ON THE COVER

The evolutionarily conserved interaction between particular SBP-box genes and miR156 is known to play a key role in the floral transition. The data presented by Xing et al. (pages 3935–3950) show another essential role for this interaction in sexual reproduction, specifically, in the process of microsporogenesis in anthers. The cover image shows the expression pattern of a GUS reporter gene driven by the MIR156H promoter region (cyan) in a top view of an Arabidopsis inflorescence apex.

IN BRIEF

Auxin Binding by SKP2A Activates Proteolysis of Downstream Cell Cycle Regulators and Promotes Cell Division
Jennifer Mach

The Nuclear Pore Complex in Arabidopsis
Nancy A. Eckardt

REVIEW

Form, Function, and Regulation of ARGONAUTE Proteins
Allison Mallory and Hervé Vaucheret

RESEARCH ARTICLES

The Arabidopsis Cell Cycle F-Box Protein SKP2A Binds to Auxin
Silvia Jurado, Zamira Abraham, Concepción Manzano, Gema López-Torrejón, Luis F. Pacios, and Juan C. Del Pozo

Root-Specific Reduction of Cytokinin Causes Enhanced Root Growth, Drought Tolerance, and Leaf Mineral Enrichment in Arabidopsis and Tobacco
Tomas Werner, Erika Nehnevajova, Ireen Köllmer, Ondřej Novák, Miroslav Strnad, Ute Kramer, and Thomas Schmülling

TCP Transcription Factors Link the Regulation of Genes Encoding Mitochondrial Proteins with the Circadian Clock in Arabidopsis thaliana
Estelle Giraud, Sophia Ng, Chris Carrie, Owen Duncan, Jasmine Low, Chun Pong Lee, Olivier Van Aken, A. Harvey Miilar, Monika Murcha, and James Whelan

miR156-Targeted and Nontargeted SBP-Box Transcription Factors Act in Concert to Secure Male Fertility in Arabidopsis
Shuping Xing, Maria Salinas, Susanne Höhmann, Rita Berndtgen, and Peter Huijser

The Arabidopsis U12-Type Spliceosomal Protein U11/U12-31K Is Involved in U12 Intron Splicing via RNA Chaperone Activity and Affects Plant Development
Won Yong Kim, Hyun Ju Jung, Kyung Jin Kwak, Min Kyung Kim, Seung Han Oh, Yeon Soo Han, and Hunseung Kang
Arabidopsis NPCC6/NaKR1 Is a Phloem Mobile Metal Binding Protein Necessary for Phloem Function and Root Meristem Maintenance

Hui Tian, Ivan R. Baxter, Brett Lahner, Anke Reinders, David E. Salt, and John M. Ward

Analyses of SORTING NEXINs Reveal Distinct Retromer-Subcomplex Functions in Development and Protein Sorting in Arabidopsis thaliana

Mikael Pourcher, Martina Santambrogio, Nelcy Thazar, Anne-Marie Thierry, Isabelle Fobis-Loisy, Christine Miège, Chris Hawes, and Jürgen Denecke

A Recycling-Defective Vacuolar Sorting Receptor Reveals an Intermediate Compartment Situated between Prevacuoles and Vacuoles in Tobacco

Ombretta Foresti, David C. Gershlick, Francesca Bottanelli, Eric Hummel, Chris Hawes, and Jürgen Denecke

EXPO, an Exocyst-Positive Organelle Distinct from Multivesicular Endosomes and Autophagosomes, Mediates Cytosol to Cell Wall Exocytosis in Arabidopsis and Tobacco Cells

Juan Wang, Yu Ding, Junji Wang, Stefan Hillmer, Yansong Miao, Sze Wan Lo, Xiangfeng Wang, David G. Robinson, and Liwen Jiang

Phosphoinositides Regulate Clathrin-Dependent Endocytosis at the Tip of Pollen Tubes in Arabidopsis and Tobacco

