Contents

FAST TRACK

435 Lateral Gene Transfer Shapes the Distribution of RuBisCO among Candidate Phyla Radiation Bacteria and DPANN Archaea
Alexander L. Jaffe, Cindy J. Castelle, Christopher L. Dupont, and Jillian F. Banfield

DISCOVERIES

447 The Cone Opsin Repertoire of Osteoglossomorph Fishes: Gene Loss in Mormyrid Electric Fish and a Long Wavelength-Sensitive Cone Opsin That Survived 3R
Da-Wei Liu, Feng-Yu Wang, Jinn-Jy Lin, Ammon Thompson, Ying Lu, Derek Vo, Hong Young Yan, and Harold Zakon

458 Influence of Recombination and GC-biased Gene Conversion on the Adaptive and Nonadaptive Substitution Rate in Mammals versus Birds
Marjolaine Rousselle, Alexandre Laverré, Emeric Figuet, Benoit Nabbolz, and Nicolas Galtier

472 Segregational Drift and the Interplay between Plasmid Copy Number and Evolvability

487 The Origin and Population History of the Endangered Golden Snub-Nosed Monkey (Rhinopithecus roxellana)
Wei-Min Kuang, Chen Ming, Hai-Peng Li, Hong Wu, Laurent Frantz, Christian Roos, Ya-Ping Zhang, Cheng-Lin Zhang, Ting Jia, Jing-Yuan Yang, and Li Yu

500 Pleiotropy Modulates the Efficacy of Selection in Drosophila melanogaster
Christelle Fratisse, Gemma Puixeu Sala, and Beatriz Vicoso

516 A Single SNP Turns a Social Honey Bee (Apis mellifera) Worker into a Selfish Parasite
Denise Aumer, Eckart Stolle, Michael Allsopp, Fiona Mumoki, Christian W.W. Pirk, and Robin F.A. Moritz

527 Evolution of DNA Methylation in Papio Baboons
Tauras P. Vilgalys, Jeffrey Rogers, Clifford J. Jolly, Baboon Genome Analysis, Sayan Mukherjee, and Jenny Tung

541 Genetic Load and Potential Mutational Meltdown in Cancer Cell Populations
Yuezheng Zhang, Yawei Li, Tao Li, Xu Shen, Tianqi Zhu, Yong Tao, Xueming Li, Di Wang, Qin Ma, Zheng Hu, Jinlin Liu, Jue Ruan, Jun Cai, Hurng-Yi Wang, and Xuemei Lu

553 Degenerative Expansion of a Young Supergene
Eckart Stolle, Rodrigo Pracana, Philip Howard, Carolina I. Paris, Susan J. Brown, Claudia Castillo-Carrillo, Stephen J. Rosister, and Yannick Wurm

562 Chromids Aid Genome Expansion and Functional Diversification in the Family Burkholderiaceae
George C. diCenzo, Alessio Mengoni, and Elena Perrin

575 Genome-Wide Characterization of Arabian Peninsula Populations: Shedding Light on the History of a Fundamental Bridge between Continents
Veronica Fernandes, Nicolas Brucato, Joana C. Ferreira, Nicole Pedro, Bruno Cavadas, François-Xavier Ricaut, Fadida Alshamali, and Luisa Pereira

METHODS

587 Beyond the SNP Threshold: Identifying Outbreak Clusters Using Inferred Transmissions
James Stimson, Jennifer Gardy, Barun Mathema, Valeriu Crudu, Ted Cohen, and Caroline Colijn

604 Genetic Gene Expression Changes during Environmental Adaptations Tend to Reverse Plastic Changes Even after the Correction for Statistical Nonindependence
Wei-Chin Ho and Jianzhi Zhang

613 Beyond Stability Constraints: A Biophysical Model of Enzyme Evolution with Selection on Stability and Activity
Julian Echave