第 436 回つくば分子生命科学セミナー

TSUKUBA MOLECULAR LIFE SCIENCE SEMINAR

Title：Differential SoxB1 requirements in naïve and primed pluripotency.

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Date：April 20, 2017　17:00-18:30

Venue：Seminar Room 105 (Innovation building 1st floor)

Abstract：

Sox2 is a key transcription factor directing embryonic stem cell (ESC) pluripotency. Self-renewal of *Sox2*$^{-/-}$ ESCs can be rescued by the SoxB1 proteins Sox1 or Sox3. However, the role of SoxB1 proteins in epiblast stem cell (EpiSC) pluripotency is unknown. We compared the abilities of Sox2-related proteins to maintain pluripotency in these cell types. Surprisingly, deletion of *Sox2* from EpiSCs does not eliminate self-renewal but Sox3 levels are increased. While EpiSCs can also dispense with Sox3, deletion of both *Sox2* and *Sox3* prevents self-renewal. ESCs with altered SoxB1 levels exhibit differentiation defects. We demonstrate that a redundant SoxB1 function maintains pluripotency in ESCs and EpiSCs, with SoxB1 levels controlling the ability of ESCs to be captured as EpiSCs or escape pluripotency.

本セミナーは、フロンティア医科学専攻（修士）「医科学セミナーII」（担当：久武 幸司）、生命システム医学専攻＆疾患制御医学専攻（博士）「最先端医学研究セミナー」（担当：熊谷 嘉人、島野 仁）及び「医学セミナー」（担当：専攻各教員）の関連セミナーに相当します

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