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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.

ON THE INSIDE

Peter V. Minorsky 1147

BREAKTHROUGH TECHNOLOGIES

^{[C][W]}Rosette Tracker: An Open Source Image Analysis Tool for Automatic Quantification of Genotype Effects. Jonas De Vylder, Filip Vandenbussche, Yuming Hu, Wilfried Philips, and Dominique Van Der Straeten 1149

SCIENTIFIC CORRESPONDENCE

Discovery of New Modules in Metabolic Biology Using ChemoMetabolomics. Samuel Bocobza, Lothar Willmitzer, Natasha V. Raikhel, and Asaph Aharoni 1160

RESEARCH ARTICLES

BIOCHEMICAL PROCESSES AND MACROMOLECULAR STRUCTURES

^{[W][OA]}Arabidopsis ECERIFERUM2 Is a Component of the Fatty Acid Elongation Machinery Required for Fatty Acid Extension to Exceptional Lengths. Tegan M. Haslam, Aurora Mañas-Fernández, Lifang Zhao, and Ljerka Kunst 1164

^{[W][OA]}Altered Starch Turnover in the Maternal Plant Has Major Effects on Arabidopsis Fruit Growth and Seed Composition. Vasilios M.E. Andriotis, Marilyn J. Pike, Sabine L. Schwarz, Stephen Rawsthorne, Trevor L. Wang, and Alison M. Smith 1175

^{[W][OA]}Loss of Lon1 in Arabidopsis Changes the Mitochondrial Proteome Leading to Altered Metabolite Profiles and Growth Retardation without an Accumulation of Oxidative Damage. Cory Solheim, Lei Li, Polydefkis Hatzopoulos, and A. Harvey Millar 1187

^[W]Impact of the Absence of Stem-Specific β -Glucosidases on Lignin and Monolignols. Aurélie Chapelle, Kris Morreel, Ruben Vanholme, Philippe Le-Bris, Halima Morin, Catherine Lapierre, Wout Boerjan, Lise Jouanin, and Nathalie Demont-Caulet 1204

^{[W][OA]}Predictive Modeling of Biomass Component Tradeoffs in *Brassica napus* Developing Oilseeds Based on in Silico Manipulation of Storage Metabolism. Jörg Schwender and Jordan O. Hay 1218

^{[C][W]}Misexpression of a Chloroplast Aspartyl Protease Leads to Severe Growth Defects and Alters Carbohydrate Metabolism in Arabidopsis. Eleonora Paparelli, Silvia Gonzali, Sandro Parlanti, Giacomo Novi, Federico M. Giorgi, Francesco Licausi, Monika Kosmacz, Regina Feil, John E. Lunn, Henrike Brust, Joost T. van Dongen, Martin Steup, and Pierdomenico Perata 1237

^{[W][OA]}Crystal Structures of *Physcomitrella patens* AOC1 and AOC2: Insights into the Enzyme Mechanism and Differences in Substrate Specificity. Piotr Neumann, Florian Brodhun, Kristin Sauer, Cornelia Herrfurth, Mats Hamberg, Jens Brinkmann, Julia Scholz, Achim Dickmanns, Ivo Feussner, and Ralf Ficner 1251

^{[W][OA]}Cinnamate:CoA Ligase Initiates the Biosynthesis of a Benzoate-Derived Xanthone Phytoalexin in *Hypericum calycinum* Cell Cultures. Mariam M. Gaid, Debabrata Sircar, Andreas Müller, Till Beuerle, Benye Liu, Ludger Ernst, Robert Hänsch, and Ludger Beerhues 1267

