CDB SEMINAR

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Friday, November 13, 2009

16:00~17:00　A7F CDB Seminar Room

Effects of neuropeptide in early postnatal brain development

Summary

Secretin is a peptide hormone originally isolated in the gastrointestinal system, but it has been found to also function as a neuropeptide hormone in the brain. We recently generated secretin and secretin receptor deficient mice that have a number of neurobehavioral deficits including impaired synaptic plasticity in the hippocampus, and abnormal social and cognitive behaviors. Furthermore, we found that deficiency of secretin causes decrease of neurogenesis in the dentate gyrus during the early postnatal period. In secretin mutant hippocampus, survival of neuronal stem/progenitor cells were significantly decreased compared to wild type hippocampus. Since secretin expression is controlled by NeuroD1, a critical transcription factor for neuronal differentiation, we hypothesize that secretin may be important for protection/survival of neuronal progenitor cells. The studies of the basic mechanism of secretin will have important implications for the understanding of neurogenesis in health, and may provide insight into the mechanism of neurobehavioral disorders.

Host:

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