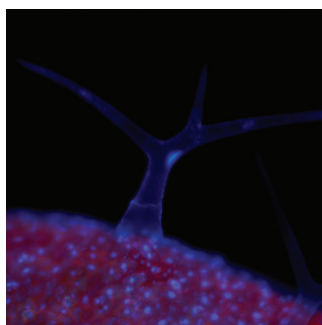


T H E
PLANT
C E L L

Volume 18 Number 2 February 2006

The electronic form of this issue, available on or before February 1, 2006, at www.plantcell.org, is considered the journal of record.

ON THE COVER



Plant cells frequently undergo endoreduplication, during which chromosomal DNA is successively duplicated in the absence of mitosis. It has been proposed that endoreduplication is regulated at its entry by mitotic cyclin-dependent kinase activity, but the regulatory mechanisms for its termination remain unclear. On pages 382–396, Imai et al. show that the A-type cyclin *CYCA2;3* negatively regulates endocycles and acts as a key regulator of ploidy levels during endoreduplication in *Arabidopsis*. The authors found that the *CYCA2;3* promoter is active in developing trichomes during the termination period of endoreduplication. Loss-of-function mutations of *CYCA2;3* semidominantly promoted endocycles and increased the ploidy levels in mature organs but did not significantly affect the proportion of cells that underwent endoreduplication. In addition, expression of a *CYCA2;3*-GFP fusion protein restrained endocycles in a dose-dependent manner. The cover image shows a 4',6'-diamidino-2-phenylindole-stained *Arabidopsis* trichome, which typically has a nuclear DNA content of 32C, in contrast with the 1C DNA content of a haploid genome.

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^{OA} Open Access articles can be viewed online without a subscription.



The Plant Cell (ISSN 1040-4651, online ISSN 1531-298X) is published monthly (one volume per year) by the American Society of Plant Biologists, 15501 Monona Drive, Rockville, MD 20855-2768, and is printed by Dartmouth Journal Services, Box 275, Orford, NH 03777. The institutional price for the print and online versions is \$2,160 per year (print and online; online only is \$1,860) and includes a subscription to both *The Plant Cell* and *Plant Physiology*; single copies may be purchased for \$75 each, plus shipping. Members of the American Society of Plant Biologists may subscribe to *The Plant Cell* for \$150. Nonmember individuals may subscribe for \$300. For matters regarding subscriptions, contact Suzanne Cholwek, ASPB, 15501 Monona Drive, Rockville, MD 20855-2768; telephone 301/251-0560, ext. 141; fax 301/279-2996; e-mail scholwek@aspb.org. Notify ASPB in writing within 2 months (domestic) or 6 months (foreign) of issue date, and defective copies or copies lost in the mail will be replaced. Send all inquiries regarding display advertising to Kelly Taylor, Leonard Media Group, PO Box 220, 415 Horsham Road, Horsham, PA 19044; telephone 215/675-9133, ext. 226; fax 215/675-9376; e-mail kelly@leonardmedia.com. Periodicals postage paid at Rockville, MD, and at additional mailing offices. **Postmaster:** Send address changes to *The Plant Cell*, American Society of Plant Biologists, 15501 Monona Drive, Rockville, MD 20855-2768. The online version of *The Plant Cell* is available at www.plantcell.org.

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