ABSTRACT

"Organization of cortical microtubule arrays in Arabidopsis"

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Microtubules are nucleated from dispersed cortical regions in interphase plant cells, where the majority of nucleation events occur from the γ-tubulin-containing sites on the pre-existing microtubules as branching patterns. The minus-ends of newly formed daughter microtubules are usually released from sites of nucleation by the action of the microtubule severing complex katanin, and the free microtubules are then transported on the cortex by polymer treadmilling. Subsequent microtubule-microtubule interactions promote microtubule bundling and ordering, which establishes particular patterns of interphase cortical arrays. With special interests in helical microtubule arrays, we have been studying possible mechanisms and particular molecules that underlie organization of cortical microtubule arrays.

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