

# 48<sup>th</sup> WPI IIIS Seminar

## “Energy expenditure and substrate oxidation during sleep: recent progress using a whole room metabolic chamber”

When you sleep, you can't eat, but you still use a lot of energy (~20 % of daily use). For calculation of the daily energy requirement, the energy cost of sleep is often assumed to be equal to or slightly lower (-5%) than the resting energy expenditure. However, this is an oversimplification, and energy expenditure and substrate oxidation change during sleep, depending on the quality of sleep (sleep stage), time after sleep onset, etc. Causes behind the temporal changes in the metabolic rate during sleep will be discussed as well as future studies on the relationship between sleep and metabolism.



Speaker: Dr. Kumpei Tokuyama

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**Date:** Monday, November 10, 2014

**Time:** 14:00-15:00

**Venue:** Room #402, 4F, Health and Medical Science Innovation  
Laboratory, University of Tsukuba



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