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The Study of Brain Asymmetry

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Deadline for manuscript
submissions:

closed (31 October 2023)

Message from the Guest Editor

Dear Colleagues,

There are anatomical and functional differences between both hemispheres of human brain. Brain asymmetry has also been observed in other animals. Damage to two brain areas localized in the left hemisphere, Broca's area and Wernicke's area, may result in the loss of the ability to formulate coherent appropriate sentences and loss of language comprehension. Other areas, such as the fusiform face area, specializing in visual-spatial and facial recognition, are localized in the right hemisphere. Moreover, the left hemisphere is responsible for the processing of pleasurable experiences and for decision-making processes, while the right hemisphere is involved in the processing of negative emotions, vigilance, arousal, and self-reflection. The motor functions are also lateralized. The left hemisphere acts on the right side of the body, and vice-versa. Left-handedness can result from the motor cortex asymmetry. The corpus callosum is responsible for the communication between both hemispheres. An abnormal brain asymmetry has been observed in various disorders, the study of brain asymmetry can be helpful in the diagnosis of various neurological and psychiatric disorders.



mdpi.com/si/95446

Special Issue



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Message from the Editor-in-Chief

Symmetry is ultimately the most important concept in natural sciences. It is not surprising then that very basic and fundamental research achievements are related to symmetry. For instance, the Nobel Prize in Physics 1979 (Glashow, Salam, Weinberg) was received for a unified symmetry description of electromagnetic and weak interactions, while the Nobel Prize in Physics 2008 (Nambu, Kobayashi, Maskawa) was received for the discovery of the mechanism of spontaneous breaking of symmetry, including CP symmetry. Our journal is named *Symmetry* and it manifests its fundamental role in nature.

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