

# ASHBi SEMINAR

## Mitogen competition regulates spermatogenic stem cell homeostasis in an open niche

Lecturer: **Dr. Yu Kitadate**

The National Institute for Basic Biology (NIBB),  
National Institutes of Natural Sciences

Date: Friday, 5th July, 2019

Time: 16:30-18:30

Venue: seminar room 107, building D

In many tissues, homeostasis is maintained by physical contact between stem cells and an anatomically defined niche. However, we questioned how the stem cell pool is maintained in tissues where motile stem cells intermingle among differentiating progeny. We found that competition for a limited supply of FGFs secreted by lymphatic endothelial cells leads to self-organized density homeostasis of spermatogenic stem cells in mouse testis. We propose that this model provides a generic and robust mechanism to support stem cell homeostasis in open niche environments.

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