EDITORSIAL
The Plant Cell Introduces Breakthrough Reports: A New Forum for Cutting-Edge Plant Research
Sabeha Merchant, Sebastian Y. Bednarek, James A. Birchler, George Coupland, Nancy A. Eckardt, Pascal Genschik, Jean Greenberg, Joseph J. Kieber, Daniel J. Kliebenstein, Barry J. Pogson, and David Smyth

IN BRIEF
Not Throwing Baby Out with the Bathwater
Peter Chien

A Sleep Like Death: Identification of Genes Related to Seed Longevity in Medicago truncatula and Arabidopsis
Jennifer Mach

Grasping at Straws: Unraveling the Proteome That Orchestrates Secondary Cell Wall Patterning in Tracheary Elements
Jennifer Lockhart

Leaf Growth Directionality Is Divergent and Involves a Conserved MicroRNA Regulatory Module
Nancy R. Hofmann

When a Tree Falls in the Woods: The Gravitropic Response in Poplar
Nancy R. Hofmann

VILLIN2 Emerges as a Master Builder in Rice
Kathleen L. Farquharson

Phytol from Degradation of Chlorophyll Feeds Biosynthesis of Tocopherols
Jennifer Mach

BREAKTHROUGH REPORT
Discovery of a Unique Clp Component, ClpF, in Chloroplasts: A Proposed Binary ClpF-ClpS1 Adaptor Complex Functions in Substrate Recognition and Delivery
Kenji Nishimura, Janina Apitz, Giulia Friso, Jitae Kim, Lalit Ponnala, Bernhard Grimm, and Klaas J. van Wijk

ON THE COVER
Angiosperm trees produce a specialized type of xylem, tension wood, in response to gravity. Tension wood forms on the upper side of leaning branches and creates strong contractile force to “pull” the stem upwards against gravity. The article by Gerttula et al. (pages 2800–2813) describes the development of tension wood in Populus, including how the stems perceive and respond to gravity, as well as the transcriptional networks underlying tension wood development. The cover shows in situ imaging of XET activity in a tangential section of tension wood in Populus. Red signal is from XET incorporation of XXXG-SR into the specialized gelatinous layer of tension wood fibers, while blue signal is from UV autofluorescence of lignified cell walls. XET activity is believed to be important in force generation in tension wood fibers and serves as a marker for tension wood fiber development.
The RECG1 DNA Translocase Is a Key Factor in Recombination Surveillance, Repair, and Segregation of the Mitochondrial DNA in Arabidopsis

Clémentine Wallet, Monique Le Ret, Marc Bergdoll, Marc Bichara, André Dietrich, and José M. Gualberto

CELLULOSE SYNTHASE INTERACTIVE1 Is Required for Fast Recycling of Cellulose Synthase Complexes to the Plasma Membrane in Arabidopsis

Lei Lei, Abhishek Singh, Logan Bashline, Shundai Li, Yaroslava G. Yingling, and Ying Gu

Arabidopsis TRIGALACTOSYLDIACYLGlycerol5 Interacts with TGD1, TGD2, and TGD4 to Facilitate Lipid Transfer from the Endoplasmic Reticulum to Plastids

Jilian Fan, Zhiyang Zhai, Chengshi Yan, and Changcheng Xu

Fibrillin 5 Is Essential for Plastoquinone-9 Biosynthesis by Binding to Solanesyl Diphosphate Synthases in Arabidopsis

Eun-Ha Kim, Yongjik Lee, and Hyun Uk Kim

CYP76C1 (Cytochrome P450)-Mediated Linalool Metabolism and the Formation of Volatile and Soluble Linalool Oxides in Arabidopsis


Multiple Avirulence Loci and Allele-Specific Effector Recognition Control the Pm3 Race-Specific Resistance of Wheat to Powdery Mildew

Salim Bourras, Kaitlin Elyse McNally, Roi Ben-David, Francis Parlange, Stefan Roffler, Coraline Rosalie Praz, Simone Oberhaensli, Fabrizio Menardo, Daniel Stirnweis, Zeev Frenkel, Luisa Katharina Schaefier, Simon Flückiger, Georges Treier, Gerhard Herren, Abraham B. Korol, Thomas Wicker, and Beat Keller

CORRECTION


OPEN Articles can be viewed online without a subscription.
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>eTOCs</td>
<td>Sign up for eTOCs at: <a href="http://www.plantcell.org/cgi/alerts/ctmain">http://www.plantcell.org/cgi/alerts/ctmain</a></td>
</tr>
<tr>
<td>CiteTrack Alerts</td>
<td>Sign up for CiteTrack Alerts at: <a href="http://www.plantcell.org/cgi/alerts/ctmain">http://www.plantcell.org/cgi/alerts/ctmain</a></td>
</tr>
<tr>
<td>Subscription Info</td>
<td>Subscription Information for <em>The Plant Cell</em> and <em>Plant Physiology</em> is available at: <a href="http://www.aspb.org/publications/subscriptions.cfm">http://www.aspb.org/publications/subscriptions.cfm</a></td>
</tr>
</tbody>
</table>