IN BRIEF

Towards Breeding Strong but Fine Cotton Fibers with a Little Help from WLIM1a
Jennifer Lockhart

Breaking Down the Complex Regulatory Web Underlying Lignin Biosynthesis
Jennifer Lockhart

Small RNAs and the Big Decisions: MicroRNA Regulation of Photoperiodic Flowering in Brachypodium distachyon
Jennifer Mach

Calmodulin Methylation: Another Layer of Regulation in Calcium Signaling
Nancy R. Hofmann

LARGE-SCALE BIOLOGY ARTICLES

Spatio-Temporal Transcript Profiling of Rice Roots and Shoots in Response to Phosphate Starvation and Recovery
David Secco, Mehdi Jabnoune, Hayden Walker, Huixia Shou, Ping Wu, Yves Poirier, and James Whelan

Systems-Level Analysis of Nitrogen Starvation–Induced Modifications of Carbon Metabolism in a Chlamydomonas reinhardtii Starchless Mutant
Ian K. Blaby, Anne G. Glaesener, Tabea Mettler, Sorel T. Fitz-Gibbon, Sean D. Gallaher, Bensheng Liu, Nanette R. Boyle, Janette Kropat, Mark Stitt, Shannon Johnson, Christoph Benning, Matteo Pellegrini, David Casero, and Sabeeha S. Merchant

SND1 Transcription Factor–Directed Quantitative Functional Hierarchical Genetic Regulatory Network in Wood Formation in Populus trichocarpa
Ying-Chung Lin, Wei Li, Ying-Hsuan Sun, Sapna Kumari, Hairong Wei, Quanzi Li, Sermsawat Tunlaya-Anukit, Ronald R. Sederoff, and Vincent L. Chiang

A Genomics Approach to Deciphering Lignin Biosynthesis in Switchgrass

RESEARCH ARTICLES

Regulation of FLOWERING LOCUS T by a MicroRNA in Brachypodium distachyon
Liang Wu, Dongfeng Liu, Jaijie Wu, Rongzhi Zhang, Zhengrui Qin, Danmei Liu, Aili Li, Daolin Fu, Wuxue Zhai, and Long Mao
The Cold Signaling Attenuator HIGH EXPRESSION OF OSMOTICALLY RESPONSIVE GENE1 Activates FLOWERING LOCUS C Transcription via Chromatin Remodeling under Short-Term Cold Stress in Arabidopsis

Jae-Hoon Jung, Ju-Hyung Park, Sangmin Lee, Taiko Kim To, Jong-Myong Kim, Motoaki Seki, and Chung-Mo Park

HIGH EXPRESSION OF OSMOTICALLY RESPONSIVE GENES1 Is Required for Circadian Periodicity through the Promotion of Nucleo-Cytoplasmic mRNA Export in Arabidopsis

Dana R. MacGregor, Peter Gould, Julia Foreman, Jayne Griffiths, Susannah Bird, Rhiannon Paige, Kelly Stewart, Gavin Steel, Jack Young, Konrad Paszkiewicz, Andrew J. Millar, Karen J. Halliday, Anthony J. Hall, and Steven Penfield

Blue Light–Dependent Interaction between Cryptochrome2 and CIB1 Regulates Transcription and Leaf Senescence in Soybean

Yingying Meng, Hongyu Li, Qin Wang, Bin Liu, and Chentao Lin

The Dual Functions of WLIM1a in Cell Elongation and Secondary Wall Formation in Developing Cotton Fibers

Li-Bo Han, Yuan-Bao Li, Hai-Yun Wang, Xiao-Min Wu, Chun-Li Li, Ming Luo, Shen-Jie Wu, Zhao-Sheng Kong, Yan Pei, Gai-Li Jiao, and Gui-Xian Xia

Rho of Plant GTPase Signaling Regulates the Behavior of Arabidopsis Kinesin-13A to Establish Secondary Cell Wall Patterns

Yoshiohisa Oda and Hiroyo Fukuda

Plastid-Localized Glutathione Reductase2–Regulated Glutathione Redox Status Is Essential for Arabidopsis Root Apical Meristem Maintenance

Xin Yu, Taras Pasternak, Monika Eiblmeier, Franck Ditengou, Philip Kochersperger, Jiaqiang Sun, Hui Wang, Heinz Rennenberg, William Teale, Ivan Paponov, Wenkun Zhou, Chuanyou Li, Xugang Li, and Klaus Palme

RETINOBLASTOMA-RELATED Protein Stimulates Cell Differentiation in the Arabidopsis Root Meristem by Interacting with Cytokinin Signaling

Serena Perilli, José Manuel Perez-Perez, Riccardo Di Mambro, Cristina Llavata Peris, Sara Díaz-Triviño, Marta Del Bianco, Emanuela Pierdonati, Laila Moubayidin, Alfredo Cruz-Ramirez, Paolo Costantino, Ben Scheres, and Sabrina Sabatini

MICROTUBULE-ASSOCIATED PROTEIN65 Is Essential for Maintenance of Phragmoplast Bipolarity and Formation of the Cell Plate in Physcomitrella patens

Ken Kosetsu, Jeroen de Keijzer, Marcel E. Janson, and Gohta Goshima

Calmodulin-Mediated Signal Transduction Pathways in Arabidopsis Are Fine-Tuned by Methylation

Joydeep Banerjee, Roberta Magnani, Meera Nair, Lynnette M. Dirk, Seth DeBolt, Indu B. Maiti, and Robert L. Houtz

Comparing the Calcium Binding Abilities of Two Soybean Calmodulins: Towards Understanding the Divergent Nature of Plant Calmodulins

