ON THE COVER

Sparkes et al. (pages 3937–3949) use a novel analytical tool to investigate the relative roles of actin, microtubules, myosin, and Golgi bodies on the form and movement of the endoplasmic reticulum (ER) in tobacco leaf epidermal cells. The images show the persistency of microtubules (magenta, top two panels) or cisternae (magenta, bottom two panels) over 80 s of examination. The left panels show all tubules and cisternal structures; the right panels show only those tubules or cisternae large enough and persistent enough for counting. Cyan in all panels shows an ER marker linked to green fluorescent protein. The authors conclude that it is the actin myofilaments and, to some extent, certain myosins, and not microtubules, that drive changes in the form of the ER network and directionality of flow within the ER membrane.

EDITORIAL

ASPB Journals Launch CrossCheck
Cathie Martin and Don Ort 3715

IN BRIEF

Functional and Phylogenetic Analysis of the Glutathione Transferase Gene Family in Poplar
Jennifer Mach and David Baum 3716

Dynamic Histone Modifications in Light-Regulated Gene Expression
Nancy R. Hofmann 3717

PERSPECTIVE: SPECIAL SERIES ON LARGE-SCALE BIOLOGY

PLAZA: A Comparative Genomics Resource to Study Gene and Genome Evolution in Plants
Sebastian Proost, Michiel Van Bel, Lieven Sterck, Kenny Billiau, Thomas Van Parys, Yves Van de Peer, and Klaas Vandepoele 3718

RESEARCH ARTICLES

Dynamic Landscapes of Four Histone Modifications during Deetiolation in Arabidopsis
Jean-Benoit F. Charron, Hang He, Axel A. Elling, and Xing Wang Deng 3732

Extensive Functional Diversification of the Populus Glutathione S-Transferase Supergene Family
Ting Lan, Zhi-Ling Yang, Xue Yang, Yan-Jing Liu, Xiao-Ru Wang, and Qing-Yin Zeng 3749

Antagonistic HLH/bHLH Transcription Factors Mediate Brassinosteroid Regulation of Cell Elongation and Plant Development in Rice and Arabidopsis
Li-Ying Zhang, Ming-Yi Bai, Jinxia Wu, Jia-Ying Zhu, Hao Wang, Zhiguo Zhang, Wenwei Wang, Yu Sun, Jun Zhao, Xuehui Sun, Hongjuan Yang, Yunyuan Xu, Soo-Hwan Kim, Shozo Fujioka, Wen-Hui Lin, Kang Chong, Tiegang Lu, and Zhi-Yong Wang 3767

Regulation of Arabidopsis Brassinosteroid Signaling by Atypical Basic Helix-Loop-Helix Proteins
Hao Wang, Yongyou Zhu, Shozo Fujioka, Tadao Asami, Jiayang Li, and Jianming Li 3781

Mutations of an α1,6 Mannosyltransferase Inhibit Endoplasmic Reticulum–Associated Degradation of Defective Brassinosteroid Receptors in Arabidopsis
Zhi Hong, Hua Jin, Anne-Catherine Fitchette, Yang Xia, Andrew M. Monk, Loic Faye, and Jianming Li 3792
A Root-Expressed Magnesium Transporter of the MRS2/MGT Gene Family in Arabidopsis thaliana Allows for Growth in Low-Mg²⁺ Environments

Michael Gebert, Karoline Meschenmoser, Soňa Svidová, Julian Weghuber, Rudolf Schweyen, Karolin Eifler, Henning Lenz, Katrin Weyand, and Volker Knoop

Orthologs of the Class A4 Heat Shock Transcription Factor HsfA4a Confer Cadmium Tolerance in Wheat and Rice

Donghwan Shim, Jae-Ung Hwang, Joohyun Lee, Sichul Lee, Yunjung Choi, Gynheung An, Enrico Martinoia, and Youngsook Lee

Quantitative Proteomics of the Tonoplast Reveals a Role for Glycolytic Enzymes in Salt Tolerance

Bronwyn J. Barkla, Rosario Vera-Estrella, Marcela Hernández-Coronado, and Omar Pantoja

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.