



第 350 回 つくば分子生命科学セミナー

TSUKUBA MOLECULAR LIFE SCIENCE SEMINAR

演題 : Transcription factor interactions in ES cells

演者 : Ian Chambers 先生

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日時 : 2012 年 6 月 1 2 日 (火) 17:00-18:00

会場 : イノベーション棟 8 階講堂

要旨 :

Stem cells are defined by the simultaneous possession of the seemingly incongruent properties of self-renewal and multi-lineage differentiation potential. To maintain a stem cell population, these opposing forces must be balanced. Transcription factors that function to direct pluripotent cell identity are not all equally distributed throughout the pluripotent cell population. While Oct4 levels are relatively homogeneous, other transcription factors, such as Nanog, are more heterogeneously expressed. Moreover, Oct4 positive cells fluctuate between states of high Nanog expression associated with a high probability of self-renewal and low Nanog expression associated with an increased propensity to differentiate.

We have identified Nanog as a key factor for ES pluripotency (2003) and have been trying to elucidate the molecular mechanism for ES self-renewal. Here, I will talk about the transcription factor interactions in ES cells

参考文献 (Philos Trans R Soc Lond B Biol Sci. 366:2230-2237. (2011), Nature 450:1230-1234 (2007))

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