

NEWS

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- Starting a tumor off wrong
- Myosins pull together to move cargo
- Going their own way in the NPC
- RhoG welcomes leukocytes
- Pol II piece makes and breaks mRNA

M. Leslie

Research Roundup

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- Independent membrane protein clustering
- Golgi helps shape dendrites
- Mitochondria move to immune synapse
- Stick with gap junctions

N. LeBrasseur

People & Ideas

1098

- Konrad Hochedlinger: The new kid of nuclear reprogramming
R. Williams

RESEARCH ARTICLES

Reports

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- Global chromatin compaction limits the strength of the DNA damage response

Matilde Murga, Isabel Jaco, Yuhong Fan, Rebeca Soria, Barbara Martinez-Pastor, Myriam Cuadrado, Seung-Min Yang, Maria A. Blasco, Arthur I. Skoultschi, and Oscar Fernandez-Capetillo

Articles

1109

- APC mutations lead to cytokinetic failures in vitro and tetraploid genotypes in *Min* mice

Christine M. Caldwell, Rebecca A. Green, and Kenneth B. Kaplan

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- Nuclear mRNA export requires specific FG nucleoporins for translocation through the nuclear pore complex

Laura J. Terry and Susan R. Wente

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- The Rpb7p subunit of yeast RNA polymerase II plays roles in the two major cytoplasmic mRNA decay mechanisms

Rona Lotan, Vicky Goler-Baron, Lea Duek, Gal Haimovich, and Mordechai Choder

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- Inhibition of nonsense-mediated mRNA decay (NMD) by a new chemical molecule reveals the dynamic of NMD factors in P-bodies

Sébastien Durand, Nicolas Cougot, Florence Mahuteau-Betzer, Chi-Hung Nguyen, David S. Grierson, Edouard Bertrand, Jamal Tazi, and Fabrice Lejeune

1161

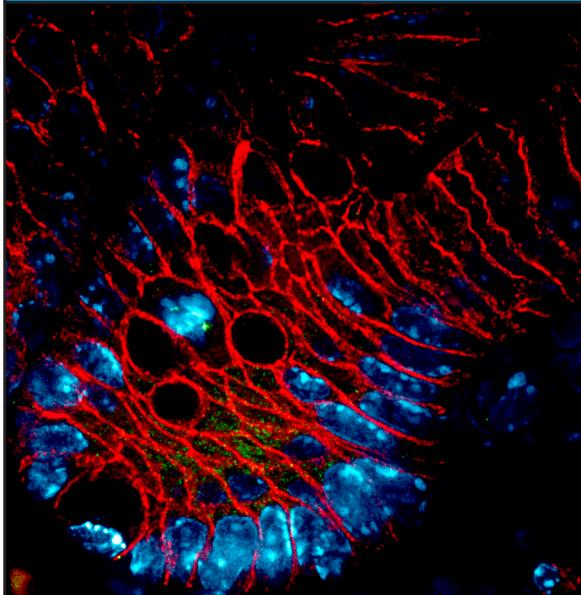
- Tim54p connects inner membrane assembly and proteolytic pathways in the mitochondrion

David K. Hwang, Steven M. Claypool, Danielle Leuenberger, Heather L. Tienson, and Carla M. Koehler

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- Control of nuclear centration in the *C. elegans* zygote by receptor-independent Gα signaling and myosin II

Morgan B. Goulding, Julie C. Canman, Eric N. Senning, Andrew H. Marcus, and Bruce Bowerman



On the cover

Mouse intestinal cells with mutant APC misorient the mitotic spindle (green) and end up with extra chromosomes (blue) that might provoke colon cancer.

See page 1109.

