



Wednesday, September 26, 2018

LSC 3 | 12:00 - 1:00PM

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"Transcriptional memory through the cell cycle"

Epigenetic maintenance of cell-type specific transcription programs is a key component of cell identity. However, this maintenance is challenged during mitosis in at least three ways. First, the transcription machinery is inactivated, leading to global transcription inhibition. Second, chromatin compacts into highly condensed mitotic chromosomes resulting in decreased DNA accessibility. Third, transcription factors (TFs) are believed to be excluded from mitotic chromosomes. Following mitosis, how do daughter cells faithfully re-establish the cell-type specific transcription program? Recent discoveries that a select set of TFs remain bound on mitotic chromosomes suggest a potential mechanism for maintaining transcriptional programs through the cell cycle termed mitotic bookmarking. I will discuss the roles of sequence-specific TFs and the general Pol II machinery in facilitating transcriptional memory in mouse embryonic stem cells.

Live Online Seminar Viewing:
<http://tinyurl.com/cbrseminaronline>

