

## NEWS

### In This Issue

- 616**
- Stem cells stand up for themselves
  - Feeling the pull
  - Young proteins cut down in their prime
  - How a cell puts itself on the menu
  - Arp2/3 phosphorylation kickstarts cells
- M. Leslie

### People & Ideas

- 618**
- Eran Meshorer: getting a chromatin perspective
- C. Sedwick

## REVIEWS

### Comments

- 621**
- Self-eating from an ER-associated cup
- Anne Simonsen and Harald Stenmark

## RESEARCH ARTICLES

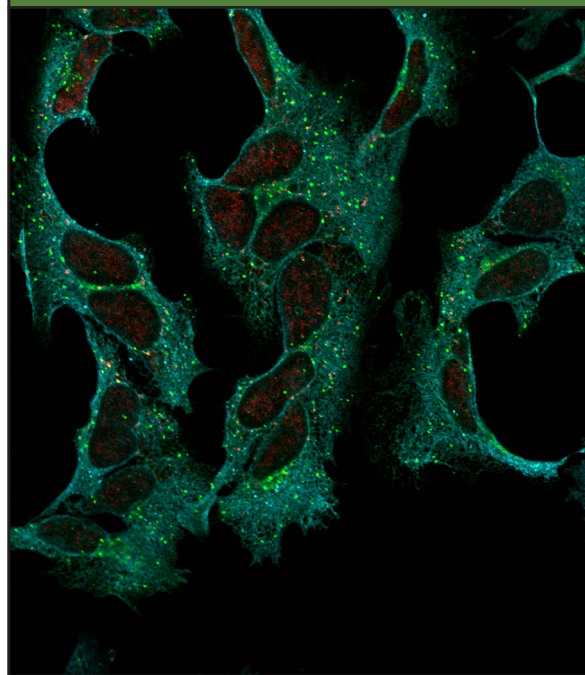
### Reports

- 623**
- Microtubules do not promote mitotic slippage when the spindle assembly checkpoint cannot be satisfied
- Daniela A. Brito, Zhenye Yang, and Conly L. Rieder
- 631**
- Regional variation of microtubule flux reveals microtubule organization in the metaphase meiotic spindle
- Ge Yang, Lisa A. Cameron, Paul S. Maddox, Edward D. Salmon, and Gaudenz Danuser
- 641**
- Stress induces the assembly of RNA granules in the chloroplast of *Chlamydomonas reinhardtii*
- James Uniacke and William Zerges
- 647**
- Phosphorylation of the Arp2/3 complex is necessary to nucleate actin filaments
- Lawrence L. LeClaire III, Martin Baumgartner, Janet H. Iwasa, R. Dyché Mullins, and Diane L. Barber
- 655**
- TGF $\beta$  induces SIK to negatively regulate type I receptor kinase signaling
- Marcin Kowanetz, Peter Lönn, Michael Vanlandewijck, Katarzyna Kowanetz, Carl-Henrik Heldin, and Aristidis Moustakas

### Articles

- 663**
- Heat shock and oxygen radicals stimulate ubiquitin-dependent degradation mainly of newly synthesized proteins
- Balasubrahmanyam Medicherla and Alfred L. Goldberg
- 675**
- E2-25K/Hip-2 regulates caspase-12 in ER stress-mediated A $\beta$  neurotoxicity
- Sungmin Song, Huiyong Lee, Tae-In Kam, Mei Ling Tai, Joo-Yong Lee, Jee-Yeon Noh, Sang Mi Shim, Soo Jung Seo, Young-Yun Kong, Toshiyuki Nakagawa, Chul-Woong Chung, Deog-Young Choi, Hammou Oubrahim, and Yong-Keun Jung

Articles with related stories in the IN THIS ISSUE section have page numbers in **RED**; articles with COMMENTS have page numbers in **BLUE**.



### On the cover

Axe et al. have determined where autophagosomes (red) come from. They spawn from omegasomes (green)—a membrane bulge of the ER (blue) that is enriched in the phospholipid PI(3)P.

See page 685.

