

NCGG SEMINAR

“Inflammation and immune modulation: tackling age-related stem cell dysfunction”

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Time and Date: at 10:30 ~ 11:30
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**Room: The 2nd floor Conference Hall Main
in the 1st Research building, NCGG**

<Reference for Seminar>

In aging and diseased tissues, regeneration and regenerative therapies are limited by stem cell dysfunction and unfavorable tissue environments. Promising strategies to improve success include interventions that enhance stem cell function and that harness and boost endogenous tissue repair mechanisms. We study stem cells and tissue repair in barrier epithelia and the retina of *Drosophila* and mice to explore the causes and consequences of age-related regenerative dysfunction. These studies have led to the discovery of interventions targeting age-related inflammation, stem cell proliferation, stem cell metabolism, innate immune responses, and the commensal microbiota as strategies to enhance regeneration and extend lifespan. I will discuss these strategies and provide perspectives for the development of targeted interventions to improve tissue function in the elderly. I will highlight strategies to improve stem cell activity by targeting endogenous proliferation, differentiation and nutrient response pathways, and strategies to improve tissue repair by modulating innate immunity and host/commensal interactions. Combining such strategies is likely to significantly improve tissue homeostasis and regenerative therapies in the elderly, ultimately extending the healthy years of life.

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