A shoot axillary bud will either grow out to produce a branch or remain dormant in the leaf axil, depending on the integration of endogenous and environmental stimuli mediated by hormonal signals. Aguilar-Martinez et al. (pages 458–472) report on Arabidopsis BRANCHED1 (BRC1), which encodes a TCP transcription factor closely related to maize teosinte branched1 (tb1). The authors show that, like tb1, BRC1 constitutes a key point at which signals controlling branching are integrated within axillary buds. BRC1 is expressed in developing axillary buds and functions to arrest bud development in response to developmental and environmental stimuli. It has previously been found that long-range signaling promoting axillary bud arrest is controlled both by auxin produced in the shoot apex and by a novel carotenoid derivative called the MAX-dependent signal synthesized in the root. Mutant and expression analyses show that BRC1 functions downstream of the MAX pathway and also is required for auxin-induced apical dominance. The cover image shows a scanning electron micrograph of a young axillary bud in the axil of a wild-type Arabidopsis rosette leaf.

ON THE COVER

RESEARCH ARTICLES

Unique, Shared, and Redundant Roles for the Arabidopsis SWI/SNF Chromatin Remodeling ATPases BRAHMA and SPLAYED

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The Arabidopsis thaliana Homolog of Yeast BRE1 Has a Function in Cell Cycle Regulation during Early Leaf and Root Growth

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The Absence of Histone H2B Monoubiquitination in the Arabidopsis hub1 (rdo4) Mutant Reveals a Role for Chromatin Remodeling in Seed Dormancy

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Histone Deacylases and ASYMMETRIC LEAVES2 Are Involved in the Establishment of Polarity in Leaves of Arabidopsis

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Arabidopsis BRANCHED1 Acts as an Integrator of Branching Signals within Axillary Buds

José Antonio Aguilar-Martinez, César Poza-Carrion, and Pilar Cubas
TCP Transcription Factors Control the Morphology of Shoot Lateral Organs via Negative Regulation of the Expression of Boundary-Specific Genes in Arabidopsis

Identification of Two Protein Kinases Required for Abscisic Acid Regulation of Seed Germination, Root Growth, and Gene Expression in Arabidopsis

KANADI and Class III HD-Zip Gene Families Regulate Embryo Patterning and Modulate Auxin Flow during Embryogenesis in Arabidopsis

The Arabidopsis EIN3 Binding F-Box Proteins EBF1 and EBF2 Have Distinct but Overlapping Roles in Ethylene Signaling

Centromere Function and Nondisjunction Are Independent Components of the Maize B Chromosome Accumulation Mechanism

Arabidopsis MYB26/MALE STERILE35 Regulates Secondary Thickening in the Endothecium and Is Essential for Anther Dehiscence

Arabidopsis irregular xylem8 and irregular xylem9: Implications for the Complexity of Glucuronoxylan Biosynthesis

Role of the MPN Subunits in COP9 Signalosome Assembly and Activity, and Their Regulatory Interaction with Arabidopsis Cullin3-Based E3 Ligases

Tapetosomes in Brassica Tapetum Accumulate Endoplasmic Reticulum–Derived Flavonoids and Alkanes for Delivery to the Pollen Surface

Arabidopsis Vacular Sorting Mutants (green fluorescent seed) Can Be Identified Efficiently by Secretion of Vaucuole-Targeted Green Fluorescent Protein in Their Seeds

NUCLEOPORIN85 Is Required for Calcium Spiking, Fungal and Bacterial Symbioses, and Seed Production in Lotus japonicus

Dominant-Negative Modification Reveals the Regulatory Function of the Multimeric Cysteine Synthase Protein Complex in Transgenic Tobacco

Lack of Respiratory Chain Complex I Impairs Alternative Oxidase Engagement and Modulates Redox Signaling during Elicitor-Induced Cell Death in Tobacco

Light-Induced Energy Dissipation in Iron-Starved Cyanobacteria: Roles of OCP and IsiA Proteins

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Prasanna Kankanala, Kirk Czymmek, and Barbara Valent

CORRECTIONS


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