Continued on next page

- [W][OA] Acyl Editing and Headgroup Exchange Are the Major Mechanisms That Direct Polyunsaturated Fatty Acid Flux into Triacylglycerols. *Philip D. Bates, Abdelhak Fatihi, Anna R. Snapp, Anders S. Carlsson, John Browse, and Chaofu Lu* 1530
- [C][W][OA] *Tie-dyed2* Encodes a Callose Synthase That Functions in Vein Development and Affects Symplastic Trafficking within the Phloem of Maize Leaves. *Thomas L. Slewinski, R. Frank Baker, Adam Stubert, and David M. Braun* 1540
- [C][W][OA] Distinct Cell Wall Architectures in Seed Endosperms in Representatives of the Brassicaceae and Solanaceae. *Kieran J.D. Lee, Bas J.W. Dekkers, Tina Steinbrecher, Cherie T. Walsh, Antony Bacic, Leónie Bentsink, Gerhard Leubner-Metzger, and J. Paul Knox* 1551
- CELL BIOLOGY AND SIGNAL TRANSDUCTION**
- [C][OA] Architecture-Based Multiscale Computational Modeling of Plant Cell Wall Mechanics to Examine the Hydrogen-Bonding Hypothesis of the Cell Wall Network Structure Model. *Hojae Yi and Virendra M. Puri* 1281
- [W][OA] Vacuolar CAX1 and CAX3 Influence Auxin Transport in Guard Cells via Regulation of Apoplastic pH. *Daeshik Cho, Florent Villiers, Laetitia Kroniewicz, Sangmee Lee, You Jin Seo, Kendal D. Hirschi, Nathalie Leonhardt, and June M. Kwak* 1293
- [W][OA] A Comparative Study of Ethylene Growth Response Kinetics in Eudicots and Monocots Reveals a Role for Gibberellin in Growth Inhibition and Recovery. *Joonyup Kim, Rebecca L. Wilson, J. Brett Case, and Brad M. Binder* 1567
- DEVELOPMENT AND HORMONE ACTION**
- [C][W][OA] Diverse Roles of Strigolactone Signaling in Maize Architecture and the Uncoupling of a Branching-Specific Subnetwork. *Jiahn Chou Guan, Karen E. Koch, Masaharu Suzuki, Shan Wu, Susan Latshaw, Tanya Petruff, Charles Goulet, Harry J. Klee, and Donald R. McCarty* 1303
- [C][W][OA] Impaired Auxin Biosynthesis in the *defective endosperm18* Mutant Is Due to Mutational Loss of Expression in the *ZmYuc1* Gene Encoding Endosperm-Specific YUCCA1 Protein in Maize. *Jamila Bernardi, Alessandra Lanubile, Qin-Bao Li, Dibyendu Kumar, Aleš Kladnik, Sam D. Cook, John J. Ross, Adriano Marocco, and Prem S. Chourey* 1318
- [W][OA] Strigolactones Are Involved in Root Response to Low Phosphate Conditions in Arabidopsis. *Einav Mayzlish-Gati, Carolien De-Cuyper, Sofie Goormachtig, Tom Beeckman, Marnik Vuylsteke, Philip B. Brewer, Christine A. Beveridge, Uri Yermiyahu, Yulia Kaplan, Yael Enzer, Smadar Wininger, Natalie Resnick, Maja Cohen, Yoram Kapulnik, and Hinanit Koltai* 1329
- [C][W][OA] A Novel Approach to Dissect the Abscission Process in Arabidopsis. *Zinnia Haydee González-Carranza, Ahmad Ali Shahid, Li Zhang, Yang Liu, Unchalee Ninsuwan, and Jeremy Alan Roberts* 1342
- [C][W] Characterization of the *procera* Tomato Mutant Shows Novel Functions of the SIDELLA Protein in the Control of Flower Morphology, Cell Division and Expansion, and the Auxin-Signaling Pathway during Fruit-Set and Development. *Esther Carrera, Omar Ruiz-Rivero, Lázaro Eustaquio Pereira Peres, Alejandro Atares, and José Luis García-Martínez* 1581
- ENVIRONMENTAL STRESS AND ADAPTATION TO STRESS**
- [C][W][OA] Carbon Deprivation-Driven Transcriptome Reprogramming in Detached Developmentally Arresting Arabidopsis Inflorescences. *Alice Trivellini, Rubina Jibran, Lyn M. Watson, Erin O'Donoghue, Antonio Ferrante, Kerry Sullivan, Paul P. Dijkwel, and Donald A. Hunter* 1357
- [C][W][OA] The γ -Carbonic Anhydrase Subcomplex of Mitochondrial Complex I Is Essential for Development and Important for Photomorphogenesis of Arabidopsis. *Qin Wang, Rikard Fristedt, Xuhong Yu, Zugen Chen, Hongtao Liu, Yurhee Lee, Hongwei Guo, Sabeeha S. Merchant, and Chentao Lin* 1373
- [W][OA] Maize Source Leaf Adaptation to Nitrogen Deficiency Affects Not Only Nitrogen and Carbon Metabolism But Also Control of Phosphate Homeostasis. *Urte Schlüter, Martin Mascher, Christian Colmsee, Uwe Scholz, Andrea Bräutigam, Holger Fahnenstich, and Uwe Sonnenschein* 1384
- GENETICS, GENOMICS, AND MOLECULAR EVOLUTION**
- [W] Structural, Functional, and Evolutionary Analysis of the Unusually Large Stilbene Synthase Gene Family in Grapevine. *Claire Parage, Raquel Tavares, Stéphane Réty, Raymonde Baltenweck-Guyot, Anne Poutaraud, Lauriane Renault, Dimitri Heintz, Raphaël Lugan, Gabriel A.B. Marais, Sébastien Aubourg, and Philippe Huguency* 1407

Continued on next page

[W][OA] Effects of Reduced Chloroplast Gene Copy Number on Chloroplast Gene Expression in Maize. Dylan B. Udy, Susan Belcher, Rosalind Williams-Carrier, José M. Gualberto, and Alice Barkan 1420

