Several monocot species develop unifacial leaves, in which leaf blades have only abaxial identity. Bifacial leaves require adaxial-abaxial polarity for leaf blade flattening, whereas many unifacial leaves become flattened despite their leaf blades being abaxialized. Yamaguchi et al. (pages 2141–2155) identify a DROOPING LEAF (DL) gene ortholog as a candidate responsible for leaf blade flattening in unifacial leaves of Juncus prismatocarpus. They suggest that DL promotes leaf cell proliferation along the median plane in monocots and that such DL function leads to leaf blade flattening in unifacial leaves, whereas it leads to leaf midrib formation in bifacial leaves. The cover image shows situ localization of the DL transcripts (the pink color) in a longitudinal section of J. prismatocarpus shoot apex.
Evidence for Light Wavelength-Specific Photoelectrophysiological Signaling and Memory of Excess Light Episodes in Arabidopsis

Magdalena Szechyn’ska-Hebda, Jerzy Kruk, Magdalena Górecka, Barbara Karpińska, and Stanisław Karpinski

The bHLH Transcription Factor POPEYE Regulates Response to Iron Deficiency in Arabidopsis

Terri A. Long, Hironaka Tsukagoshi, Wolfgang Busch, Brett Lahner, David E. Sait, and Philip N. Benfey

Arabidopsis PCR2 Is a Zinc Exporter Involved in Both Zinc Extrusion and Long-Distance Zinc Transport

Won-Yong Song, Kwan Sam Choi, Do Young Kim, Markus Geisler, Jiyoung Park, Vincent Vincenzetti, Maja Schellenberg, Sun Ha Kim, Yong Pyo Lim, Eun Woon Noh, Youngsoon Lee, and Enrico Martinoia

Crossovers Get a Boost in Brassica Allotriploid and Allotetraploid Hybrids

Martine Leflon, Laurie Grandont, Frédérique Eber, Virginie Huteau, Olivier Coriton, Liudmila Chelysheva, Eric Jenczewski, and Anne-Marie Chêvre

Repeated Polyploidy Drove Different Levels of Crossover Suppression between Homoeologous Chromosomes in Brassica napus Allohaploids

Marta Cifuentes, Frédérique Eber, Marie-Odile Lucas, Maryse Lode, Anne-Marie Chêvre, and Eric Jenczewski

Fast Diploidization in Close Mesopolyploid Relatives of Arabidopsis

Terezie Mandáková, Simon Joly, Martin Krzywinski, Klaus Mummenhoff, and Martin A. Lysak

The CURLY LEAF Interacting Protein BLISTER Controls Expression of Polycomb-Group Target Genes and Cellular Differentiation of Arabidopsis thaliana

Nicole Schatlowski, Yvonne Stahl, Mareike L. Hohenstatt, Justin Goodrich, and Daniel Schubert

Regulation of Cell Proliferation in the Stomatal Lineage by the Arabidopsis MYB FOUR LIPS via Direct Targeting of Core Cell Cycle Genes

Zidian Xie, EunKyoun Lee, Jessica R. Lucas, Kengo Morohashi, Dongmei Li, James A.H. Murray, Fred D. Sack, and Erich Grotewold

Temporal Control of Trichome Distribution by MicroRNA156-Targeted SPL Genes in Arabidopsis thaliana

Nan Yu, Wen-Juan Cai, Shucai Wang, Chun-Min Shan, Ling-Jian Wang, and Xiao-Ya Chen

DNA Replication Factor C1 Mediates Genomic Stability and Transcriptional Gene Silencing in Arabidopsis

Qian Liu, Junguo Wang, Daisuke Miki, Ran Xia, Weniang Yu, Junna He, Zhimin Zheng, Jian-Kang Zhu, and Zhizhong Gong

Arabidopsis Cockayne Syndrome A-Like Proteins 1A and 1B Form a Complex with CULLIN4 and Damage DNA Binding Protein 1A and Regulate the Response to UV Irradiation

Caiguo Zhang, Huiping Guo, Jun Zhang, Guangqin Guo, Karen S. Schumaker, and Yan Guo

Arabidopsis PHYTOCHROME INTERACTING FACTOR Proteins Promote Phytochrome B Polyubiquitination by COP1 E3 Ligase in the Nucleus

In-Cheol Jang, Rossana Henrques, Hak Soo Seo, Akira Nagatani, and Nam-Hai Chua

Ethylene-Induced Stabilization of ETHYLENE INSENSITIVE3 and EIN3-LIKE1 Is Mediated by Proteasomal Degradation of EIN3 Binding F-Box 1 and 2 That Requires EIN2 in Arabidopsis

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The Levels of Male Gametic Mitochondrial DNA Are Highly Regulated in Angiosperms with Regard to Mitochondrial Inheritance

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Spatial Uncoupling of Mitosis and Cytokinesis during Appressorium-Mediated Plant Infection by the Rice Blast Fungus *Magnaporthe oryzae*

Diane G.O. Saunders, Yasin F. Dagdas, and Nicholas J. Talbot

Entry Mode–Dependent Function of an Indole Glucosinolate Pathway in Arabidopsis for Nonhost Resistance against Anthracnose Pathogens

Kei Hiruma, Mariko Onozawa-Komori, Fumika Takahashi, Makoto Asakura, Pawel Bednarek, Tetsuro Okuno, Paul Schulze-Lefert, and Yoshitaka Takano

Activation of an Arabidopsis Resistance Protein Is Specified by the in Planta Association of Its Leucine-Rich Repeat Domain with the Cognate Oomycete Effector

Ksenia V. Krasileva, Douglas Dahlbeck, and Brian J. Staskawicz

A Nitrogen Response Pathway Regulates Virulence Functions in *Fusarium oxysporum* via the Protein Kinase TOR and the bZIP Protein MeaB

Manuel S. López-Berges, Nicolas Rispail, Rafael C. Prados-Rosales, and Antonio Di Pietro

The Myosin Motor Domain of Fungal Chitin Synthase V Is Dispensable for Vesicle Motility but Required for Virulence of the Maize Pathogen *Ustilago maydis*

Steffi Treitschke, Gunther Doehlemann, Martin Schuster, and Gero Steinberg

The Tig1 Histone Deacetylase Complex Regulates Infectious Growth in the Rice Blast Fungus *Magnaporthe oryzae*

Sheng-Li Ding, Wende Liu, Anton Illuk, Cecilie Ribot, Julie Vallet, Andy Tao, Yang Wang, Marc-Henri Lebrun, and Jin-Rong Xu

*NENA*, a *Lotus japonicus* Homolog of *Sec13*, Is Required for Rhizodermal Infection by Arbuscular Mycorrhiza Fungi and Rhizobia but Dispensable for Cortical Endosymbiotic Development

Martin Groth, Naoya Takeda, Jillian Perry, Hisaki Uchida, Stephan Dräxl, Andreas Brachmann, Shusei Sato, Satoshi Tabata, Masayoshi Kawaguchi, Trevor L. Wang, and Martin Parniske

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