Yamate Evening Seminar

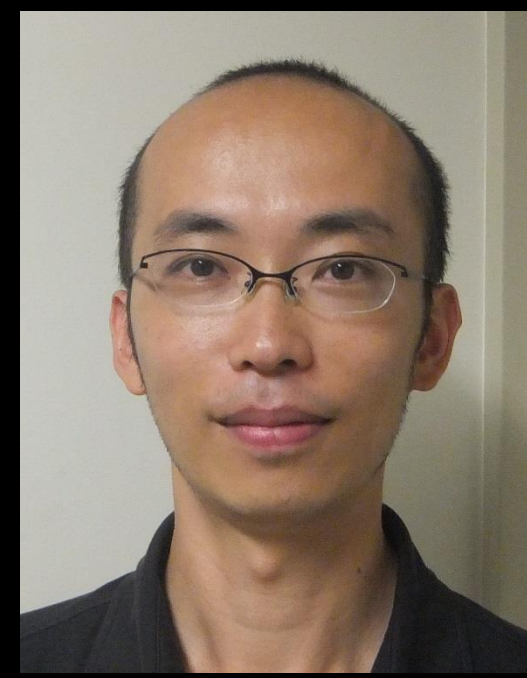
Jan. 27th, 2017, 16:00-17:00

Large meeting room, 2nd floor, Yamate 3rd Bldg.

Prof. Yoshifumi Yamaguchi

(The University of Tokyo)

Toward understanding mechanisms of mammalian hibernation ~ an approach with Syrian golden hamsters



Hibernation is an adaptive strategy to survive cold winter with little or no food. Some of mammals can hibernate to survive during the winter months by suppressing metabolisms and lowering body temperature and heart rate. Since these physiological changes are lethal to most mammals including mouse and human, it is of great interest from both basic sciences and clinical application to understand mechanisms that enable hibernation. Two fascinating topics in the mysteries of hibernation are "seasonal (chronic) body remodeling for hibernation" and "regulation of deep torpor (immobility state with low body temperature) and periodic arousal during hibernation". We have tackled the topics by examining one of ideal animal models for hibernation research, Syrian golden hamsters (*Mesocricetus auratus*); they can enter hibernation throughout the year irrespective of seasons when exposed to a short day photoperiod and cold ambient temperatures under laboratory conditions. In this seminar, I will introduce our recent findings and discuss how hamsters achieve proper hibernation.

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