NANYANG TECHNOLOGICAL UNIVERSITY

School of Biological Sciences

SBS Seminar Announcement

Understanding Epigenetic reprogramming

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Abstract

The epigenome of differentiated cells is remarkably plastic. Cellular reprogramming or lineage conversions can be effected simply through the introduction of defined transcription factors. The ability to generate autologous, patient-specific stem cells offers unprecedented potential for disease research, drug screening, and regenerative medicine. We have developed novel strategies to reprogram with high efficiency somatic blood cells from donors to iPSCs. This greatly aids the creation of iPSCs bio-banking of diseased patients and normal donors from diverse ethnic groups and nationalities. To help us understand the process of cellular reprogramming, we have employed factor based screening strategies to capture novel pathways and determinants affecting the process. Integration of this information with systematic analysis of the transcriptome, proteome, and phosphoproteome has provided novel insights into how cell fates restriction is overcome during the process of epigenetic reprogramming.

Monday, 13 Oct 2014 2.30pm to 3.30pm SBS Classroom 2 (SBS-01n-22)

Host: A/Prof. Koh C.G.

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