

# 第45回最先端脳科学セミナー

## Role of Orexins at the Interface of Emotion and Wakefulness

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### 要旨

Animals shift their sleep-wakefulness state according to their internal state and the external environment. Studies of efferent and afferent systems of orexin-producing neurons have shown that the orexin neuronal system has close interactions with systems that are involved in the regulations of emotion, energy homeostasis, reward, and arousal. Recent studies have suggested that orexin neurons are activated during the behavioral expression of fear or in response to cues associated with danger or reward. These observations suggest that orexin neurons are involved in control of vigilance states in response to outer environment. On the other hand, orexin system affects expression of behavioral response against outer environment via control of monoaminergic neurons. I will discuss functional interplay between the limbic system and arousal system, and involvement of orexin and orexin receptors in these interactions.

※ 本セミナーは、生命融合科学教育部「脳認知学特論」の一環です。履修者は、[レポートの提出](#)が必要です。また、大学院の単位認定の対象となります。

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