685

Autophagosome formation from membrane compartments enriched in phosphatidylinositol 3-phosphate and dynamically connected to the endoplasmic reticulum

Elizabeth L. Axe, Simon A. Walker, Maria Manifava, Priya Chandra, H. Ulewelyn Roderick, Anja Habermann, Gareth Griffiths, and Nicholas T. Ktistakis

703

In vivo reconstitution of autophagy in *Saccharomyces cerevisiae*

Yang Cao, Heesun Cheong, Hui Song, and Daniel J. Klionsky

715

Poleward transport of Eg5 by dynein–dynactin in *Xenopus laevis* egg extract spindles

Marianne Uteng, Christian Hentrich, Kota Miura, Peter Bieling, and Thomas Surrey

727

Novel role of the muskelin–RanBP9 complex as a nucleocytoplasmic mediator of cell morphology regulation

Manojkumar Valiyaveetil, Amber A. Bentley, Priya Gursahaney, Rajaa Hussien, Ritu Chakravarti, Nina Kureishy, Soren Prag, and Josephine C. Adams

741

SopB promotes phosphatidylinositol 3-phosphate formation on *Salmonella* vacuoles by recruiting Rab5 and Vps34

Gustavo V. Mallo, Marianela Espina, Adam C. Smith, Mauricio R. Terebiznik, Ainel Alemán, B. Brett Finlay, Lucia E. Rameh, Sergio Grinstein, and John H. Brumell

753

Mechanotransduction in an extracted cell model: Fyn drives stretch- and flow-elicited PECAM-1 phosphorylation

Yi-Jen Chiu, Elena McBeath, and Keigi Fujiwara

765

Single-molecule analysis of CD9 dynamics and partitioning reveals multiple modes of interaction in the tetraspanin web

Cedric Espenel, Emmanuel Margeat, Patrice Dosset, Cécile Arduise, Christian Le Grimellec, Catherine A. Royer, Claude Boucheix, Eric Rubinstein, and Pierre-Emmanuel Milhiet

777

uPAR promotes formation of the p130Cas–Crk complex to activate Rac through DOCK180

Harvey W. Smith, Pierfrancesco Marra, and Christopher J. Marshall

791

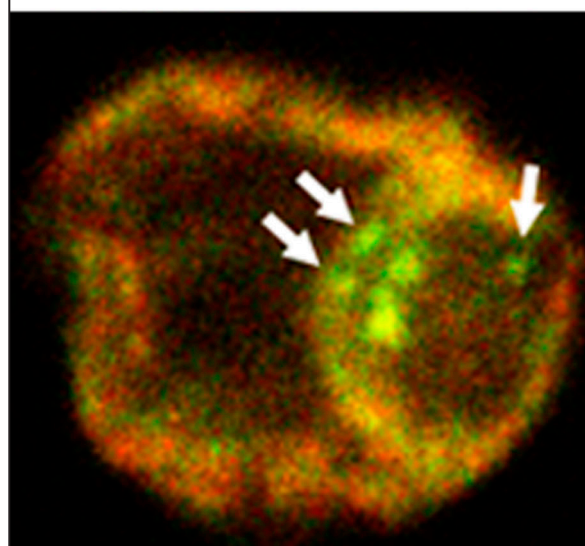
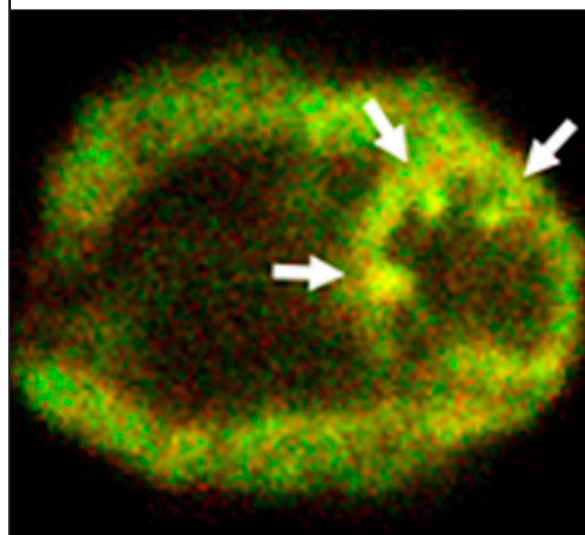
Structural basis for distinctive recognition of fibrinogen  $\gamma$ C peptide by the platelet integrin  $\alpha_{IIb}\beta_3$

Timothy A. Springer, Jianghai Zhu, and Tsan Xiao

801

Integrins control the positioning and proliferation of follicle stem cells in the *Drosophila* ovary

Alana M. O'Reilly, Hsiu-Hsiang Lee, and Michael A. Simon



Stress granules (arrows) don't just form in the cytoplasm and nucleus. They can also form in chloroplasts (circular structure), which have bacterial-like ribosomes and expression mechanisms. Uniacke and Zerges thus wonder whether stress granules are more wide spread in nature than currently realized.

See page 641.