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Neural Correlates and Molecular Mechanisms of Memory and Learning

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Deadline for manuscript submissions:
closed (15 June 2023)

Message from the Guest Editors

Dear Colleagues,

The neurobiological and molecular foundation of learning and memory is an issue that has attracted researchers for decades. Through the use of many different learning and memory paradigms in different organisms, we are beginning to have a deeper understanding of the molecular changes that allow neurons within the amygdala, the hippocampus, and prefrontal cortex, to create and store memories and improve learning.

The investigation of the biological basis of learning and memory requires a clear representation of molecular and cellular changes associated with brain plasticity, as memory formation depends on changes in synaptic efficiency that permit strengthening of associations between neurons. We also know that, at the cellular level, the storage of long-term memory is associated with gene expression, de novo protein synthesis, and the formation of new synaptic connections.

This Special Issue welcomes original research or review articles focused on cellular and molecular evidence relating to different brain regions underlying memory and learning mechanisms.

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Message from the Editor-in-Chief

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