Plant Physiology®

September 2010 • Vol. 154 • No. 1

The electronic form of this issue, available as of September 13, 2010, at www.plantphysiol.org, is considered the journal of record.

On the Cover: Secondary cell wall thickenings from cultured *Zinnia elegans* tracheary elements are rich in lignocellulose and autofluorescent due to the presence of lignin (top image). The topography of the secondary cell wall can be visualized after generating cell fragments, which include rings of these secondary wall thickenings (bottom left; atomic force microscopy image). Closer examination of a region (box) within this ring reveals cellulose fibrils that are embedded in a granular matrix and organized in a parallel, concentric orientation (bottom right; atomic force microscopy image). To investigate the composition and structure of the cell wall of individual tracheary elements, Lacayo et al. (pp. 121–133) employed three imaging platforms in conjunction with chemical extraction and a fluorescent cellulose binding protein. Cultured tracheary elements from *Z. elegans* can provide important insights into cell wall development, organization, and dynamics, which are especially important in research on lignocellulosic biofuel production. Fluorescence microscopy image and cover design by Dr. Catherine Lacayo; atomic force microscopy images by Dr. Alexander Malkin.

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