Jessica L. Gifford, Mostafa Jamshidiha, Jeffrey Mo, Hiroaki Ishida, Serena Perilli, José Manuel Perez-Perez, Riccardo Di Mambro, Cristina Llavata Peris, Sara Díaz-Triviño, Marta Del Bianco, Emanuela Pierdonati, Laila Moubayidin, Alfredo Cruz-Ramirez, Paolo Costantino, Ben Scheres, and Sabrina Sabatini

Pollen Tube Growth Regulation by Free Anions Depends on the Interaction between the Anion Channel SLAH3 and Calcium-Dependent Protein Kinases CPK2 and CPK20

Timo Gutermuth, Roman Lassig, Maria-Teresa Portes, Tobias Maierhofer, Tina Romeis, Jan-Willem Scheid, Jeroen de Keijzer, Marcel E. Janson, and Gohta Goshima

The Actin-Related Protein2/3 Complex Regulates Mitochondrial-Associated Calcium Signaling during Salt Stress in Arabidopsis

Yi Zhao, Zhen Pan, Yan Zhang, Xiaoai Qu, Yuguang Zhang, Yongqing Yang, Xiangning Jiang, Shanjin Huang, Ming Yuan, Karen S. Schumaker, and Yan Guo

Subchromoplast Sequestration of Carotenoids Affects Regulatory Mechanisms in Tomato Lines Expressing Different Carotenoid Gene Combinations

Marilise Nogueira, Leticia Mora, Eugenia M.A. Enfissi, Peter M. Bramley, and Paul D. Fraser
A γ-Glutamyl Cyclotransferase Protects Arabidopsis Plants from Heavy Metal Toxicity by Recycling Glutamate to Maintain Glutathione Homeostasis

Bibin Paulose, Sudesh Chhikara, Joshua Coomey, Ha-il Jung, Olena Vatamaniuk, and Om Parkash Dhankher

A BAR-Domain Protein SH3P2, Which Binds to Phosphatidylinositol 3-Phosphate and ATG8, Regulates Autophagosome Formation in Arabidopsis

Xiaohong Zhuang, Hao Wang, Sheung Kwan Lam, Caiji Gao, Xiangfeng Wang, Yi Cai, and Liwen Jiang

Catalase and NO CATALASE ACTIVITY1 Promote Autophagy-Dependent Cell Death in Arabidopsis

Thomas Hackenberg, Trine Juul, Aija Auzina, Sonia Gwizdz, Anna Malolepszy, Katrien Van Der Kelen, Svend Dam, Simon Bressendorff, Andrea Lorentzen, Peter Roepstorff, Kåre Lehmann Nielsen, Jan-Elo Jørgensen, Daniel Hofius, Frank Van Breusegem, Morten Petersen, and Stig Uggerhøj Andersen

Arabidopsis 56–Amino Acid Serine Palmitoyltransferase-Interacting Proteins Stimulate Sphingolipid Synthesis, Are Essential, and Affect Mycotoxin Sensitivity

Athen N. Kimberlin, Saurav Majumder, Gongshe Han, Ming Chen, Rebecca E. Cahoon, Julie M. Stone, Teresa M. Dunn, and Edgar B. Cahoon

Gene Coexpression Analysis Reveals Complex Metabolism of the Monoterpene Alcohol Linalool in Arabidopsis Flowers


MAIGOS Functions in Protein Export from Golgi-Associated Endoplasmic Reticulum Exit Sites in Arabidopsis

Junpei Takagi, Luciana Renna, Hideyuki Takahashi, Yasuko Kouruma, Kentaro Tamura, Giovanni Stefano, Yoichiro Fukao, Maki Kondo, Mikio Nishimura, Tomoo Shimada, Federica Brandizzi, and Ikuko Hara-Nishimura

Endoplasmic Reticulum Glucosidases and Protein Quality Control Factors Cooperate to Establish Biotrophy in Ustilago maydis

Alfonso Fernández-Alvarez, Alberto Elias-Villalobos, Alberto Jiménez-Martín, Miriam Marin-Menguiano, and José I. Ibeas

Two Rumex Species from Contrasting Hydrological Niches Regulate Flooding Tolerance through Distinct Mechanisms


The Arabidopsis NAC Transcription Factor ANAC096 Cooperates with bZIP-Type Transcription Factors in Dehydration and Osmotic Stress Responses

Zheng-Yi Yi, Soo Youn Kim, Do Young Hyeon, Dae Heon Kim, Ting Dong, Youngmin Park, Jing Bo Jin, Se-Hwan Joo, Seong-Kim Kim, Jong Chan Hong, Dahee Wang, and Inhwan Huang

Jumonji C Domain Protein JMJ705-Mediated Removal of Histone H3 Lysine 27 Trimethylation Is Involved in Defense-Related Gene Activation in Rice

Tiantian Li, Xiangsong Chen, Xiaochao Zhong, Yu Zhao, Xiaoyun Liu, Shaoli Zhou, Saifeng Cheng, and Dao-Xiu Zhou

Two Herbivore-Induced Cytochrome P450 Enzymes CYP79D6 and CYP79D7 Catalyze the Formation of Volatile Aldoximes Involved in Poplar Defense

Sandra Irmisch, Andrea Clavijo McCormick, G. Andreas Boeckler, Axel Schmidt, Michael Reichelt, Bernd Schneider, Katja Block, Jörg-Peter Schnitzler, Jonathan Gershenson, Sybille B. Unsicker, and Tobias G. Köllner
CORRECTION


Some figures in this article are displayed in color online but in black and white in the print edition.

Online version contains Web-only data.

Articles can be viewed online without a subscription.