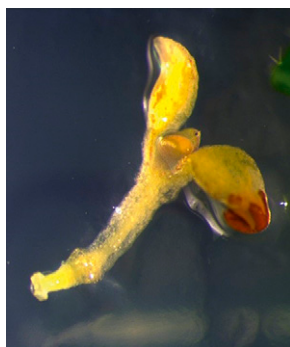


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ON THE COVER



Tissue and cell identity in plants is extraordinarily plastic. A variety of chromatin-based regulatory mechanisms ensure that gene expression occurs in the appropriate tissues. One such mechanism, deposition of the histone tail modification H3K27me₃, represses genes in a tissue-specific manner. Carter et al. (pages 1337–1352) propose the existence of an epigenetic pathway linking H3K27me₃ enrichment with enrichment of the histone variant H2A.Z, an epigenetic mark associated with inducible changes in gene expression state. This presents intriguing possibilities for the epigenetic basis of plant developmental plasticity. Furthermore, the authors uncover roles for the chromatin remodelers PKL and PIE1, which promote enrichment of H3K27me₃ and H2A.Z, respectively. The cover image shows an Arabidopsis seedling lacking PKL and PIE1 with severe defects in development and organogenesis.

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