

T H E  
**PLANT**  
C E L L

Volume 29 Number 9 September 2017

The electronic form of this issue, available at [www.plantcell.org](http://www.plantcell.org), is the journal of record.

**ON THE COVER**



According to Duchesne (1766), the runnerless trait in woodland strawberry was first described by Furetiere in his Dictionnaire printed in 1690. Furetiere underlined the rare occurrence at that time of runnerless strawberry plants. Remarkably, Duchesne (1766) could already confirm the genetic origin of the runnerless trait by analyzing more than 30 plants grown from seeds. He could confirm that all the plants were runnerless, thus providing an early example of a rigorous study aimed at assessing the genetic control of a reproduction mode in a crop species. He recognized the *F. vesca* origin of the runnerless mutant, named it *F. eflagellis*, and indicated that it spread from a garden from Burgundy province in France to several gardens in the Paris area. Furthermore, Duchesne observed that runnerless plants had a higher number of branch crowns (lateral shoots that terminated by inflorescences). By identifying the underlying causal mutation, Tenreira et al. (pages 2168–2182) provided new insights into the mechanisms underlying the trade-off between sexual reproduction and vegetative propagation in strawberry, which was first described in the 1600s. Reproduction from Publications Scientifiques du Muséum National d'Histoire Naturelles, Paris. Staudt G. 2003. Les dessins d'Antoine Nicolas Duchesne pour son Histoire naturelle des fraisiers. Editors Muséum National d'Histoire Naturelle/Ciref Duchesne, N. (1766) Histoire naturelle des fraisiers Paris: Didot Panckoucke, C.J. © Publications Scientifiques du Muséum national d'Histoire naturelle, Paris.

**EDITORIAL**

**Journal Impact: Brave New World** [OPEN](#) 2071  
Nancy A. Eckardt and Sabeeha S. Merchant

**IN BRIEF**

**Some Like It HOT: Protein Translation and Heat Stress in Plants** [OPEN](#) 2075  
Patrice A. Salomé

**Intrafamily Protein Interactions Contribute to DNA Localization** [OPEN](#) 2076  
Diarmuid S. Ó'Maoiléidigh

**Time-Intensive Transcriptomics Reveal Temporal Patterns in the Jasmonic Acid Gene Regulatory Network** [OPEN](#) 2078  
Sonali Roy

**Flowering Versus Runnering: Uncovering the Protein Behind a Trait That Matters in Strawberry** [OPEN](#) 2080  
Jennifer Lockhart

**A Time to Divide and a Time to Expand: Histone Deacetylases Flip a Gibberellin Oxidase-Mediated Switch in Root Meristem Cells** [OPEN](#) 2082  
Jennifer Mach

**Know Your Histone (Zip) Code: Flowering Time and Phosphorylation of Histone H2A on Serine 95** [OPEN](#) 2084  
Patrice A. Salomé

**LARGE-SCALE BIOLOGY ARTICLES**

**Architecture and Dynamics of the Jasmonic Acid Gene Regulatory Network** [OPEN](#) 2086  
Richard Hickman, Marcel C. Van Verk, Anja J.H. Van Dijken, Marciel Pereira Mendes, Irene A. Vroegop-Vos, Lotte Caarls, Merel Steenbergen, Ivo Van der Nagel, Gert Jan Wesselink, Aleksey Jironkin, Adam Talbot, Johanna Rhodes, Michel De Vries, Robert C. Schuurink, Katherine Denby, Corné M.J. Pieterse, and Saskia C.M. Van Wees

