

TECHNOLOGY ABSTRACT



MGluR5 KO Mice exhibiting impaired spatial learning and memory

Background

1. [Mice Lacking Metabotropic Glutamate Receptor 5 Show Impaired Learning and Reduced CA1 Long-Term Potentiation \(LTP\) But Normal CA3 LTP | Journal of Neuroscience](#)
2. [Selective abolition of the NMDA component of long-term potentiation in mice lacking mGluR5 - PubMed](#)

Learning from repetitive of a stimulus, or long-term potentiation (LTP) occurs in various regions of the hippocampus, the structure in the brain associated with short term memory and learning. Information flow in the hippocampus generally follows a unidirectional loop, with spatial learning occurring in one of the last regions of the loop. This region (CA1) is the predominant location of the mGluR5 receptor. Mice lacking this receptor are healthy and show no sensory or motor defects, but are impaired in the acquisition and utilization of spatial information.

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