



# CDB SEMINAR

## Felipe Mora-Bermúdez

Max Planck Institute of Molecular Cell Biology and Genetics, Dresden,  
Germany

Friday, March 2, 2012

16:00~17:00 A7F Seminar Room

### Mitotic microtubules in mammalian neurogenesis

#### Summary

Asymmetric cell division is a key event in mammalian neurogenesis. In the developing cerebral cortex, polarized cellular components, such as the apical and basal processes, can be distributed symmetrically or asymmetrically during the divisions of neuroepithelial and radial glial cells, the primary cortical neural stem cells. These differences in distribution have been broadly linked to differences in cell fate and also to the integrity of the developing cortical wall. The cellular mechanisms that regulate the dynamics and symmetry levels of cell division in mammalian neurogenesis are, however, still poorly understood. We are investigating the role of the mitotic spindle, a central player in mitosis, in the asymmetric divisions of mouse neocortical neural stem cells. We show that populations of mitotic microtubules can influence cleavage plane movement and orientation. We also show that mitotic microtubules could modify division symmetry and this influence may change the localization and fate of the stem cell progeny.

#### Host:

**Fumio Matsuzaki**

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