



第 411 回 つくば分子生命科学セミナー

TSUKUBA MOLECULAR LIFE SCIENCE SEMINAR

Title : Macrophages: Versatile Players in Stem Cell and Developmental Biology

Speaker : Dr. Tony DeFalco

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Cincinnati Children's Hospital Medical Center

Date : March 16 (Mon) 15:00-16:30

Place : Igakukei-tou Seminar Room 483

Abstract :

Organ formation and organ homeostasis both rely on extensive molecular and cellular interactions between diverse cell types. In these processes, the functions of immune cells such as macrophages are poorly understood and under-appreciated. Macrophages are traditionally known for their roles in innate immunity, but recent evidence indicates that they play diverse and vital functions in development and health. Our results in mice suggest that macrophages are required for proper formation of fetal testis architecture, as well as for maintaining spermatogenesis in the adult male. These immune cells act by regulating angiogenesis and tissue remodeling in the fetal testis, and are also an important source of secreted factors that promote the differentiation of spermatogonial stem cells in adulthood. Our findings demonstrate that macrophages are an unexpectedly critical cell type in stem cell and developmental biology.

Reference

1) Yolk-sac-derived macrophages regulate fetal testis vascularization and morphogenesis. DeFalco T, et al. Proc Natl Acad Sci U S A. 2014 Jun 10;111(23)

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