Contents

Perspectives

Signaling silence—breaking ground and spreading out  
Hye Ryun Woo and Eric J. Richards 1719

DLC1: a significant GAP in the cancer genome  
Aurelia Lahoz and Alan Hall 1724

POT of gold: modeling dyskeratosis congenita in the mouse  
Chantal Autexier 1731

PERspective on PER phosphorylation  
Justin Blau 1737

Research communications

The bacterial cell division protein FtsZ assembles into cytoplasmic rings in fission yeast  
Ramanujam Srinivasan, Mithilesh Mishra, Lifang Wu, Zhongchao Yin, and Mohan K. Balasubramanian 1741

Fibrinogen drives dystrophic muscle fibrosis via a TGFβ/alternative macrophage activation pathway  
Berta Vidal, Antonio L. Serrano, Marc Tjwa, Mònica Suelves, Esther Ardite, Roberta De Mori, Bernat Baeza-Raja, María Martínez de Lagrán, Peggy Lafuste, Vanessa Ruiz-Bonilla, Mercè Jardí, Romain Gherardi, Christo Christov, Mara Dierssen, Peter Carmeliet, Jay L. Degen, Mieke Dewerchin, and Pura Muñoz-Cánoves 1747

Tissue-specific regulation of SIRT1 by calorie restriction  

Research papers

The phospho-occupancy of an atypical SLIMB-binding site on PERIOD that is phosphorylated by DOUBLETIME controls the pace of the clock  
Joanna C. Chiu, Jens T. Vanselow, Achim Kramer, and Isaac Edery 1758

Engineered telomere degradation models dyskeratosis congenita  
Dirk Hockemeyer, Wilhelm Palm, Richard C. Wang, Suzana S. Couto, and Titia de Lange 1773

SpoIIIE strips proteins off the DNA during chromosome translocation  
Kathleen A. Marquis, Briana M. Burton, Marcelo Nollmann, Jerod L. Ptacin, Carlos Bustamante, Sigal Ben-Yehuda, and David Z. Rudner 1786

Distinct activities of the DExD/H-box splicing factor hUAP56 facilitate stepwise assembly of the spliceosome  
Haihong Shen, Xuexiu Zheng, Jingping Shen, Lingdi Zhang, Rui Zhao, and Michael R. Green 1796

(continued)
Nuclear HuR accumulation through phosphorylation by Cdk1
Hyeon Ho Kim, Kotb Abdelmohsen, Ashish Lal, Rudolf Pullmann Jr., Xiaoling Yang, Stefanie Galban, Subramanya Srikantan, Jennifer L. Martindale, Justin Blethrow, Kevan M. Shokat, and Myriam Gorospe

Separate roles for the DNA damage checkpoint protein kinases in stabilizing DNA replication forks
Monica Segurado and John F.X. Diffley

Pax3 regulation of FGF signaling affects the progression of embryonic progenitor cells into the myogenic program
Mounia Lagha, Jay D. Kormish, Didier Rocancourt, Marie Manceau, Jonathan A. Epstein, Kenneth S. Zaret, Frédéric Relaix, and Margaret E. Buckingham

Translational regulation of glutathione peroxidase 4 expression through guanine-rich sequence-binding factor 1 is essential for embryonic brain development
Christoph Ufer, Chi Chiu Wang, Michael Fähling, Heike Schiebel, Bernd J. Thiele, E. Ellen Billett, Hartmut Kuhn, and Astrid Borchert

Open Access paper

Cover
The bacterial DNA translocase SpoIIIE strips proteins off the forespore chromosome during DNA transport across the septum during sporulation. Shown here are tiled fluorescent micrographs of wild-type sporulating Bacillus subtilis cells stained with a membrane dye (red), expressing either SpoIIIE-GFP (green) or a functional fusion of the β′ subunit of RNA polymerase to GFP (false-colored blue). During sporulation, SpoIIIE translocates 75% of the chromosome into the spore compartment. Images with green foci show SpoIIIE-GFP at the polar division plane. Images with blue show RNA polymerase associated with the chromosome. RNA polymerase and other DNA-binding proteins are stripped off during translocation, suggesting that much of the DNA arrives in the spore compartment naked, ready to receive and carry out the dictates of the developing spore. (For details, see Marquis et al., p. 1786.)