On the Cover: The cover shows a montage of different tie-dyed2 (tdy2) mutant maize (Zea mays) leaves. tdy2 mutant leaves display variegated green and yellow regions, with starch and soluble sugars hyperaccumulating in the latter regions. In this issue, Slewinski et al. (pp. 1540–1550) physiologically characterize defects in tdy2 leaves and molecularly identify the Tdy2 gene. Tdy2 encodes a callose synthase and is highly expressed in the veins of developing leaves. tdy2 yellow leaf regions exhibit incomplete vascular maturation and defective solute transport between the phloem companion cells and sieve elements. Hence, Tdy2 functions during vein development, which ultimately affects symplastic trafficking into the phloem translocation stream. Photo credit: Tom Slewinski.

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Peter V. Minorsky

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[W][OA] Arabidopsis ECERIFERUM2 Is a Component of the Fatty Acid Elongation Machinery Required for Fatty Acid Extension to Exceptional Lengths. Tegan M. Haslam, Aurora Mañas-Fernández, Lifang Zhao, and Ljerka Kunst


[W][OA] Loss of Lon1 in Arabidopsis Changes the Mitochondrial Proteome Leading to Altered Metabolite Profiles and Growth Retardation without an Accumulation of Oxidative Damage. Cory Solheim, Lei Li, Polydefkis Hatzopoulos, and A. Harvey Millar


[W][OA] Cinnamate:CoA Ligase Initiates the Biosynthesis of a Benzoate-Derived Xanthone Phytoalexin in Hypericum calycinum Cell Cultures. Mariam M. Gaid, Debabrata Sircar, Andreas Müller, Till Beuerle, Benye Liu, Ludger Ernst, Robert Hänsch, and Ludger Beerhues

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