On the Cover: Physcomitrella patens is tolerant of high levels of NaCl and can maintain growth at Na⁺ concentrations detrimental to most vascular plants. This tolerance is suggested to be due to the expression of one or two ENA-type Na⁺-ATPases, which are absent in vascular plants. In this issue, Lunde et al. (pp. 1786–1796) show that PpENA1 is important under moderate salt stress. When grown in 100 mM NaCl, wild-type Physcomitrella is able to maintain a higher K⁺ to Na⁺ ratio and growth rate compared to the PpENA1 (ena1) gene knockout. The tissue-specific expression of PpENA1 in Physcomitrella was determined by fusing the PpENA1 promoter to a GUS-reporter gene. In the nonstressed gametophyte (left), GUS staining was confined to the stem, the basal part of the leaves, and to a small number of rhizoids originating from the base of the gametophyte. No staining was present in the apical part of the leaf, and staining was less pronounced in the top leaves compared to the leaves closer to the base of the gametophyte. The staining was significantly stronger but still confined to the same tissues in gametophytes exposed to 100 mM NaCl (right). Cover image by Christina Lunde.

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Peter V. Minorsky

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Structural Organization and a Standardized Nomenclature for Plant Endo-1,4-β-Glucanases (Cellulases) of Glycosyl Hydrolase Family 9. Breeanna R. Urbanowicz, Alan B. Bennett, Elena del Campillo, Carmen Catalá, Takahisa Hayashi, Bernard Henriques, Herman Höfte, Simon J. McQueen-Mason, Sara E. Patterson, Oded Shosegov, Tiula T. Teeri, and Jocelyn K.C. Rose

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Involvement of a Soybean ATP-Binding Cassette-Type Transporter in the Secretion of Genistein, a Signal Flavonoid in Legume-Rhizobium Symbiosis. Akifumi Sugiyama, Nobukazu Shitan, and Kazufumi Yazaki 2000

WHOLE PLANT AND ECOPHYSIOLOGY

Leaf Maximum Photosynthetic Rate and Venation Are Linked by Hydraulics. Tim J. Brodribb, Taylor S. Feild, and Gregory J. Jordan 1890

SYSTEMS BIOLOGY, MOLECULAR BIOLOGY, AND GENE REGULATION

[C][OA] Mutations in the Type II Protein Arginine Methyltransferase AtPRMT5 Result in Pleiotropic Developmental Defects in Arabidopsis. Yanxi Pei, Lifang Niu, Falong Lu, Chunyan Liu, Jixian Zhai, Xiangfeng Kong, and Xiaofeng Cao 1913


CORRECTIONS

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Mechanisms of Cross Talk between Gibberellin and Other Hormones. D. Weiss and N. Ori 2024

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