

NEWS

In This Issue

470

- Ltc1 gets added to the ER's contacts
- A stem cell niche shows self-restraint
- A SMRTer way to track molecules

Ben Short

In Focus

471

- Dimerization dictates the message

Ben Short

People & Ideas

472

- Eva Nogales: See how they run
Caitlin Sedwick

From the Archive

474

- 60** VEGF tips its hand in angiogenesis
Ben Short

In Memoriam

475

- Tribute to Alan Hall
Priya Prakash Budde, Pontus Aspenstrom, Vania Braga, Ridhdhi Desai, Sandrine Etienne-Manneville, Elaine Fuchs, Filippo G. Giancotti, Michael N. Hall, Cole Haynes, Rick Horwitz, Dan Jin, Thomas J. Kelly, Nathalie Lamarche-Vane, Ian G. Macara, Laura M. Machesky, Joan Massague, Ira Mellman, Tom Misteli, Koh-ichi Nagata, Erich A. Nigg, Eric N. Olson, Tatiana Omelchenko, Michael Overholtzer, Louisiane Perrin, M. Angeles Rabadian, Anne J. Ridley, Dagmar Tapon, Nic Tapon, Yun-Yu Tseng, Meng-Fu (Bryan) Tsou, Harold Varmus, Kenneth M. Yamada, and Xian Zhang

481

- From RAS to RHO: The making of the great cell biologist Alan Hall (1952–2015)
Chris Marshall

REVIEWS

Comment

485

- The expanding implications of polyploidy
Kevin P. Schoenfelder and Donald T. Fox

Review

493

- Brain barriers: Crosstalk between complex tight junctions and adherens junctions
Silvia Tietz and Britta Engelhardt

RESEARCH ARTICLES

Reports

507

- Kinetochore-localized BUB-1/BUB-3 complex promotes anaphase onset in *C. elegans*
Taekyung Kim, Mark W. Moyle, Pablo Lara-Gonzalez, Christian De Groot, Karen Oegema, and Arshad Desai

519

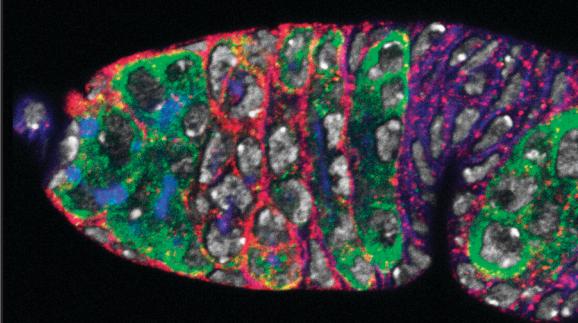
- Bub3 promotes Cdc20-dependent activation of the APC/C in *S. cerevisiae*
Yang Yang, Dai Tsuchiya, and Soni Lacefield

529

- Nesprin provides elastic properties to muscle nuclei by cooperating with spectraplakin and EB1
Shuoshuo Wang, Adriana Reuveny, and Talila Volk

Articles with related stories in the IN THIS ISSUE section have page numbers in RED; articles related to the IN FOCUS feature have page numbers in BLUE.

VOL. 209, NO. 4, MAY 25, 2015



On the cover

In a wild-type *Drosophila* gerarium, the Dpp receptor Tkv (red) is strongly expressed in escort cells, part of the female germline stem cell niche. The gerarium is also stained for Vasa (green), α -Spectrin (blue), and DNA (white). Luo et al. reveal that Tkv mops up excess Dpp released from neighboring niche cells, spatially restricting the morphogen's ability to inhibit stem cell differentiation.

Image © 2015 Luo et al.

See page 595.

539

Ltc1 is an ER-localized sterol transporter and a component of ER–mitochondria and ER–vacuole contacts

Andrew Murley, Reta D. Sarsam, Alexandre Toulmay, Justin Yamada, William A. Prinz, and Jodi Nunnari

Articles

549

The Msd1–Wdr8–Pkl1 complex anchors microtubule minus ends to fission yeast spindle pole bodies

Masashi Yukawa, Chiho Ikebe, and Takashi Toda

563

BLOC-2 targets recycling endosomal tubules to melanosomes for cargo delivery

Megan K. Dennis, Adriana R. Mantegazza, Olivia L. Snir, Danièle Tenza, Amanda Acosta-Ruiz, Cédric Delevoye, Richard Zorger, Anand Sitaran, Wilfredo de Jesus-Rojas, Keerithana Ravichandran, John Rux, Elena V. Sviderskaya, Dorothy C. Bennett, Graça Raposo, Michael S. Marks, and Subba Rao Gangi Setty

579

Receptor dimerization dynamics as a regulatory valve for plasticity of type I interferon signaling

Stephan Wilmes, Oliver Beutel, Zhi Li, Véronique Francois-Newton, Christian P. Richter, Dennis Janning, Cindy Kroll, Patrizia Hanhart, Katharina Hötte, Changjiang You, Gilles Uzé, Sandra Pellegrini, and Jacob Piehler

595

Wnt ligands regulate Tkv expression to constrain Dpp activity in the *Drosophila* ovarian stem cell niche

Lichao Luo, Huashan Wang, Chao Fan, Sen Liu, and Yu Cai

Tools

609

Nuclear accessibility of β-actin mRNA is measured by 3D single-molecule real-time tracking

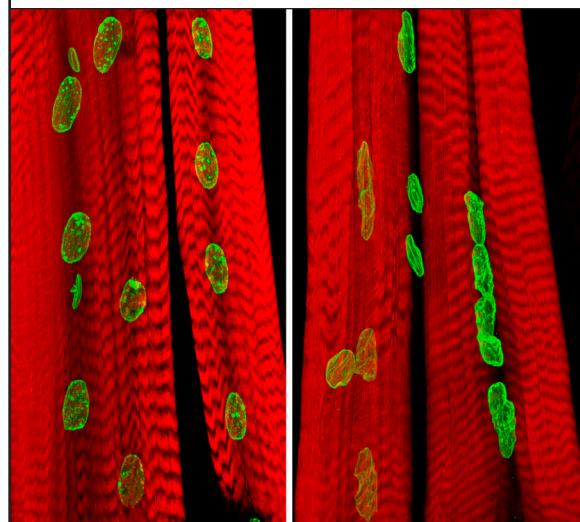
Carlas S. Smith, Stephan Preibisch, Aviva Joseph, Sara Abrahamsson, Bernd Rieger, Eugene Myers, Robert H. Singer, and David Grunwald

Correction

621

The yeast ERAD-C ubiquitin ligase Doa10 recognizes an intramembrane degron

Gregor Habeck, Felix A. Ebner, Hiroko Shimada-Kreft, and Stefan G. Kreft



Wang et al. describe how a myonuclear scaffold helps *Drosophila* larval muscle nuclei resist the strain produced by muscle contraction and relaxation. Compared to wild-type muscle (left), nuclear morphology and positioning is abnormal in the absence of Shot (right), a spectraplakin that stabilizes a perinuclear network of microtubules. Muscles are stained for the nuclear marker laminDm0 (green) and F-actin (red).

Image © 2015 Wang et al.

See page 529.