[C][W] Genomics and Localization of the Arabidopsis DHHC-Cysteine-Rich Domain S-Acyltransferase Protein Family. Oliver Batistič 1597

[C][W][OA] Allelic Variation in Paralogs of GDP-L-Galactose Phosphorylase Is a Major Determinant of Vitamin C Concentrations in Apple Fruit. Ifigeneia Mellidou, David Chagné, William A. Laing, Johan Keulemans, and Mark W. Davey 1613

PLANTS INTERACTING WITH OTHER ORGANISMS

[C][W][OA] Characterization of a Viral Synergism in the Monocot *Brachypodium distachyon* Reveals Distinctly Altered Host Molecular Processes Associated with Disease. Kranthi K. Mandadi and Karen-Beth G. Scholthof 1432

[W][OA] Alternative Oxidase in Resistance to Biotic Stresses: *Nicotiana attenuata* AOX Contributes to Resistance to a Pathogen and a Piercing-Sucking Insect But Not *Manduca sexta* Larvae. Lu Zhang, Youngjoo Oh, Hongyu Li, Ian T. Baldwin, and Ivan Galis 1453

[W][OA] An Amino Acid Substitution Inhibits Specialist Herbivore Production of an Antagonist Effector and Recovers Insect-Induced Plant Defenses. Eric A. Schmelz, Alisa Huffaker, Mark J. Carroll, Hans T. Alborn, Jared G. Ali, and Peter E.A. Teal 1468

[C][W][OA] Rhamnolipids Elicit Defense Responses and Induce Disease Resistance against Biotrophic, Hemibiotrophic, and Necrotrophic Pathogens That Require Different Signaling Pathways in Arabidopsis and Highlight a Central Role for Salicylic Acid. Lisa Sanchez, Barbara Courteaux, Jane Hubert, Serge Kauffmann, Jean-Hugues Renault, Christophe Clément, Fabienne Baillieu, and Stéphan Dorey 1630

[C][W][OA] Microbe-Associated Molecular Patterns-Triggered Root Responses Mediate Beneficial Rhizobacterial Recruitment in Arabidopsis. Venkatachalam Lakshmanan, Sherry L. Kitto, Jeffrey L. Caplan, Yi-Huang Hsueh, Daniel B. Kearns, Yu-Sung Wu, and Harsh P. Bais 1642

WHOLE PLANT AND ECOPHYSIOLOGY

[W][OA] Acclimation of Leaf Nitrogen to Vertical Light Gradient at Anthesis in Wheat Is a Whole-Plant Process That Scales with the Size of the Canopy. Delphine Moreau, Vincent Allard, Oorbessy Gaju, Jacques Le Gouis, M. John Foulkes, and Pierre Martre 1479

[W][OA] Functional Characterization of a Silicon Transporter Gene Implicated in Silicon Distribution in Barley. Naoki Yamaji, Yukako Chiba, Namiki Mitani-Ueno, and Jian Feng Ma 1491

SYSTEMS BIOLOGY, MOLECULAR BIOLOGY, AND GENE REGULATION

[C][W][OA] Targeted Systems Biology Profiling of Tomato Fruit Reveals Coordination of the Yang Cycle and a Distinct Regulation of Ethylene Biosynthesis during Postclimacteric Ripening. Bram Van de Poel, Inge Bulens, Aikaterina Markoula, Maarten L.A.T.M. Hertog, Rozemarijn Dreesen, Markus Wirtz, Sandy Vandoninck, Yasmin Oppermann, Johan Keulemans, Ruediger Hell, Etienne Waelkens, Maurice P. De Proft, Margret Sauter, Bart M. Nicolai, and Annemie H. Geeraerd 1498

[C][W] Poplar Wood Rays Are Involved in Seasonal Remodeling of Tree Physiology. Christina Larisch, Marcus Dittrich, Henning Wildhagen, Silke Lautner, Jörg Fromm, Andrea Polle, Rainer Hedrich, Heinz Rennenberg, Tobias Müller, and Peter Ache 1515

[W] Proteasome-Mediated Turnover of Arabidopsis MED25 Is Coupled to the Activation of FLOWERING LOCUS T Transcription. Sabrina Iñigo, Adrián N. Giraldez, Joanne Chory, and Pablo D. Cerdán 1662

CORRECTIONS

SMALL ACICIC PROTEIN1 Acts with RUB Modification Components, the COP9 Signalosome and AXR1 to Regulate Growth and Development of Arabidopsis. Nakasone A., Fujiwara M., Fukao Y., Biswas K.K., Rahman A., Kawai-Yamada M., Narumi I., Uchimiya H., and Oono Y. 1674

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