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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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