

NEWS

In This Issue

708

- Unwrapping new histones
- Go on, satellite cells, be all that you can be
- With HMGB1's help, cells dine in
M. Leslie

In Focus

709

- Sweet recipe for cellular closeness
M. Leslie

People & Ideas

710

- Mónica Bettencourt-Dias: Centered on centrioles
B. Short

Editorial

713

- New editorial board members

REVIEWS

Comments

715

- NPHP proteins: gatekeepers of the ciliary compartment
Heymut Omran

Reviews

719

- Protein homeostasis and aging in neurodegeneration
Peter M. Douglas and Andrew Dillin

RESEARCH ARTICLES

Reports

731

- The chromatin-remodeling factor CHD4 coordinates signaling and repair after DNA damage
Dorthe Helena Larsen, Catherine Poinsignon, Thorkell Gudjonsson, Christoffel Dinant, Mark R. Payne, Flurina J. Hari, Jannie M. Rendtlew Danielsen, Patrice Menard, Jette Christensen Sand, Manuel Stucki, Claudia Lukas, Jiri Bartek, Jens S. Andersen, and Jiri Lukas

741

- The NuRD chromatin-remodeling complex regulates signaling and repair of DNA damage
Godelieve Smeenk, Wouter W. Wiegant, Hans Vrolijk, Aldo P. Solari, Albert Pastink, and Haico van Attikum

751

- Formation of a Bazooka–Stardust complex is essential for plasma membrane polarity in epithelia
Michael P. Krahn, Johanna Bükers, Lars Kastrup, and Andreas Wodarz

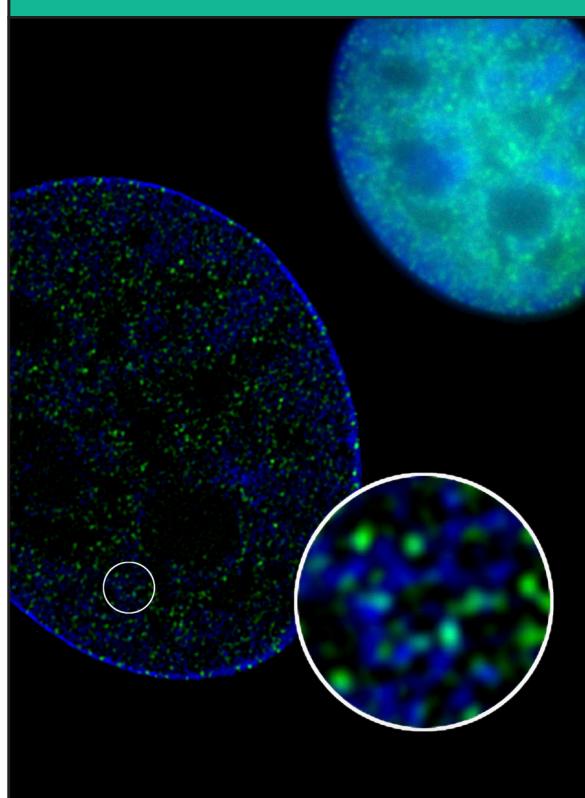
Articles

761

- Dynamic plasticity of large-scale chromatin structure revealed by self-assembly of engineered chromosome regions
Paul Sinclair, Qian Bian, Matt Plutz, Edith Heard, and Andrew S. Belmont

777

- Identification and characterization of two novel primate-specific histone H3 variants, H3.X and H3.Y
Sonja M. Wiedemann, Silke N. Mildner, Clemens Bönisch, Lars Israel, Andreas Maiser, Sarah Matheisl, Tobias Straub, Rainer Merkl, Heinrich Leonhardt, Elisabeth Kremmer, Lothar Schermelleh, and Sandra B. Hake



On the cover

Wiedemann et al. identify two novel variants of histone H3. Super-resolution 3D-SIM microscopy of a starved U2OS cell shows that these histones (green) mainly localize to regions where chromatin (blue) is less condensed. A conventional wide-field image of the same nucleus is at the top right.
See page 777.