Yan Zhao, An Yan, José A. Feijó, Masahiro Furutani, Tadaomi Takenawa, Inhwan Hwang, Ying Fu, and Zhenbiao Yang

LAP6/POLYKETIDE SYNTHASE A and LAP5/POLYKETIDE SYNTHASE B Encode Hydroxyalkyl-α-Pyrone Synthases Required for Pollen Development and Sporopollenin Biosynthesis in Arabidopsis thaliana

Sung Soo Kim, Etienne Grienenberger, Benjamin Lallemand, Che C. Colpitts, Sun Young Kim, Clarice de Azevedo Souza, Pierrette Geoffroy, Dimitri Heintz, Daniel Krahn, Markus Kaiser, Erich Kombrink, Thierry Heitz, Dae-Yeon Suh, Michel Legrand, and Carl J. Douglas

Analysis of TETRAKETIDE α-PYRONE REDUCTASE Function in Arabidopsis thaliana Reveals a Previously Unknown, but Conserved, Biochemical Pathway in Sporopollenin Monomer Biosynthesis

Etienne Grienenberger, Sung Soo Kim, Benjamin Lallemand, Pierrette Geoffroy, Dimitri Heintz, Clarice de Azevedo Souza, Thierry Heitz, Carl J. Douglas, and Michel Legrand

Identification and Characterization of Nuclear Pore Complex Components in Arabidopsis thaliana

Kentaro Tamura, Yoichiro Fukao, Masaaki Iwamoto, Tokuko Haraguchi, and Ikuko Hara-Nishimura

The CRR1 Nutritional Copper Sensor in Chlamydomonas Contains Two Distinct Metal-Responsive Domains

Frederik Sommer, Janette Kropat, Davin Malasarn, Nicholas E. Grossoehme, Xiaohua Chen, David P. Giedroc, and Sabeeha S. Merchant

Structure-Function Analyses of a Caffeic Acid O-Methyltransferase from Perennial Ryegrass Reveal the Molecular Basis for Substrate Preference

Gordon V. Louie, Marianne E. Bowman, Yi Tu, Aidyn Mouradov, German Spangenberg, and Joseph P. Noel
The Arabidopsis GTL1 Transcription Factor Regulates Water Use Efficiency and Drought Tolerance by Modulating Stomatal Density via Transrepression of SDD1

Chan Yul Yoo, Heather E. Pence, Jing Bo Jin, Kenji Miura, Michael J. Gosney, Paul M. Hasegawa, and Michael V. Mickelbart

A C Subunit of the Plant Nuclear Factor NF-Y Required for Rhizobial Infection and Nodule Development Affects Partner Selection in the Common Bean–Rhizobium etli Symbiosis

Maria Eugenia Zanetti, Flavio A. Blanco, Maria Pia Beker, Marina Battaglia, and O. Mario Aguilar

Serine Protease Inhibitors Specifically Defend Solanum nigrum against Generalist Herbivores but Do Not Influence Plant Growth and Development

Markus Hartl, Ashok P. Giri, Harleen Kaur, and Ian T. Baldwin

RanGAP2 Mediates Nucleocytoplasmic Partitioning of the NB-LRR Immune Receptor Rx in the Solanaceae, Thereby Dictating Rx Function

Wladimir I.L. Tameling, Claudia Nooljen, Nora Ludwig, Marta Boter, Erik Slootweg, Aska Goverse, Ken Shirasu, and Matthieu H.A.J. Joosten

Nucleocytoplasmic Distribution Is Required for Activation of Resistance by the Potato NB-LRR Receptor Rx1 and Is Balanced by Its Functional Domains

Erik Slootweg, Jan Roosien, Laurentiu N. Spiridon, Andrei-Jose Petrescu, Wladimir Tameling, Matthieu Joosten, Rikus Pomp, Casper van Schaik, Robert Dees, Jan Willem Borst, Geert Smant, Arjen Schots, Jaap Bakker, and Aska Goverse

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.

Open Access articles can be viewed online without a subscription.