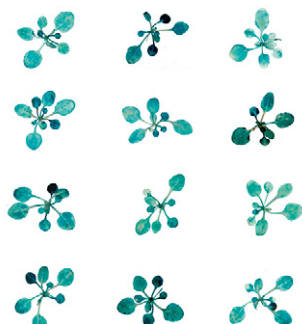


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ON THE COVER



C₄ photosynthesis evolved through a combination of anatomical, cellular, and biochemical changes to leaves. Williams et al. (pages 454–465) dissected the evolutionary events that led to the increased expression and mesophyll specificity of genes encoding carbonic anhydrase, a key enzyme in the C₄ photosynthetic pathway. The cover image shows differing effects on leaf expression of GUS reporter transgenes expressed in Arabidopsis driven by carbonic anhydrase sequences from an ancestral C₃ species (*Arabidopsis*) and a C₄ species (*Gynandropsis gynandra*).

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