

## Perspective

- A better way to discover gene function in the social amoeba *Dictyostelium discoideum* 1161  
William F. Loomis

## Insight/Outlook

- The ethics of conducting molecular autopsies in cases of sudden death in the young 1165  
Amy L. McGuire, Quianta Moore, Mary Majumder, Magdalena Walkiewicz, Christine M. Eng, John W. Belmont, Salma Nassef, Sandra Darilek, Katie Rutherford, Stacey Pereira, Steven E. Scherer, V. Reid Sutton, Dwayne Wolf, Richard A. Gibbs, Roger Kahn, Luis A. Sanchez, and the Molecular Autopsy Consortium of Houston (MATCH)

## Research

- Postmortem genetic screening for the identification, verification, and reporting of genetic variants contributing to the sudden death of the young 1170  
D. Nicole R. Methner, Steven E. Scherer, Katherine Welch, Magdalena Walkiewicz, Christine M. Eng, John W. Belmont, Mark C. Powell, Viktoriya Korchina, Harsha Vardhan Doddapaneni, Donna M. Muzny, Richard A. Gibbs, Dwayne A. Wolf, Luis A. Sanchez, and Roger Kahn
- CENPT bridges adjacent CENPA nucleosomes on young human  $\alpha$ -satellite dimers 1178<sup>OA</sup>  
Jitendra Thakur and Steven Henikoff
- SMARCA4 regulates gene expression and higher-order chromatin structure in proliferating mammary epithelial cells 1188  
A. Rasim Barutcu, Bryan R. Lajoie, Andrew J. Fritz, Rachel P. McCord, Jeffrey A. Nickerson, Andre J. van Wijnen, Jane B. Lian, Janet L. Stein, Job Dekker, Gary S. Stein, and Anthony N. Imbalzano
- Genomes of *Ellobius* species provide insight into the evolutionary dynamics of mammalian sex chromosomes 1202  
Eskeatnaf Mulugeta, Evelyne Wassenaar, Esther Sleddens-Linkels, Wilfred F.J. van IJcken, Edith Heard, J. Anton Grootegoed, Walter Just, Joost Gribnau, and Willy M. Baarends
- Direct estimate of the rate of germline mutation in a bird 1211<sup>OA</sup>  
Linnéa Smeds, Anna Qvarnström, and Hans Ellegren
- Specific down-regulation of spermatogenesis genes targeted by 22G RNAs in hybrid sterile males associated with an X-Chromosome introgression 1219  
Runsheng Li, Xiaoliang Ren, Yu Bi, Vincy Wing Sze Ho, Chia-Ling Hsieh, Amanda Young, Zhihong Zhang, Tingting Lin, Yanmei Zhao, Long Miao, Peter Sarkies, and Zhongying Zhao

(continued)

Critical roles of long noncoding RNAs in *Drosophila* spermatogenesis 1233  
Kejia Wen, Lijuan Yang, Tuanlin Xiong, Chao Di, Danhui Ma, Menghua Wu, Zhaoyu Xue,  
Xuedi Zhang, Li Long, Weimin Zhang, Jiaying Zhang, Xiaolin Bi, Junbiao Dai, Qiangfeng Zhang,  
Zhi John Lu, and Guanjun Gao

Chromatin dynamics during DNA replication 1245  
Raz Bar-Ziv, Yoav Voichkek, and Naama Barkai

## Methods

In silico phylogenomics using complete genomes: a case study on the evolution of hominoids 1257  
Igor Rodrigues Costa, Francisco Prosdocimi, and W. Bryan Jennings

Gene discovery by chemical mutagenesis and whole-genome sequencing in *Dictyostelium* 1268  
Cheng-Lin Frank Li, Balaji Santhanam, Amanda Nicole Webb, Blaž Zupan, and Gad Shaulsky

## Resources

Diverse alternative back-splicing and alternative splicing landscape of circular RNAs 1277<sup>OA</sup>  
Xiao-Ou Zhang, Rui Dong, Yang Zhang, Jia-Lin Zhang, Zheng Luo, Jun Zhang, Ling-Ling Chen,  
and Li Yang

Indels, structural variation, and recombination drive genomic diversity in *Plasmodium falciparum* 1288<sup>OA</sup>  
Alistair Miles, Zamin Iqbal, Paul Vauterin, Richard Pearson, Susana Campino, Michel Theron,  
Kelda Gould, Daniel Mead, Eleanor Drury, John O'Brien, Valentin Ruano Rubio, Bronwyn MacInnis,  
Jonathan Mwangi, Upeka Samarakoon, Lisa Ranford-Cartwright, Michael Ferdig, Karen Hayton,  
Xin-zhuan Su, Thomas Wellems, Julian Rayner, Gil McVean, and Dominic Kwiatkowski

<sup>OA</sup>Open Access paper



**Cover** A second calendar year male flycatcher just arrived from his winter visit in Angola, Africa to the Swedish island Gotland—a trip of around 8500 km. In this issue, the germline mutation rate is estimated following deep resequencing of 11 members of a three-generation flycatcher pedigree. (Cover photo by Johan Träff. [For details, see Smeds et al., pp. 1211–1218.])