EDITORIAL
Happy Birthday to The Plant Cell
Cathie Martin 1

The Plant Cell: 20 Years Young
Robert B. Goldberg 3

The original promotional brochure announcing the debut of The Plant Cell 5

IN BRIEF
A Plastidial Pathway for Protein Isoprenylation in Tobacco Cells
Nancy A. Eckardt 13

Alternative Splicing Produces a JAZ Protein That Is Not Broken Down in Response to Jasmonic Acid
Jennifer Mach 14

Pack-MULEs Carry Functionality
Nancy A. Eckardt 15

Breaking Up Is Hard to Do: Cell Separation Events Involve Multiple Polygalacturonases and Multiple Hormones
Nancy R. Hofmann 16

Chloroplast RNA Editing by Pentatricopeptide Repeat Proteins
Jennifer Mach 17

PERSPECTIVE
Hunting for Plant Nitric Oxide Synthase Provides New Evidence of a Central Role for Plastids in Nitric Oxide Metabolism
Elisabet Gas, Ursula Flores-Pérez, Susanna Sauret-Güeto, and Manuel Rodríguez-Concepción 18

RESEARCH ARTICLES
The Functional Role of Pack-MULEs in Rice Inferred from Purifying Selection and Expression Profile
Kousuke Hanada, Veronica Vallejo, Kan Nobuta, R. Keith Slotkin, Damon Lisch, Blake C. Meyers, Shin-Han Shiu, and Ning Jiang 25

Regulation of Carotenoid Composition and Shoot Branching in Arabidopsis by a Chromatin Modifying Histone Methyltransferase, SDG8
Christopher I. Cazzonelli, Abby J. Cuttriss, Susan B. Cossetto, William Pye, Peter Crisp, Jim Whelan, E. Jean Finnegan, Colin Turnbull, and Barry J. Pogson 39
Repression of Seed Maturation Genes by a Trihelix Transcriptional Repressor in Arabidopsis Seedlings

Ming-Jun Gao, Derek J. Lydiate, Xiang Li, Helen Lui, Branimir Gjetvaj, Dwayne D. Hegedus, and Kevin Rozwadowski

The Arabidopsis MYB5 Transcription Factor Regulates Mucilage Synthesis, Seed Coat Development, and Trichome Morphogenesis

Song Feng Li, Olga Nicolaou Milliken, Hanh Pham, Reg Seyit, Ross Napoli, Jeremy Preston, Anna M. Koltunow, and Roger W. Parish

ENDOSPERM DEFECTIVE1 Is a Novel Microtubule-Associated Protein Essential for Seed Development in Arabidopsis

Cristina Pignocchi, Gregory E. Minns, Nathalie Nesi, Rachil Koumproglou, Georgios Kitsios, Christopher Benning, Clive W. Lloyd, John H. Doonan, and Matthew J Hills

FORMATION OF NUCLEAR BODIES OF ARABIDOPSIS CRY2 IN RESPONSE TO BLUE LIGHT IS ASSOCIATED WITH ITS BLUE LIGHT–DEPENDENT DEGRADATION

Xuhong Yu, Ricardo Sayegh, Maskit Maymon, Katherine Warpeha, John Klejnot, Hongyun Yang, Jie Huang, Janet Lee, Lon Kaufman, and Chentao Lin

A Critical Role for the TIFY Motif in Repression of Jasmonate Signaling by a Stabilized Splice Variant of the JASMONATE ZIM-Domain Protein JAZ10 in Arabidopsis

Yun Zhou, Xiaojuan Zhang, Xiaojun Kang, Xiangyu Zhao, Xiansheng Zhang, and Min Ni

PENTATRICOPINE REPEAT PROTEINS WITH THE DYW MOTIF HAVE DISTINCT MOLECULAR FUNCTIONS IN RNA EDITING AND RNA CLEAVAGE IN ARABIDOPSIS CHLOROPLASTS


PARTICIPATION OF LEAKY RIBOSOME SCANNING IN PROTEIN DUAL TARGETING BY ALTERNATIVE TRANSLATION INITIATION IN HIGHER PLANTS

