

NEWS

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- Peroxisome inheritance at the right time and place
 - Myosin drives bladder movements
 - Ubiquitin drives cilia shortening
B. Short and E. Choi

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- Aurora B answers an XIST-ential question
B. Short

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- Alexander Meissner: Learning the reprogramming code
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- Super-coil me: Sizing up centromeric nucleosomes
E. Hill and R. Williams

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- Endocytosis of lipid-anchored proteins: excluding GEECs from the crowd
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- Bringing KASH under the SUN: the many faces of nucleocyto-skeletal connections
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RESEARCH ARTICLES

Reports

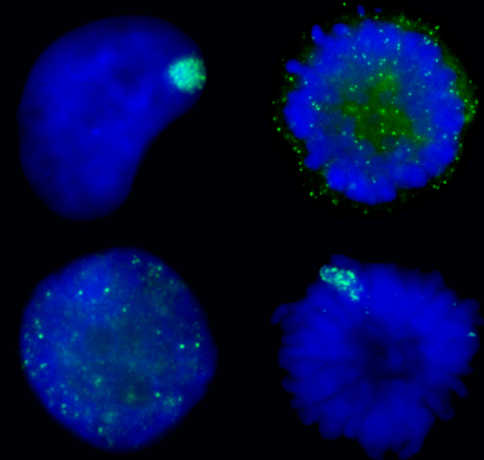
- 473**
- A requirement for epsin in mitotic membrane and spindle organization
Zhonghua Liu and Yixian Zheng

- 481**
- Motor domain phosphorylation and regulation of the *Drosophila* kinesin 13, KLP10A
Vito Mennella, Dong-Yan Tan, Daniel W. Buster, Ana B. Asenjo, Uttama Rath, Ao Ma, Hernando J. Sosa, and David J. Sharp

Articles

- 491**
- AURKB-mediated effects on chromatin regulate binding versus release of XIST RNA to the inactive chromosome
Lisa L. Hall, Meg Byron, Gayle Pageau, and Jeanne B. Lawrence
- 509**
- Oncogene homologue Sch9 promotes age-dependent mutations by a superoxide and Rev1/Pol ζ -dependent mechanism
Federica Madia, Min Wei, Valerie Yuan, Jia Hu, Cristina Gattazzo, Phuong Pham, Myron F. Goodman, and Valter D. Longo
- 525**
- The BCL-2-like protein CED-9 of *C. elegans* promotes FZO-1/Mfn1,2- and EAT-3/Opa1-dependent mitochondrial fusion
Stéphane G. Rolland, Yun Lu, Charles N. David, and Barbara Conrad

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



On the cover

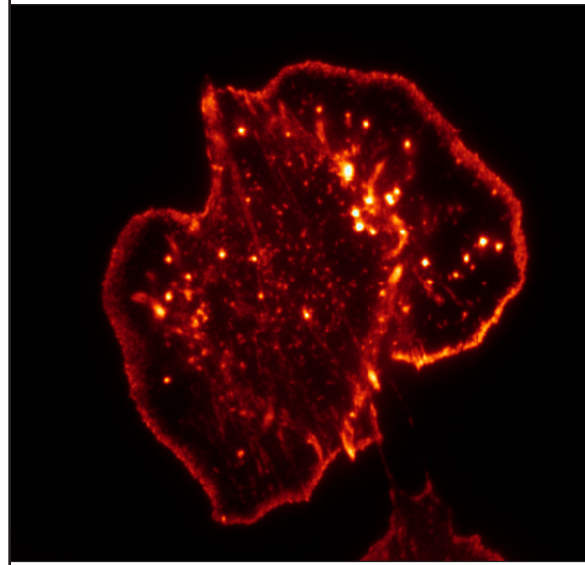
XIST RNA (green) coats and inactivates one X chromosome (top left) but is released during mitosis (top right). Hall et al. find that Aurora B kinase regulates this association, and manipulate the kinase's activity to either release XIST during interphase (bottom left) or retain it in metaphase (bottom right).

See page 491.

- 541** **Myosin-driven peroxisome partitioning in *S. cerevisiae***
Andrei Fagarasanu, Fred D. Mast, Barbara Knoblach, Yui Jin, Matthew J. Brunner, Michael R. Logan, J.N. Mark Glover, Gary A. Eitzen, John D. Aitchison, Lois S. Weisman, and Richard A. Rachubinski
- 555** **The *Dictyostelium* type V myosin MyoJ is responsible for the cortical association and motility of contractile vacuole membranes**
Goeh Jung, Margaret A. Titus, and John A. Hammer III
- 571** **Cortactin regulates cofilin and N-WASp activities to control the stages of invadopodium assembly and maturation**
Matthew Oser, Hideki Yamaguchi, Christopher C. Mader, J.J. Bravo-Cordero, Marianela Arias, Xiaoming Chen, Vera DesMarais, Jacco van Rheenen, Anthony J. Koleske, and John Condeelis
- 589** **Crystal structure of the complete integrin $\alpha V\beta 3$ ectodomain plus an α/β transmembrane fragment**
Jian-Ping Xiong, Bhuvaneshwari Mahalingham, Jose Luis Alonso, Laura Ann Borrelli, Xianliang Rui, Saurabh Anand, Bradley T. Hyman, Thomas Rysiok, Dirk Müller-Pompalla, Simon L. Goodman, and M. Amin Arnaout
- 601** **The ubiquitin conjugation system is involved in the disassembly of cilia and flagella**
Kaiyao Huang, Dennis R. Diener, and Joel L. Rosenbaum
- 615** **Steric and not structure-specific factors dictate the endocytic mechanism of glycosylphosphatidylinositol-anchored proteins**
Pinkesh Bhagatji, Rania Leventis, Jonathan Comeau, Mohammad Refaei, and John R. Silvius

Corrections

- 629** **RMD-1, a novel microtubule-associated protein, functions in chromosome segregation in *Caenorhabditis elegans***
Kumiko Oishi, Hideyuki Okano, and Hitoshi Sawa



Oser et al. dissect the assembly of invadopodia—actin-based membrane protrusions that degrade surrounding extracellular matrix. Bright puncta of actin barbed ends are rapidly generated in invadopodia precursors by the severing protein cofilin.
See page 571.