ON THE COVER

Root knot nematodes, *Meloidogyne* spp, are among the most damaging plant pathogens. Root knot nematodes induce root cell redifferentiation into multinucleate, hypertrophied feeding cells called giant cells, which develop from repeated karyokinesis without cell division. Caillaud et al. (pages 423–437) show that *Arabidopsis* Microtubule-Associated Protein65-3 (MAP65-3) plays a critical role in giant cell development and is associated with a novel type of cell plate, the giant cell mini cell plate, separating daughter nuclei. MAP65-3 plays a key role in microtubule array organization in mitosis and cytokinesis in all plant organs. The cover shows microtubule arrays in giant cells and surrounding cells coexpressing microtubule binding domain MBD:GFP (green) and nuclear histone H2B:YFP (yellow) proteins.

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