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On the Cover: Roots have the challenging task of sourcing nutrients from the environment to fulfill the needs of a developing plant. This occurs in an environment where the supply of nutrients is both spatially and temporally variable. The root system responds to conditions of nutrient deficiency at both physiological and morphological levels. In this issue, Gruber et al. (pp. 161–179) have characterized the response of the root system architecture to 12 different nutrient deficiencies. The authors found a diverse response of plant roots to the deficiency of single nutrients, with individual root traits behaving differently. Nutrient-dependent changes in root system architecture were then visualised and quantified using novel root plasticity charts, an example of which is shown in the background of the cover image. Such plasticity charts allow the degree of root plasticity from all measured root traits to be compared across the nutrient deficiencies. Cover design and images: Ricardo F.H. Giehl and Benjamin D. Gruber.

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BIOCHEMISTRY AND METABOLISM

^{[W][OPEN]}Identification and Functional Analysis of Tomato BRI1 and BAK1 Receptor Kinase Phosphorylation Sites. Vikramjit S. Bajwa, Xiaofeng Wang, R. Kevin Blackburn, Michael B. Goshe, Srijeet K. Mitra, Elisabeth L. Williams, Gerard J. Bishop, Sergei Krasnyanski, George Allen, Steven C. Huber, and Steven D. Clouse

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^[W]Metabolic Interaction between Anthocyanin and Lignin Biosynthesis Is Associated with Peroxidase FaPRX27 in Strawberry Fruit. Ludwig Ring, Su-Ying Yeh, Stephanie Hücherig, Thomas Hoffmann, Rosario Blanco-Portales, Mathieu Fouche, Carmen Villatoro, Béatrice Denoyes, Amparo Monfort, José Luis Caballero, Juan Muñoz-Blanco, Jonathan Gershenson, and Wilfried Schwab

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^{[C][W][OPEN]}Probing Arabidopsis Chloroplast Diacylglycerol Pools by Selectively Targeting Bacterial Diacylglycerol Kinase to Suborganelle Membranes. Bagyalakshmi Muthan, Rebecca L. Roston, John E. Froehlich, and Christoph Benning

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[C][W][OPEN]Distinct Detoxification Mechanisms Confer Resistance to Mesotrione and Atrazine in a Population of Waterhemp. *Rong Ma, Shiv S. Kaundun, Patrick J. Tranel, Chance W. Riggins, Daniel L. McGinness, Aaron G. Hager, Tim Hawkes, Eddie McIndoe, and Dean E. Riechers*

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[C][W]In Situ Speciation and Distribution of Toxic Selenium in Hydrated Roots of Cowpea. *Peng Wang, Neal W. Menzies, Enzo Lombi, Brigid A. McKenna, Martin D. de Jonge, David J. Paterson, Daryl L. Howard, Chris J. Glover, Simon James, Peter Kappen, Bernt Johannessen, and Peter M. Kopittke*

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[W][OPEN]Transcriptional Dynamics of Two Seed Compartments with Opposing Roles in Arabidopsis Seed Germination. *Bas J.W. Dekkers, Simon Pearce, R.P. van Bolderen-Veldkamp, Alex Marshall, Paweł Widera, James Gilbert, Hajk-Georg Drost, George W. Bassel, Kerstin Müller, John R. King, Andrew T.A. Wood, Ivo Grosse, Marcel Quint, Natalio Krasnogor, Gerhard Leubner-Metzger, Michael J. Holdsworth, and Léonie Bentsink*

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[W][OPEN] Common and Distinct Functions of Arabidopsis Class A1 and A2 Heat Shock Factors in Diverse Abiotic Stress Responses and Development. *Hsiang-chin Liu and Yee-yung Charng*

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[W][OPEN] Basic Helix-Loop-Helix Transcription Factors JASMONATE-ASSOCIATED MYC2-LIKE1 (JAM1), JAM2, and JAM3 Are Negative Regulators of Jasmonate Responses in Arabidopsis. *Yuko Sasaki-Sekimoto, Yusuke Jikumaru, Takeshi Obayashi, Hikaru Saito, Shinji Masuda, Yuji Kamiya, Hiroyuki Ohta, and Ken Shirasu*

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