator of extracellular vesicles in the context of biomarkers, basic biology, and cell-cell communication as well as therapeutics. EVs are found in a wide range of biofluids, including cerebrospinal fluid, plasma, serum, and urine. They reflect the cargo of the parental cells and can inform about the tumor status in a noninvasive real-time fashion. The bioactive molecules carried within EVs have also been shown to modulate the behavior of recipient cells in many ways. Specifically, EVs can shuttle between neurons and glia cells, likely influencing synaptic activity, morphological plasticity, and neurovasculature. In the presence of injury, EVs have been suggested to play a role in neuroprotection, while in neurodegeneration, EVs have been implicated in the spreading and clearance of toxic aggregates. Finally, several studies have proposed using EVs as a delivery tool for small molecule drugs, protein, and nucleic acid to the CNS. Characteristics of EVs such as biocompatibility, low immunogenicity, and low toxicity profiles, are make them highly valuable for therapeutic purposes.









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Message from the Editor-in-Chief

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