IN BRIEF

Open Wide! Exine Patterning and Aperture Formation in Arabidopsis Pollen
Jennifer Mach

Ubiquitination and Exocytosis in Plant Immunity
Nancy R. Hofmann

Polarization of Subsidiary Cell Division in Maize Stomatal Complexes
Kathleen L. Farquharson

COMMENTARY

Reevaluation of the Reliability and Usefulness of the Somatic Homologous Recombination Reporter Lines
Bekir Ullker, Carl Maximilian Hommelsheim, Tobias Berson, Stefan Thomas, Balakumaran Chandrasekar, Ahmet Can Olcay, Kenneth Wayne Berendzen, and Lamprinos Frantzeskakis

In Planta Somatic Homologous Recombination Assay Revisited:
A Successful and Versatile, but Delicate Tool
Holger Puchta and Barbara Hohn

LARGE-SCALE BIOLOGY ARTICLES

Genome-Wide Analysis Uncovers Regulation of Long Intergenic Noncoding RNAs in Arabidopsis
Jun Liu, Choonkyun Jung, Jun Xu, Huan Wang, Shulin Deng, Lucia Bernad, Catalina Arenas-Huertero, and Nam-Hai Chua

Regulatory Impact of RNA Secondary Structure across the Arabidopsis Transcriptome
Fan Li, Qi Zheng, Lee E. Vandivier, Matthew R. Willmann, Ying Chen, and Brian D. Gregory

Polypyrimidine Tract Binding Protein Homologs from Arabidopsis Are Key Regulators of Alternative Splicing with Implications in Fundamental Developmental Processes
Christina Ruhl, Eva Stauffer, Andre Kahles, Gabriele Wagner, Gabriele Drechsel, Gunnar Ratsch, and Andreas Wachter

Genome-Wide Control of Polyadenylation Site Choice by CPSF30 in Arabidopsis
Patrick E. Thomas, Xiaohui Wu, Man Liu, Bobby Gaffney, Guoli Ji, Qingshun Q. Li, and Arthur G. Hunt
The MORPH Algorithm: Ranking Candidate Genes for Membership in Arabidopsis and Tomato Pathways
Oren Tzfadia, David Amar, Louis M.T. Bradbury, Eleanore T. Wurzel, and Ron Shamir

RESEARCH ARTICLES

Identification and Characterization of an Epi-Allele of FIE1 Reveals a Regulatory Linkage between Two Epigenetic Marks in Rice
Liguo Zhang, Zhijun Cheng, Ruiwen Qin, Yang Qiu, Ji-Lin Wang, Xieke Cui, Lianfeng Gu, Xin Zhang, Xiuping Guo, Dan Wang, Ling Jiang, Chuan-yin Wu, Haiyang Wang, Xiaofeng Cao, and Jianmin Wan

Genome-Wide Characterization of Nonreference Transposons Reveals Evolutionary Propensities of Transposons in Soybean
Zhixi Tian, Meixia Zhao, Maoyun She, Jianchang Du, Steven B. Cannon, Xin Liu, Xin Yu, Xinpeng Qi, Man-Wah Li, Hon-Ming Lam, and Jianxin Ma

The Tomato FRUITFULL Homologs TDR4/FUL1 and MBP7/FUL2 Regulate Ethylene-Independent Aspects of Fruit Ripening
Marian Bemer, Rumyana Karlova, Ana Rosa Ballester, Yury M. Tikunov, Arnaud G. Bovy, Mieke Wolters-Arts, Priscilla de Barros Rossetto, Gerco C. Angenent, and Ruud A. de Maagd

The Novel Plant Protein INAPERTURATE POLLEN1 Marks Distinct Cellular Domains and Controls Formation of Apertures in the Arabidopsis Pollen Exine
Anna A. Dobritsa and Daniel Coerper

Protein–Protein and Protein–Membrane Associations in the Lignin Pathway
Jean-Etienne Bassard, Ludovic Richert, Jan Geerinck, Hugues Renault, Frederic Duval, Pascaline Ullmann, Martine Schmitt, Etienne Meyer, Jerome Mutterer, Wout Boerjan, Geert De Jaeger, Yves Mely, Alain Goossens, and Daniele Werck-Reichhart

A Triantagonistic Basic Helix-Loop-Helix System Regulates Cell Elongation in Arabidopsis
Miho Ikeda, Sumire Fujiwara, Nobutaka Mitsuda, and Masaru Ohme-Takagi

NODULE ROOT and COCHLEATA Maintain Nodule Development and Are Legume Orthologs of Arabidopsis BLADE-ON-PETIOLE Genes
Jean-Malo Couzigou, Vladimir Zhukov, Ana Rosa Ballester, Yury M. Tikunov, Arnaud G. Boyv, Mieke Wolters-Arts, Priscilla de Barros Rossetto, Gerco C. Angenent, and Ruud A. de Maagd

A Galacturonic Acid–Containing Xyloglucan Is Involved in Arabidopsis Root Hair Tip Growth
Maria J. Peña, Yingzhen Kong, William S. York, and Malcolm A. O’Neill

