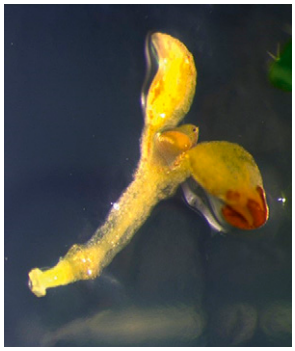
THE
PLANT
CELL

Volume 30 Number 6 June 2018

The electronic form of this issue, available at www.plantcell.org, is the journal of record.

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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[OPEN] Articles can be viewed without a subscription.

The Plant Cell (eISSN 1532-298X) is published monthly (one volume per year) by the American Society of Plant Biologists, 15501 Monona Drive, Rockville, MD 20855-2768, and is produced by The Sheridan Group, Waterbury, VT. For matters regarding library subscriptions, contact Suzanne Cholwek, ASPB, 15501 Monona Drive, Rockville, MD 20855-2768; telephone 301/296-0926; fax 301/251-6740; e-mail scholwek@aspb.org. Send all inquiries regarding advertising to Alison Bashian, Advertising & Sponsorship Sales; telephone 703/964-1240 x280; fax 703/964-1246; e-mail abashian@conferencemanagers.com. The online version of *The Plant Cell* is available at www.plantcell.org.