793

The mitosis-to-interphase transition is coordinated by cross talk between the SIN and MOR pathways in *Schizosaccharomyces pombe*
Samridha Ray, Kazunori Kume, Sneha Gupta, Wanzhong Ge,
Mohan Balasubramanian, Dai Hirata, and Dannel McCollum

807

Subgroup II PAK-mediated phosphorylation regulates Ran activity during mitosis
Guillaume Bompard, Gabriel Rabeharivel, Marie Frank, Julien Cau, Claude Delsert,
and Nathalie Morin

823

Molecular architecture and assembly of the yeast kinetochore MIND complex
Daniel P. Maskell, Xiao-Wen Hu, and Martin R. Singleton

835

The MIS12 complex is a protein interaction hub for outer kinetochore assembly
Arsen Petrovic, Sebastiano Pasqualato, Prakash Dube, Veronica Krenn,
Stefano Santaguida, Davide Cittaro, Silvia Monzani, Lucia Massimiliano, Jenny Keller,
Aldo Tarricone, Alessio Maiolica, Holger Stark, and Andrea Musacchio

853

Functional dichotomy of ribosomal proteins during the synthesis of mammalian 40S ribosomal subunits
Marie-Françoise O'Donohue, Valérie Choesmel, Marlène Faubladier,
Gwennaële Fichant, and Pierre-Emmanuel Gleizes

867

microRNA-1 and microRNA-206 regulate skeletal muscle satellite cell proliferation and differentiation by repressing Pax7
Jian-Fu Chen, Yazhong Tao, Juan Li, Zhongliang Deng, Zhen Yan, Xiao Xiao,
and Da-Zhi Wang

881

Endogenous HMGB1 regulates autophagy
Daolin Tang, Rui Kang, Kristen M. Livesey, Chun-Wei Cheh, Adam Farkas,
Patricia Loughran, George Hoppe, Marco E. Bianchi, Kevin J. Tracey, Herbert J. Zeh III,
and Michael T. Lotze

893

A testis-specific regulator of complex and hybrid N-glycan synthesis
Hung-Hsiang Huang and Pamela Stanley

911

Two distinct mechanisms target GAD67 to vesicular pathways and presynaptic clusters
Jamil Kanaani, Julia Kolibachuk, Hugo Martinez, and Steinunn Baekkeskov

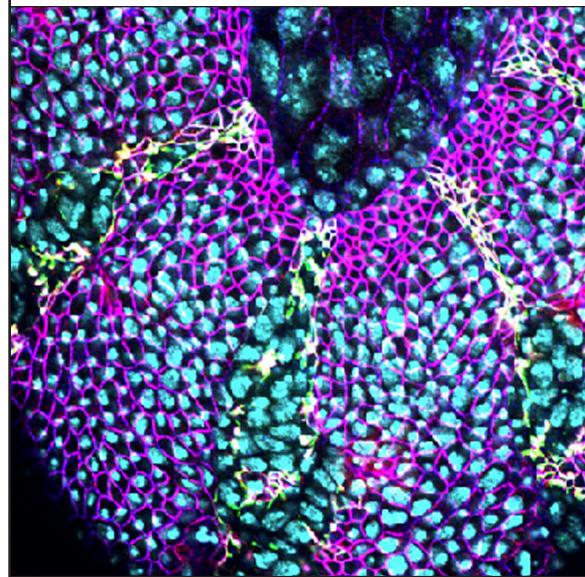
927

CEP290 tethers flagellar transition zone microtubules to the membrane and regulates flagellar protein content
Branch Craige, Che-Chia Tsao, Dennis R. Diener, Yuqing Hou,
Karl-Ferdinand Lechtreck, Joel L. Rosenbaum, and George B. Witman

Corrections

941

Drosophila Mtm and class II PI3K coregulate a PI(3)P pool with cortical and endolysosomal functions
Michaella Velichkova, Joe Juan, Pavan Kadandale, Steve Jean, Inês Ribeiro,
Vignesh Raman, Chris Stefan, and Amy A. Kiger



Expressing a non-phosphorylatable version of the polarity protein Bazooka (green) in segments of *Drosophila* epithelia causes mislocalization of the apical membrane proteins aPKC and Crumbs (magenta), disrupting epithelial morphogenesis.
See page 751.