

新潟脳神経研究会特別例会の御案内

日時：平成30年8月2日（木）17:00～18:00

場所：脳研究所 1F 検討会室

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Dopaminergic Memory Enhancement by Two Distinct Novelty Systems

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Many people have vivid memories of the first dinner date with their partner, including details like the name of the restaurant and the food they had. In contrast, it is very difficult to remember what you had for dinner a few weeks ago. Most everyday memories may be formed automatically in the hippocampus. The key role of this memory system is to filter out unnecessary information, but keep the important memories by a mechanism that involves novelty-associated dopamine release in the hippocampus. Recently, our studies (Takeuchi *et al.*, *Nature*, 2016) revealed that projections from neurons in the locus coeruleus to the hippocampus can drive environmental novelty-associated enhancement of memory retention through non-canonical release of dopamine in the hippocampus. These studies also raise a possibility that the impact of distinct novel experiences which, by their very nature, bear minimal relationship to past experiences ('distinct novelty') may differ from novel experiences that share some commonality with past experiences ('common novelty') (Yamasaki and Takeuchi, *Neural Plasticity*, 2017; Duzskiewicz *et al.*, submitted). We now propose that memory of events accompanied by novelty can be selectively retained through two distinct dopaminergic mechanisms, depending on the nature of the novel experience itself.

どうぞ奮ってご参加ください。

(担当：動物資源開発研究分野 笹岡俊邦)
新潟脳神経研究会幹事代表：那波宏之