**Editor in Chief**  
Sabeeha Merchant

**Senior Features Editor**  
Nancy A. Eckardt

**Features Editor**  
Mary Williams

**Science Editors**  
Greg Bertoni  
Kathleen L. Farquharson  
Nancy R. Hofmann  
Jennifer Lockhart  
Jennifer M. Mach

**Managing Editor**  
Patti Lockhart

**Issue Manager**  
Felicia Dadak

**Production Manager**  
Susan L. Entwistle

**Manuscript Manager**  
Annette Kessler

**Publications Director**  
Nancy A. Winchester

**Publisher**  
American Society of  
Plant Biologists  
Executive Director,  
Crispin Taylor

**Editorial Office**  
15501 Monona Drive  
Rockville, Maryland 20855-2768  
Telephone: 301/296-0908

**Online at [www.plantcell.org](http://www.plantcell.org)**

<b>Zygotic Genome Activation Occurs Shortly after Fertilization in Maize</b> <a href="#">OPEN</a> Junyi Chen, Nicholas Strieder, Nadia G. Krohn, Philipp Cyprys, Stefanie Sprunck, Julia C. Engelmann, and Thomas Dresselhaus	2106
<b>Genomic Analysis of the DNA Replication Timing Program during Mitotic S Phase in Maize (<i>Zea mays</i>) Root Tips</b> <a href="#">OPEN</a> Emily E. Wear, Jawon Song, Gregory J. Zynda, Chantal LeBlanc, Tae-Jin Lee, Leigh Mickelson-Young, Lorenzo Concia, Patrick Mulvaney, Eric S. Szymanski, George C. Allen, Robert A. Martienssen, Matthew W. Vaughn, Linda Hanley-Bowdoin, and William F. Thompson	2126
<b>RESEARCH ARTICLES</b>	
<b>Subgenome Dominance in an Interspecific Hybrid, Synthetic Allopolyploid, and a 140-Year-Old Naturally Established Neo-Allopolyploid Monkeyflower</b> <a href="#">OPEN</a> Patrick P. Edger, Ronald Smith, Michael R. McKain, Arielle M. Cooley, Mario Vallejo-Marin, Yaowu Yuan, Adam J. Bewick, Lexiang Ji, Adrian E. Platts, Megan J. Bowman, Kevin L. Childs, Jacob D. Washburn, Robert J. Schmitz, Gregory D. Smith, J. Chris Pires, and Joshua R. Puzey	2150
<b>A Specific Gibberellin 20-Oxidase Dictates the Flowering-Runnering Decision in Diploid Strawberry</b> <a href="#">OPEN</a> Tracey Tenreira, Maria João Pimenta Lange, Theo Lange, Cécile Bres, Marc Labadie, Amparo Monfort, Michel Hernould, Christophe Rothan, and Béatrice Denoyes	2168
<b>Plant-Specific Histone Deacetylases HDT1/2 Regulate <i>GIBBERELLIN 2-OXIDASE2</i> Expression to Control Arabidopsis Root Meristem Cell Number</b> <a href="#">OPEN</a> Huchen Li, Jesus Torres-Garcia, David Latrasse, Moussa Benhamed, Stefan Schilderink, Wenkun Zhou, Olga Kulikova, Heribert Hirt, and Ton Bisseling	2183
<b>Phosphorylation of Histone H2A at Serine 95: A Plant-Specific Mark Involved in Flowering Time Regulation and H2A.Z Deposition</b> <a href="#">OPEN</a> Yanhua Su, Shiliang Wang, Fei Zhang, Han Zheng, Yanan Liu, Tongtong Huang, and Yong Ding	2197
<b>The Intracellular Immune Receptor Sw-5b Confers Broad-Spectrum Resistance to Tospoviruses through Recognition of a Conserved 21-Amino Acid Viral Effector Epitope</b> Min Zhu, Lei Jiang, Baohui Bai, Wenyang Zhao, Xiaojiao Chen, Jia Li, Yong Liu, Zhengqiang Chen, Boting Wang, Chunli Wang, Qian Wu, Qianhua Shen, Savithramma P. Dinesh-Kumar, and Xiaorong Tao	2214
<b>GENERAL CONTROL NONREPRESSIBLE4 Degrades 14-3-3 and the RIN4 Complex to Regulate Stomatal Aperture with Implications on Nonhost Disease Resistance and Drought Tolerance</b> <a href="#">OPEN</a> Amita Kaundal, Vemanna S. Ramu, Sunhee Oh, Seonghee Lee, Bikram Pant, Hee-Kyung Lee, Clemencia M. Rojas, Muthappa Senthil-Kumar, and Kirankumar S. Mysore	2233
<b>An InDel in the Promoter of <i>AI-ACTIVATED MALATE TRANSPORTER9</i> Selected during Tomato Domestication Determines Fruit Malate Contents and Aluminum Tolerance</b> <a href="#">OPEN</a> Jie Ye, Xin Wang, Tixu Hu, Fengxia Zhang, Bing Wang, Changxin Li, Tianxia Yang, Hanxia Li, Yongen Lu, James J. Giovannoni, Yuyang Zhang, and Zhibiao Ye	2249
<b>Light and Ethylene Coordinately Regulate the Phosphate Starvation Response through Transcriptional Regulation of <i>PHOSPHATE STARVATION RESPONSE1</i></b> Yang Liu, Yurong Xie, Hai Wang, Xiaojing Ma, Wenjun Yao, and Haiyang Wang	2269

