



Seminar/Talk

Control of microtubule dynamics: seeing proteins and drugs in action

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Host: Michael Sixt

Tight control of microtubule dynamics is essential for many cellular processes, including cell division, migration and morphogenesis. Using in vitro reconstitution experiments, we explored the detailed mechanisms of such regulation by proteins that interact with microtubule plus ends. Furthermore, we used assays with fluorescent analogues of microtubule-stabilizing and destabilizing agents to directly visualize their effects on microtubule polymerization. We found that a single molecule of a microtubule-depolymerizing drug bound to the microtubule tip was sufficient to trigger a catastrophe, whereas microtubule rescue and stabilization required local accumulation of multiple drug molecules. Our results illustrate the diversity and complexity of mechanisms controlling microtubule growth and organization.

Friday, December 13, 2019 11:00am - 12:00pm

Mondi Seminar Room 1, Central Building



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