

Leading Edge

Cell Volume 145 Number 1, April 1, 2011

IN THIS ISSUE

SELECT

- 5 Genome Instability

PREVIEWS

- 13 Directly Observing Therapy:
A New View of Drug
Tolerance in Tuberculosis
J.A. Philips and J.D. Ernst
- 15 Traveling Back and Forth
from Mitochondria to Control Apoptosis
M.E. Soriano and L. Scorrano
- 17 Hungry Flies Tune to Vinegar
W. Hueteroth and S. Waddell

ESSAY

- 19 The Evolving War on Cancer
D.A. Haber, N.S. Gray, and J. Basega

MINIREVIEW

- 25 Mapping Cancer Origins
R.J. Gilbertson

PERSPECTIVE

- 30 Genetic Interactions in
Cancer Progression and Treatment
A. Ashworth, C.J. Lord, and J.S. Reis-Filho

SNAPSHOT

- 162 The Epithelial-Mesenchymal Transition
J.P. Steegman and J.P. Thiery

Articles

Cell Volume 145 Number 1, April 1, 2011

- 39 Drug Tolerance in Replicating Mycobacteria Mediated by a Macrophage-Induced Efflux Mechanism
K.N. Adams, K. Takaki, L.E. Connolly, H. Wiedenhoft, K. Winglee, O. Humbert, P.H. Edelstein, C.L. Cosma, and L. Ramakrishnan
- 54 The Mre11:Rad50 Structure Shows an ATP-Dependent Molecular Clamp in DNA Double-Strand Break Repair
K. Lammens, D.J. Bemeisel, C. Möckel, E. Clausing, A. Schell, S. Hertung, C.B. Schiller, M. Lucas, C. Angermüller, J. Soding, K. Straßer, and K.-P. Hopfner
- 57 Covalent Linkage of Distinct Substrate Degrons Controls Assembly and Disassembly of DegP Proteolytic Cages
S. Kim, R.A. Grant, and R.T. Sauer
- 79 Rhomboid Family Pseudoproteases Use the ER Quality Control Machinery to Regulate Intercellular Signaling
M. Zettl, C. Adrain, K. Strisovsky, V. Lastun, and M. Freeman
- 92 NEMO and RIP1 Control Cell Fate in Response to Extensive DNA Damage via TNF- α Feedforward Signaling
S. Biton and A. Ashkenazi
- 104 Bcl-x_L Retrotranslocates Bax from the Mitochondria into the Cytosol
F. Edlich, S. Banerjee, M. Suzuki, M.M. Cleland, D. Aronoff, C. Wang, A. Neutzner, N. Tjandra, and R.J. Youle
- 117 Loss of Skywalker Reveals Synaptic Endosomes as Sorting Stations for Synaptic Vesicle Proteins
V. Uytterhoeven, S. Kuenen, J. Kaspravic, K. Miskiewicz, and P. Verstreken
- 133 Presynaptic Facilitation by Neuropeptide Signaling Mediates Olfactor-Driven Food Search
C.M. Root, K.I. Ko, A. Jafari, and J.W. Wang

RESOURCE

- 145 A Rapid and Scalable System for Studying Gene Function in Mice Using Conditional RNA Interference
P.K. Premaratne, L.E. Dow, S.Y. Kim, M. Camiolo, C.D. Malone, C. Mithring, C. Scuppo, J. Zuber, R.A. Dickins, S.C. Kogan, K.R. Shroyer, R. Sordella, G.J. Hannon, and S.W. Lowe

CORRECTION

- 159 Drug Tolerance in Replicating Mycobacteria Mediated by a Macrophage-Induced Efflux Mechanism
K.N. Adams, K. Takaki, L.E. Connolly, H. Wiedenhoft, K. Winglee, O. Humbert, P.H. Edelstein, C.L. Cosma, and L. Ramakrishnan

(continued)

ERRATA

160 Systematic Protein Location Mapping Reveals Five Principal Chromatin Types in *Drosophila* Cells

G.J. Filion, J.G. van Bemmel, U. Braunschweig, W. Talhout, J. Kind, L.D. Ward, W. Brugman, I.J. de Castro, R.M. Kerihoven, H.J. Bussemaker, and B. van SteENSEL

160 Revisiting the Central Dogma One Molecule at a Time

C. Bustamante, W. Cheng, and Y.X. MeJia

RETRACTION

161 Retraction Notice to: DNA-PKcs-PIDDosome: A Nuclear Caspase-2-Activating Complex with Role in G2/M Checkpoint Maintenance

M. Shi, C.J. Vivian, K.-J. Lee, C. Ge, K. Morotomi-Yano, C. Manzi, F. Bock, S. Sato, C. Tomomori-Sato, R. Zhu, J.S. Haug, S.K. Swanson, M.P. Washburn, D.J. Chen, B.P.C. Chen, A. Villunger, L. Florens, and C. Du

POSITIONS AVAILABLE

On the cover: Synaptic vesicles recycle locally at the synapse, and the proteins are used during many rounds of exo- and endocytosis. Here, Uytterhoeven et al. (pp. 117–132) show that, in skywalker mutants, endosome-like structures accumulate and dysfunctional synaptic vesicle proteins are sorted for degradation at these sites, resulting in a larger vesicle pool and increased synaptic transmission. The image depicts a boiling mud pool in Reykjanes, Iceland in which small bubbles that represent synaptic vesicles surface into structures that appear similar in morphology to the endosomes found at stimulated synapses in sky mutants. Photo by Patrik Verstreken.

