Special Issue

Brain-Microbiome Interactions: 2nd Edition

Message from the Guest Editor

The gut-brain axis is a bi-directional communication system that connects the central nervous system (CNS) with the enteric nervous system (ENS). The microbiome and its metabolites can send signals to the brain through various pathways, including the immune system, the vagus nerve, and the release of neuroactive molecules. Likewise, the brain can influence the gut microbiome through the release of stress hormones and other neurotransmitters. Current researches on the gut-brain axis focus on its role in disorders such as mental health, neurological disorders, and cancers. Researchers are exploring the link between the gut microbiome and diseases such as depression, Parkinson's disease, Alzheimer's disease, and glioma, with the goal of developing new treatments and interventions. This Special Issue is to explore the composition and diversity of the gut microbiome and its role in influencing brain function, neurochemistry, and brain disease development, and to discuss how changes in microbiome composition can affect the gut-brain axis. Another purpose of this Special Issue is to explore the potential of microbiome-based interventions in treating gut-brain axis-related conditions.

Guest Editor

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You are invited to contribute a research article or a comprehensive review for consideration and publication in *Brain Sciences* (ISSN 2076-3425). *Brain Sciences* is an open access, peer-reviewed scientific journal that publishes original articles, critical reviews, research notes, and short communications on neuroscience. The scientific community and the general public can access the content free of charge as soon as it is published.

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