



CDB SEMINAR

Brian D. Hendrich

Wellcome Trust Centre for Stem Cell Research
MRC Centre for Stem Cell Biology and Regenerative Medicine
University of Cambridge

Tuesday, February 17, 2009

16:00~17:00 A7F CDB Seminar Room

Transcriptional silencing and lineage commitment in mice

Summary

The goal of the group is to define the role of transcriptional silencing complexes in stem cell potency and in cell fate decisions. Cells of early mammalian embryos have the potential to develop into any adult cell type, and are thus said to be pluripotent. Pluripotency is lost during embryogenesis as cells begin to commit to specific developmental pathways. We have shown that the NuRD co-repressor complex is necessary for gene silencing and maturation of pluripotent cells to a differentiation-competent state during early murine development, and for differentiation of embryonic stem cells. This work has shed new light on a role for epigenetic silencing in the maintenance of pluripotent cells and in cell fate commitment during development. Our current work is aimed at defining how chromatin modifying, transcriptional silencing complexes help control cell fate choices and lineage commitment during pre- and peri-implantation mouse development and in embryonic stem cells.

Host:

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