

| Press Release

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International Institute for Integrative Sleep Medicine, University of Tsukuba

Discovery of the previously unknown hormone secretion control mechanism responsible for anxiety in the adrenal cortex

A team of researchers headed by Masashi Yanagisawa (Director, International Institute for Integrative Sleep Medicine, WPI-IIIS, University of Tsukuba) revealed in mice studies that the circadian rhythms of glucocorticoid, the stress hormone produced by the adrenal cortex, are controlled by a previously unknown hormone secretion control mechanism that is responsible for anxiety. In addition, the team demonstrated that increased amplitude in the oscillation of circadian glucocorticoid is linked to the action that reduces anxiety in female mice, thus making them braver.

These findings not only offer new insights into the actions of adrenal cortical hormones within the adrenal cortex that are already known for their control of the endocrine system, but shed light on the direct location of the control mechanism in the adrenal cortex.

In collaboration with the University of Texas Southwestern Medical Center's Yuichi Ikeda, Amber Skach, and Makito Sato, along with Hidetoshi Kumagai and Masashi Yanagisawa of the International Institute for Integrative Sleep Medicine (WPI-IIIS), University of Tsukuba, this research was published in *Cell* on December 5, 2013 (online edition).

Publication Information

“Modulation of Circadian Glucocorticoid Oscillation via Adrenal Opioid-CXCR7 Signaling Alters Emotional Behavior”

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