IBS/EMBL SEMINAR

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External speaker

Monday 26th April, 2010

11 AM - ILL Chadwick Amphitheater

By Michel Steinmetz

Paul Scherrer Institute
Villigen , Switzerland

Tracking the ends: A dynamic protein network controls the fate of microtubule tips

Microtubule plus-end tracking proteins (+TIPs) constitute a diverse group of widely conserved proteins that possess the remarkable ability to form dynamic interaction networks at microtubule ends. They play an essential role in regulating microtubule dynamics and in conferring molecular recognition of the microtubule end in all eukaryotic cells. Although many studies have revealed the central components forming +TIP interactions, the nature, specificity and modes of regulation of these interactions as well as the mechanisms used to track microtubule ends remained unknown for a long time. We recently have explored key binding modes of dynamic +TIP networks by analyzing the interactions between several selected domains and linear sequence motifs. Amongst others, we discovered a universal 'microtubule tip localization signal' (MtLS) used by many functionally diverse +TIPs to localize to the growing ends of microtubules.

Hosted by : Michael Plevin (IBS/LRMN) &
Imre Berger (EMBL Grenoble)

Axe :
Fundamental Intra-cellular Processes

Participants who have no badges allowing entrance to the ILL-ESRF site are requested to contact Mary-Jane Villot (villot@embl.fr)