



MOLECULAR AND CELLULAR NEUROBIOLOGY



12h15

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Pathophysiological mechanisms of intellectual disabilities: focus on hippocampal neurogenesis

Nowadays, many gene mutations that cause intellectual disabilities (ID) have been identified. However, the link between these mutations and cognitive dysfunctions remains to be further explored. My research aims to study some of the pathophysiological mechanisms underlying ID. Among them, the hypothesis that gene mutations causing ID affect the formation and integration of new neurons in the adult hippocampus caught my attention. This adult hippocampal neurogenesis is a form of plasticity that plays a crucial role in cognitive functions. In this context, my research projects using mouse models of ID, help to identify alterations in the dynamics and regulation of adult hippocampus neurogenesis, in relation with some cognitive dysfunctions. This approach has the prospect of discovering new therapeutic targets to restore / compensate cognitive deficits. My current and future projects focus on the characterization of brain alterations taking place during post-natal development, a critical period in the establishment of neural networks and cognitive processes, and a potentially important therapeutic window for these pathologies.



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