- The Arabidopsis Leucine-Rich Repeat Receptor Kinase BIR3 Negatively Regulates BAK1 Receptor Complex Formation and Stabilizes BAK1** 2285  
Julia Imkampe, Thierry Halter, Shuhua Huang, Sarina Schulze, Sara Mazzotta, Nikola Schmidt, Raffaele Manstretta, Sandra Postel, Michael Wierzba, Yong Yang, Walter M.A.M. van Dongen, Mark Stahl, Cyril Zipfel, Michael B. Goshe, Steven Clouse, Sacco C. de Vries, Frans Tax, Xiaofeng Wang, and Birgit Kemmerling

### CORRECTION

- Xing, D., Wang, Y., Hamilton, M., Ben-Hur, A., and Reddy, A.S.N. (2015). Transcriptome-wide identification of RNA targets of Arabidopsis SERINE/ARGININE-RICH45 uncovers the unexpected roles of this RNA binding protein in RNA processing. *Plant Cell* 27: 3294–3308. [OPEN](#) 2304

### RETRACTION

- Cao, L., Wang, L., Zheng, M., Cao, H., Ding, L., Zhang, X., and Fu, Y. (2013). *Arabidopsis* AUGMIN Subunit8 is a microtubule plus-end binding protein that promotes microtubule reorientation in hypocotyls. *Plant Cell* 25: 2187–2201. [OPEN](#) 2305

[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](mailto:scholwek@aspb.org). Send all inquiries regarding advertising to FASEB AdNet, 9650 Rockville Pike, Bethesda, MD 20814-3998; telephone 301/634-7791; fax 301/634-7153; e-mail [adnet@faseb.org](mailto:adnet@faseb.org). The online version of *The Plant Cell* is available at [www.plantcell.org](http://www.plantcell.org).

**Permission to Reprint:** Permission to make digital or hard copies of part or all of a work published in *The Plant Cell* is granted without fee for personal or classroom use provided that copies are not made or distributed for profit or commercial advantage and that copies bear the full citation and the following notice on the first page: "Copyright American Society of Plant Biologists." For all other kinds of copying, request permission in writing from Nancy A. Winchester, Publications Director, ASPB headquarters.

This information is current as of March 23, 2018

<b>Permissions</b>	<a href="https://www.copyright.com/ccc/openurl.do?sid=pd_hw1532298X&amp;issn=1532298X&amp;WT.mc_id=pd_hw1532298X">https://www.copyright.com/ccc/openurl.do?sid=pd_hw1532298X&amp;issn=1532298X&amp;WT.mc_id=pd_hw1532298X</a>
<b>eTOCs</b>	Sign up for eTOCs at: <a href="http://www.plantcell.org/cgi/alerts/ctmain">http://www.plantcell.org/cgi/alerts/ctmain</a>
<b>CiteTrack Alerts</b>	Sign up for CiteTrack Alerts at: <a href="http://www.plantcell.org/cgi/alerts/ctmain">http://www.plantcell.org/cgi/alerts/ctmain</a>
<b>Subscription Information</b>	Subscription Information for <i>The Plant Cell</i> and <i>Plant Physiology</i> is available at: <a href="http://www.aspb.org/publications/subscriptions.cfm">http://www.aspb.org/publications/subscriptions.cfm</a>