

若手イニシアティブセミナー

Wakate-Initiative Seminar

筑波大学
若手研究者の自立的な研究環境整備促進プログラム
「次代を担う若手大学人育成イニシアティブ」

Memory formation in the fly brain

ショウジョウバエ脳における記憶形成の研究

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日時： 2011年12月27日(火) 13:30 – 15:00

会場： 総合研究棟A棟 107室

Animals can adapt their behaviour to given environment according to memories of their former experiences. To address neural circuits underlying adaptive behaviour, we chose associative memory of *Drosophila melanogaster* as a model system. Flies form positive or negative memories of an odour by paired presentation of sugar reward or electric shock punishment. Over the past years, we have worked on the neuronal mechanisms for endowing positive or negative values with the odour and found the important roles of neuromodulator dopamine. The value signals by dopamine converge with the odour signal in the mushroom body that consists of second-order olfactory interneurons, thereby the fly forms associative memories. Since dopamine is synthesized in ~280 neurons in the fly brain and involved also in other brain functions, it is important to identify individual responsible neurons for value signalling. I will summarize our most recent findings particularly how we identified different types of neurons for signalling positive and negative values and discuss about the subcellular modulation of synapses at the formation of odour memories.

皆様奮ってご参加下さい。

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