Crystal Structure of an Indole-3-Acetic Acid Amido Synthetase from Grapevine Involved in Auxin Homeostasis
Thomas S. Peat, Christine Bottcher, Janet Newman, Del Lucent, Nathan Cowieson, and Christopher Davies

FIMBRIN1 Is Involved in Lily Pollen Tube Growth by Stabilizing the Actin Fringe
Hui Su, Jinhong Zhu, Chao Cai, Weike Pei, Jiaojiao Wang, Huaijian Dong, and Haiyun Ren

Phosphatidic Acid Regulates Microtubule Organization by Interacting with MAP65-1 in Response to Salt Stress in Arabidopsis
Qun Zhang, Feng Lin, Tonglin Mao, Jianing Nie, Min Yan, Ming Yuan, and Wenhua Zhang

Identification of PAN2 by Quantitative Proteomics as a Leucine-Rich Repeat–Receptor-Like Kinase Acting Upstream of PAN1 to Polarize Cell Division in Maize
Xiaoguo Zhang, Michelle Facette, John A. Humphries, Zhouxin Shen, Yeri Park, Dena Sutimantanapi, Anne W. Sylvester, Steven P. Briggs, and Laurie G. Smith
Arabidopsis FYH3 and HY5 Positively Mediate Induction of COP1 Transcription in Response to Photomorphogenic UV-B Light
Xi Huang, Xinshao Ouyang, Panyu Yang, On Sun Lau, Gang Li, Jigang Li, Haodong Chen, and Xing Wang Deng

The ARC1 E3 Ligase Gene Is Frequently Deleted in Self-Compatible Brassicaceae Species and Has a Conserved Role in Arabidopsis lyrata Self-Pollen Rejection
Emily Indriolo, Pirashaanthy Tharmapalan, Stephen I. Wright, and Daphne R. Goring

Cysteine-Generated Sulfide in the Cytosol Negatively Regulates Autophagy and Modulates the Transcriptional Profile in Arabidopsis
Consolación Álvarez, Irene García, Inmaculada Moreno, María Esther Pérez-Pérez, José L. Crespo, Luis C. Romero, and Cecilia Gotor

Degradation of the Endoplasmic Reticulum by Autophagy during Endoplasmic Reticulum Stress in Arabidopsis
Yiruo Liu, Junmarie Soto Burgos, Yan Deng, Renu Srivastava, Stephen H. Howell, and Diane C. Bassham

Metabolic Interactions between the Lands Cycle and the Kennedy Pathway of Glycerolipid Synthesis in Arabidopsis Developing Seeds
Liping Wang, Wenyun Shen, Michael Kazachkov, Guanqun Chen, Qilin Chen, Anders S. Carlsson, Sten Stymne, Randall J. Weselake, and Jitao Zou

A Galactoglycerolipid Lipase Is Required for Triacylglycerol Accumulation and Survival Following Nitrogen Deprivation in Chlamydomonas reinhardtii
Xiaobo Li, Eric R. Moellering, Bensheng Liu, Cassandra Johnny, Marie Fedewa, Barbara B. Sears, Min-Hao Kuo, and Christoph Benning

Phototropin Influence on Eyespot Development and Regulation of Phototactic Behavior in Chlamydomonas reinhardtii
Jessica Trippens, Andre Greiner, Jana Schellwat, Martin Neukam, Theresa Rottmann, Yinghong Lu, Suneel Kateriya, Peter Hegemann, and Georg Kreimer

The Ubiquitin Ligase PUB22 Targets a Subunit of the Exocyst Complex Required for PAMP-Triggered Responses in Arabidopsis
Martin Stegmann, Ryan G. Anderson, Kazuya Ichimura, Tamara Pecenkova, Patrick Reuter, Viktor Zársky, John M. McDowell, Ken Shirasu, and Marco Trujillo

The KEEP ON GOING Protein of Arabidopsis Regulates Intracellular Protein Trafficking and Is Degraded during Fungal Infection
Yangnan Gu and Roger W. Innes

XTH31, Encoding an in Vitro XEH/XET-Active Enzyme, Regulates Aluminum Sensitivity by Modulating in Vivo XET Action, Cell Wall Xyloglucan Content, and Aluminum Binding Capacity in Arabidopsis
Xiao Fang Zhu, Yuan Zhi Shi, Gui Jie Lei, Stephen C. Fry, Bao Cai Zhang, Yi Hua Zhou, Janet Braam, Tao Jiang, Xiao Yan Xu, Chuan Zao Mao, Yuan Jiang Pan, Jian Li Yang, Ping Wu, and Shao Jian Zheng

The Magnaporthe oryzae Effector AvrPiz-t Targets the RING E3 Ubiquitin Ligase APIP6 to Suppress Pathogen-Associated Molecular Pattern–Triggered Immunity in Rice
The Coronatine Toxin of *Pseudomonas syringae* Is a Multifunctional Suppressor of *Arabidopsis* Defense

Xueqing Geng, Jiye Cheng, Anju Gangadharan, and David Mackey

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.

Open Access articles can be viewed online without a subscription.