Secondary walls are the major constituent of wood, the most abundant biomass produced by land plants. Dissecting the molecular mechanisms underlying secondary wall biosynthesis during wood formation is an important goal in plant science. Previous studies have discovered that the secondary wall–associated transcription factor SND1 and its close homologs, NST1, NST2, VND6, and VND7, are master switches activating the developmental program of secondary wall biosynthesis. Zhong et al. (pages 2763–2782) show that SND1 together with 11 SND1-regulated downstream targets comprise a transcriptional network involved in regulating secondary wall biosynthesis in fibers. They further demonstrate that NST1, NST2, VND6, and VND7 are functional homologs of SND1 that regulate the same downstream targets in different secondary wall–containing cell types in Arabidopsis. The cover image shows ectopic secondary wall deposition in mesophyll cells of Arabidopsis leaves ectopically expressing SND1.
Histone H2B Monoubiquitination in the Chromatin of *FLOWERING LOCUS C* Regulates Flowering Time in *Arabidopsis* Ying Cao, Yan Dai, Sujuan Cui, and Ligeng Ma

A Novel Class of Gibberellin 2-Oxidases Control Semidwarfism, Tillering, and Root Development in Rice Šhuen-Fang Lo, Show-Ya Yang, Ku-Ting Chen, Yue-Te Hsing, Jan A.D. Zeevaart, Liang-Jwu Chen, and Su-May Yu

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A Battery of Transcription Factors Involved in the Regulation of Secondary Cell Wall Biosynthesis in *Arabidopsis* Ruiqin Zhong, Chanhui Lee, Jianli Zhou, Ryan L. McCarthy, and Zheng-Hua Ye

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NIP6;1 Is a Boric Acid Channel for Preferential Transport of Boron to Growing Shoot Tissues in Arabidopsis

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Transgenic Arabidopsis Plants Expressing the Type 1 Inositol 5-Phosphatase Exhibit Increased Drought Tolerance and Altered Abscisic Acid Signaling

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Small Ubiquitin-Like Modifier Proteases OVERLY TOLERANT TO SALT1 and -2 Regulate Salt Stress Responses in Arabidopsis

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