- 1193** Myo4p is a monomeric myosin with motility uniquely adapted to transport mRNA
Brian D. Dunn, Takeshi Sakamoto, Myoung-Soo Hong, James R. Sellers, and Peter A. Takizawa

- 1207** Actin–myosin network reorganization breaks symmetry at the cell rear to spontaneously initiate polarized cell motility
Patricia T. Yam, Cyrus A. Wilson, Lin Ji, Benedict Hebert, Erin L. Barnhart, Natalie A. Dye, Paul W. Wiseman, Gaudenz Danuser, and Julie A. Theriot

- 1223** The protein tyrosine phosphatase Pez regulates TGF β , epithelial–mesenchymal transition, and organ development
Leila Wyatt, Carol Wadham, Lesley A. Crocker, Michael Lardelli, and Yeesim Khew-Goodall

- 1237** Proteolysis and membrane capture of F-spondin generates combinatorial guidance cues from a single molecule
Sophie Zisman, Karen Marom, Oshri Avraham, Lilah Rinsky-Halivni, Uri Gai, Gilit Kligun, Vered Tzarfaty-Majar, Tatsuo Suzuki, and Avihu Klar

- 1251** Cofilin recruitment and function during actin-mediated endocytosis dictated by actin nucleotide state
Voytek Okreglak and David G. Drubin

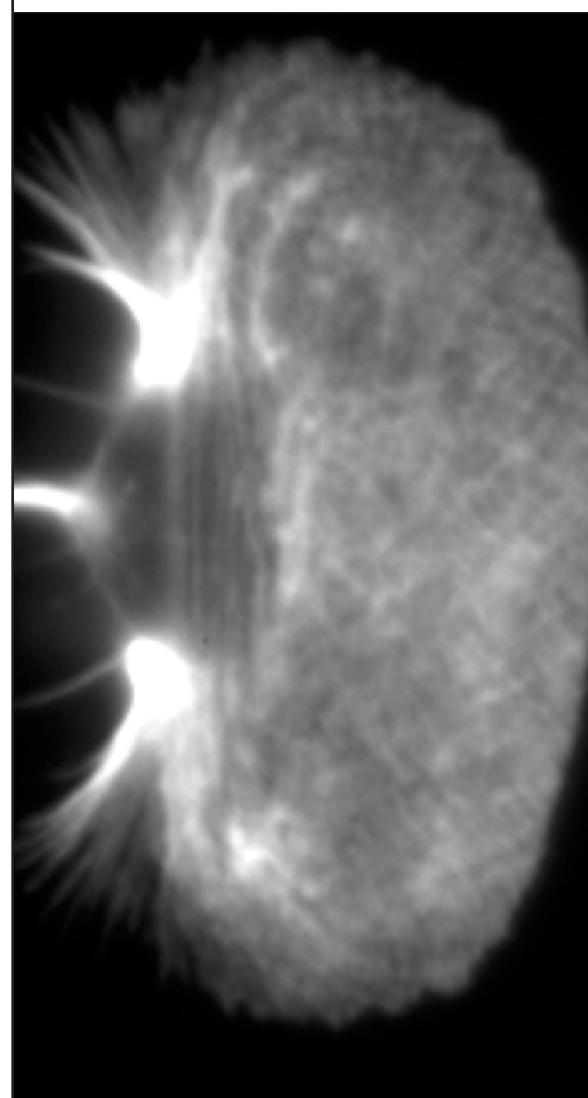
- 1265** The type III effector EspF coordinates membrane trafficking by the spatiotemporal activation of two eukaryotic signaling pathways
Neal M. Alto, Andrew W. Weflen, Matthew J. Rardin, Defne Yarar, Cheri S. Lazar, Raffi Tonikian, Antonius Koller, Susan S. Taylor, Charles Boone, Sachdev S. Sidhu, Sandra L. Schmid, Gail A. Hecht, and Jack E. Dixon

- 1279** RhoG regulates endothelial apical cup assembly downstream from ICAM1 engagement and is involved in leukocyte trans-endothelial migration
Jaap D. van Buul, Michael J. Allingham, Thomas Samson, Julia Meller, Etienne Boulter, Rafael García-Mata, and Keith Burridge

- 1295** The EphA4 receptor regulates dendritic spine remodeling by affecting β 1-integrin signaling pathways
Caroline Bourgin, Keith K. Murai, Melanie Richter, and Elena B. Pasquale

Corrections

- 1309** A role for Rab5 in structuring the endoplasmic reticulum
Anjon Audhya, Arshad Desai, and Karen Oegema



Just before this epithelial cell becomes motile, its symmetry is broken by an increase in the flow of actin (white) in the rear.

See page 1207.