

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.

IN THIS ISSUE

- Functional Divergence of *AP3* Genes in the MAD World of Flower Development** 1779
Nancy A. Eckardt










IN BRIEF

- Ferredoxin-Thioredoxin System Plays a Key Role in Plant Response to Oxidative Stress** 1782
- Complexities of *R* Gene Evolution in *Arabidopsis***
Nancy A. Eckardt

CURRENT PERSPECTIVE ESSAY

- Florigen Coming of Age after 70 Years** 1783
Jan A.D. Zeevaart

RESEARCH ARTICLES

- High Rate of Chimeric Gene Origination by Retroposition in Plant Genomes**  1791
Wen Wang, Hongkun Zheng, Chuanzhu Fan, Jun Li, Junjie Shi, Zhengqiu Cai, Guojie Zhang, Dongyuan Liu, Jianguo Zhang, Soren Vang, Zhike Lu, Gane Ka-Shu Wong, Manyuan Long, and Jun Wang
- A Genome-Wide Survey of *R* Gene Polymorphisms in *Arabidopsis***  1803
Erica G. Bakker, Christopher Toomajian, Martin Kreitman, and Joy Bergelson
- Analysis of the *Petunia TM6* MADS Box Gene Reveals Functional Divergence within the *DEF/AP3* Lineage**  1819
Anneke S. Rijkema, Stefan Royaert, Jan Zethof, Gerard van der Weerden, Tom Gerats, and Michiel Vandenbussche
- Functional Analyses of Two Tomato *APETALA3* Genes Demonstrate Diversification in Their Roles in Regulating Floral Development**  1833
Gemma de Martino, Irvin Pan, Eyal Emmanuel, Avraham Levy, and Vivian F. Irish
- Poplar *FT2* Shortens the Juvenile Phase and Promotes Seasonal Flowering**  1846
Chuan-Yu Hsu, Yunxia Liu, Dawn S. Luthe, and Cetin Yuceer
- AGL80* Is Required for Central Cell and Endosperm Development in *Arabidopsis***  1862
Michael F. Portereiko, Alan Lloyd, Joshua G. Steffen, Jayson A. Punwani, Denichiro Otsuga, and Gary N. Drews
- AUXIN RESPONSE FACTOR8* Is a Negative Regulator of Fruit Initiation in *Arabidopsis***  1873
Marc Goetz, Adam Vivian-Smith, Susan D. Johnson, and Anna M. Koltunow
- Arabidopsis* ABA INSENSITIVE4 Regulates Lipid Mobilization in the Embryo and Reveals Repression of Seed Germination by the Endosperm**  1887
Steven Penfield, Yi Li, Alison D. Gilday, Stuart Graham, and Ian A. Graham
- KNAT6*: An *Arabidopsis* Homeobox Gene Involved in Meristem Activity and Organ Separation**  1900
Enric Belles-Boix, Olivier Hamant, Sarah Melissa Witiak, Halima Morin, Jan Traas, and Véronique Pautot

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- Proteomic Analysis of the Eyespot of *Chlamydomonas reinhardtii* Provides Novel Insights into Its Components and Tactic Movements** [W](#) 1908
Melanie Schmidt, Gunther Geßner, Matthias Luff, Ines Heiland, Volker Wagner, Marc Kaminski, Stefan Geimer, Nicole Eitzinger, Tobias Reibenweber, Olga Voytsekh, Monika Fiedler, Maria Mittag, and Georg Kreimer
- Arabidopsis* LHT1 Is a High-Affinity Transporter for Cellular Amino Acid Uptake in Both Root Epidermis and Leaf Mesophyll** [W](#) 1931
Axel Hirner, Friederike Ladwig, Harald Stransky, Sakiko Okumoto, Melanie Keinath, Agnes Harms, Wolf B. Frommer, and Wolfgang Koch
- A Chromoplast-Specific Carotenoid Biosynthesis Pathway Is Revealed by Cloning of the Tomato *white-flower* Locus** [W](#) 1947
Navot Galpaz, Gil Ronen, Zehava Khalfa, Dani Zamir, and Joseph Hirschberg
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Rodrigo M.P. Siloto, Kim Findlay, Arturo Lopez-Villalobos, Edward C. Yeung, Cory L. Nykiforuk, and Maurice M. Moloney
- CONSTITUTIVELY PHOTOMORPHOGENIC1 Is Required for the UV-B Response in *Arabidopsis*** [W](#) 1975
Attila Oravecz, Alexander Baumann, Zoltán Máté, Agnieszka Brzezinska, Jean Molinier, Edward J. Oakeley, Eva Adám, Eberhard Schäfer, Ferenc Nagy, and Roman Ulm
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Haodong Chen, Yunping Shen, Xiaobo Tang, Lu Yu, Jia Wang, Lan Guo, Yu Zhang, Huiyong Zhang, Suhua Feng, Elizabeth Strickland, Ning Zheng, and Xing Wang Deng
- Tobacco Tsi1, a DnaJ-Type Zn Finger Protein, Is Recruited to and Potentiates Tsi1-Mediated Transcriptional Activation** [W](#) 2005
Byung-Kook Ham, Jeong Mee Park, Suk-Bae Lee, Min Jung Kim, In-Ju Lee, Ki-Jeong Kim, Chang Seob Kwon, and Kyung-Hee Paek
- A Variable Cluster of Ethylene Response Factor-Like Genes Regulates Metabolic and Developmental Acclimation Responses to Submergence in Rice** [W](#) 2021
Takeshi Fukao, Kenong Xu, Pamela C. Ronald, and Julia Bailey-Serres
- Functional Replacement of Ferredoxin by a Cyanobacterial Flavodoxin in Tobacco Confers Broad-Range Stress Tolerance** [W](#) 2035
Vanessa B. Tognetti, Javier F. Palatnik, María F. Fillat, Michael Melzer, Mohammad-Reza Hajirezaei, Estela M. Valle, and Néstor Carrillo
- Posttranscriptional Induction of Two Cu/Zn Superoxide Dismutase Genes in *Arabidopsis* Is Mediated by Downregulation of miR398 and Important for Oxidative Stress Tolerance** [W](#) 2051
Ramanjulu Sunkar, Avnish Kapoor, and Jian-Kang Zhu
- Endocytosis Is Essential for Pathogenic Development in the Corn Smut Fungus *Ustilago maydis*** [W](#) 2066
Uta Fuchs, Gerd Hause, Isabel Schuchardt, and Gero Steinberg
- Distinct Domains in the ARC Region of the Potato Resistance Protein Rx Mediate LRR Binding and Inhibition of Activation** [W](#) 2082
Gregory J. Rairdan and Peter Moffett
- CORRECTION** 2094
Sang Ho Lee and Hyung-Taeg Cho (2006). PINOID Positively Regulates Auxin Efflux in *Arabidopsis* Root Hair Cells and Tobacco Cells. *Plant Cell* 18, 1604–1616.

[W](#) Online version contains Web-only data.

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



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