

What proteins are involved in learning and memory?

Abstract

Learning is the acquisition of new knowledge while memory is retention of the new knowledge. Recently acquired knowledge is stored in short-term memory (STM). If that knowledge is reinforced through repetition, it is consolidated into long-term memory (LTM). The latter is modified over time with acquisition of new information by either further reinforcement of the synaptic circuits or through nonuse, by pruning of such circuits. This accounts for neuronal plasticity. The process of consolidation of learning and memory is very crucial to the survival of organisms. There is great interest in unveiling and in understanding of the underlying mechanism of this process. To achieve this, a popular strategy is to use the simpler and more easily manipulated nervous systems of invertebrates to generate information that can be applied on the more complex nervous systems of vertebrates.