



Advances in the Research of Neural Circuits

Guest Editor:

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Message from the Guest Editor

The neuron is a fundamental component of brain function. However, neurons do not function individually—rather, they function through synaptically connected neural circuits and their networks, more recently known as the connectome. Unraveling the structure and function of neural circuits and connectomes requires the combination of various approaches, including biology, chemistry, physics, mathematics, engineering, information technology, and psychology. In particular, there is no doubt that a panoply of molecular studies and tools have been at the center of this research. In addition, new tools for connectomics such as traceable molecular reporters, caged compounds, recombinant viruses, calcium indicators, and optogenetics have opened new avenues to examine diverse neural circuits. These technical breakthroughs have helped to understand the neural development and the brain pathology of human aging.

This Special Issue welcomes original and review articles that demonstrate or summarize recent progress in the studies of any neural circuits, with a particular focus on molecular workforces and tools such as proteins, glycoconjugates, neurotransmitters, and lipids.





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Message from the Editor-in-Chief

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