Yashitola Wamboldt, Saleem Mohammed, Christian Elowsky, Chris Wittgren, Wilson B.M. de Paula, and Sally A. Mackenzie

Multiple Repeats of a Promoter Segment Causes Transcription Factor Autoregulation in Red Apples

Richard V. Espley, Cyril Brendolise, David Chagne, Sumathi Kutty-Amma, Sol Green, Richard Volz, Jo Putterill, Henk J. Schouten, Susan E. Gardiner, Roger P. Hellens, and Andrew C. Allan

ARABIDOPSIS DEHISCENCE ZONE POLYGALACTURONASE1 (ADPG1), ADPG2, AND QUARTET2 ARE POLYGALACTURONASES REQUIRED FOR CELL SEPARATION DURING REPRODUCTIVE DEVELOPMENT IN ARABIDOPSIS

Mikihiro Ogawa, Pippa Kay, Sarah Wilson, and Stephen M. Swain

discordia1 and alternative discordia1 Function Redundantly at the Cortical Division Site to Promote Preprophase Band Formation and Orient Division Planes in Maize

Amanda J. Wright, Kimberly Gallagher, and Laurie G. Smith

MYB58 AND MYB63 ARE TRANSCRIPTIONAL ACTIVATORS OF THE LIGNIN BIOSYNTHETIC PATHWAY DURING SECONDARY CELL WALL FORMATION IN ARABIDOPSIS

Jianli Zhou, Chanhui Lee, Ruiqin Zhong, and Zheng-Hua Ye
Rearrangement of Actin Cytoskeleton Mediates Invasion of Lotus japonicus Roots by Mesorhizobium loti

Keisuke Yokota, Eigo Fukai, Lene H. Madsen, Anna Jurkiewicz, Paloma Rueda, Simona Radutoiu, Mark Held, Md Shakawat Hossain, Krzysztof Szczypkowski, Giulia Morieri, Giles E.D. Oldroyd, J. Allan Downie, Mette W. Nielsen, Anna Maria Rusek, Shusei Sato, Satoshi Tabata, Euan K. James, Hiroshi Oyaizu, Niels Sandal, and Jens Stougaard

The Plastidial 2-C-Methyl-D-Erythritol 4-Phosphate Pathway Provides the Isoprenyl Moiety for Protein Geranylation in Tobacco BY-2 Cells

Esther Gerber, Andréa Hemmerlin, Michael Hartmann, Dimitri Heintz, Marie-Andrée Hartmann, Jérome Mutterer, Manuel Rodriguez-Concepción, Albert Boronat, Alain Van Dorsselaer, Michel Rohmer, Dring N. Crowell, and Thomas J. Bach

A Novel Pathway for Sesquiterpene Biosynthesis from Z,Z-Farnesyl Pyrophosphate in the Wild Tomato Solanum habrochaites

Christophe Sallaud, Denis Rontein, Sandrine Onillon, Françoise Jacbès, Philippe Duffé, Cécile Giacalone, Samuel Thoraval, Camille Escoffier, Gaëtan Herbetter, Nathalie Leonhardt, Mathilde Causse, and Alain Tissier

A Novel Polyamine Acyltransferase Responsible for the Accumulation of Spermidine Conjugates in Arabidopsis Seed

Jie Luo, Christine Fuell, Adrian Parr, Lionel Hill, Paul Bailey, Katherine Elliott, Shirley A. Fairhurst, Cathie Martin, and Anthony J. Michael

STARCH-EXCESS4 Is a Laforin-Like Phosphoglucan Phosphatase Required for Starch Degradation in Arabidopsis thaliana

Oliver Kötting, Diana Santelia, Christoph Edner, Simona Eicke, Tina Marthaler, Matthew S. Gentry, Sylviane Comparot-Moss, Jychian Chen, Alison M. Smith, Martin Steup, Gerhard Rittle, and Samuel C. Zeeman

SQUAMOSA Promoter Binding Protein–Like 7 Is a Central Regulator for Copper Homeostasis in Arabidopsis

Hiroaki Yamasaki, Makoto Hayashi, Mitsue Fukazawa, Yoshichika Kobayashi, and Toshiharu Shikanai

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.