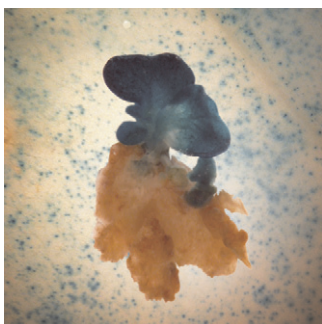


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ON THE COVER



The ability to precisely modify DNA in cells offers great opportunities for basic and applied research, yet it remains difficult to achieve for most plant species. Baltes et al. (pages 151–163) demonstrate the feasibility of using geminivirus replicons for genome engineering in *Arabidopsis* and tobacco. They engineer geminivirus vectors to repair a nonfunctional *gus:nptII* reporter gene and demonstrate the production of leaf cells, calli, and plantlets with precise DNA sequence changes. The cover is a composite image of tobacco leaf tissue showing individual cells that have undergone gene targeting with geminivirus vectors to restore GUS activity (blue specks; background image) and a shoot that was regenerated from transformed leaf cells (foreground).

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