

Neural mechanisms underlying dopamine reward prediction errors

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Abstract :

The midbrain dopamine system is thought to play important roles in reward, motivation and movement. It has been postulated that dopamine neurons in the ventral tegmental area (VTA) signal a reward prediction error, or the discrepancy between actual and expected reward. However, how reward prediction errors are calculated remains elusive. I will discuss two examples where dynamic inference process based on ambiguous information plays a critical role in computing dopamine reward prediction errors. I will further discuss the involvement of specific brain areas in this inference process.

Host: Hiroyuki Nakahara & Shigeyoshi Fujisawa