

T H E
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ON THE COVER



APETALA3 (*AP3*) genes, which specify petal and stamen identity in flowering plants, arose from a major gene duplication event that led to paralogous *euAP3* and *TM6* gene lineages in the core eudicots. Analysis of *AP3/DEF* and *TM6* genes in petunia (Rijkema et al., pages 1819–1832) and tomato (de Martino et al., pages 1833–1845) show that *TM6* functions mainly in determining stamen identity and exhibits typical C-class expression patterns in both species, whereas *AP3* functions as a typical B-class gene involved in both petal and stamen identity. The results further show that subfunctionalization of the two lineages has led to somewhat different patterns of expression in these closely related species. The cover shows petunia wild-type (top left), petunia *tm6/+def* mutant (bottom left), tomato wild-type (top right), and tomato *ap3* mutant (bottom right) flowers.

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- Proteomic Analysis of the Eyespot of *Chlamydomonas reinhardtii* Provides Novel Insights into Its Components and Tactic Movements** [W](#) 1908
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- Functional Replacement of Ferredoxin by a Cyanobacterial Flavodoxin in Tobacco Confers Broad-Range Stress Tolerance** [W](#) 2035
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[W](#) Online version contains Web-only data.

[OA](#) Open Access articles can be viewed online without a subscription.



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