

NCGG SEMINAR

“Novel probes to investigate ROS *in vivo* during ageing”

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**Time and Date: at 13:45 ~ 14:30
on 25 Jun, 2014 (Wed)**

**Room: The 2nd floor conference room
in the 2nd Research building at NCGG**

<Reference for Seminar>

The generation of hydrogen peroxide (H_2O_2) by mitochondria is central to oxidative damage and redox signalling, yet the extent and regulation of reactive oxygen species (ROS) levels *in vivo* are still poorly understood. To address this challenge, we recently developed a ratiometric mass spectrometry probe approach to assess mitochondrial H_2O_2 levels *in vivo*. We successfully applied this probe, MitoB, to living *Drosophila* and show that mitochondrial H_2O_2 levels increase with age, but do not coordinately respond to interventions that modulate lifespan in flies, namely physical activity and dietary restriction. Our findings suggest that while an increase in overall mitochondrial H_2O_2 correlates with ageing, it may not be causative.

*Cochemé et al. (2011) *Cell Metabolism* 13(3):340-350

*Cochemé et al. (2012) *Nature Protocols* 7(5):946-958

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