Contents
Vol. 205 No. 2 February 2017

COMMENTARY
467–469 A Bitter Taste of the Sun Makes Egg-Laying Flies Run
Dahanukar, Anupama and Chun Han

FLYBOOK
471–490 DNA Repair in Drosophila: Mutagens, Models, and Missing Genes
Sekelsky, Jeff

INVESTIGATIONS
METHODS, TECHNOLOGY, AND RESOURCES
491–501 Improving the Identification of Phenotypic Abnormalities and Sexual
Dimorphism in Mice When Studying Rare Event Categorical Characteristics
Karp, Natasha A., Ruth Heller, Shay Yaacoby, Jacqueline K. White, and Yoav Benjamini
OPEN ACCESS

GENOME INTEGRITY AND TRANSMISSION
503–516 Genetic Contributors to Intergenerational CAG Repeat Instability in
Huntington’s Disease Knock-In Mice
OPEN ACCESS

517–527 Cooperation Between Kinesin Motors Promotes Spindle Symmetry and
Chromosome Organization in Oocytes
Radford, Sarah J., Alysa Marie M. Go, and Kim S. McKim
HIGHLIGHTED ARTICLE

529–537 Repair of Meiotic DNA Breaks and Homolog Pairing in Mouse Meiosis
Requires a Minichromosome Maintenance (MCM) Paralog
McNairn, Adrian J., Vera D. Rinaldi, and John C. Schimenti

GENE EXPRESSION
539–549 The Role of +4U as an Extended Translation Termination Signal in Bacteria
Wei, Yulong and Xuhua Xia
OPEN ACCESS

551–558 An Unexpected Regulatory Cascade Governs a Core Function of the
Drosophila PRC1 Chromatin Protein Su(2)2
Nguyen, Son C., Stephanie Yu, Elaine Oberlick, and Chao-ting Wu
HIGHLIGHTED ARTICLE
559–576 Zinc Cluster Transcription Factors Alter Virulence in *Candida albicans*
Issi, Luca, Rhys A. Farrer, Kelly Pastor, Benjamin Landry, Toni Delorey, George W. Bell, Dawn A. Thompson, Christina A. Cuomo, and Reeta P. Rao

577–588 The Promiscuous *sumA* Missense Suppressor from *Salmonella enterica* Has an Intriguing Mechanism of Action
Cole, Ashley E., Fatmah M. Hani, Ronni Altman, Megan Meservy, John R. Roth, and Elliot Altman

589–603 Different Evolutionary Strategies To Conserve Chromatin Boundary Function in the Bithorax Complex
Cleard, Fabienne, Daniel Wolle, Andrew M. Taverner, Tsutomu Aoki, Girish Deshpande, Peter Andolfatto, Francois Karch, and Paul Schedl

OPEN ACCESS

605–620 Stable Binding of the Conserved Transcription Factor Grainy Head to its Target Genes Throughout *Drosophila melanogaster* Development
Nevil, Markus, Eliana R. Bondra, Katharine N. Schulz, Tommy Kaplan, and Melissa M. Harrison

621–632 Multiple Transcriptional and Post-transcriptional Pathways Collaborate to Control Sense and Antisense RNAs of *Tf2* Retroelements in Fission Yeast
Mallet, Pierre-Luc, Marc Larochelle, and François Bachand

633–655 General Amino Acid Control and 14-3-3 Proteins Bmh1/2 Are Required for Nitrogen Catabolite Repression-Sensitive Regulation of *Gln3* and * Gat1* Localization
Tate, Jennifer J., David Buford, Rajendra Rai, and Terrance G. Cooper

CELLULAR GENETICS

657–671 Meiotic Centromere Coupling and Pairing Function by Two Separate Mechanisms in *Saccharomyces cerevisiae*
Kurdzo, Emily L., David Obeso, Hoa Chuong, and Dean S. Dawson

673–690 Traffic Through the Trans-Golgi Network and the Endosomal System Requires Collaboration Between Exomer and Clathrin Adaptors in Fission Yeast
Hoya, Marta, Francisco Yanguas, Sandra Moro, Cristina Prescianotto-Baschong, Cristina Doncel, Nagore de León, M.-Ángeles Curto, Anne Spang, and M.-Henar Valdivieso

691–705 Evidence for Amino Acid Snorkeling from a High-Resolution, *In Vivo* Analysis of Fis1 Tail-Anchor Insertion at the Mitochondrial Outer Membrane
Keskin, Abdurrahman, Emel Akdoğan, and Cory D. Dunn

HIGHLIGHTED ARTICLE OPEN ACCESS

DEVELOPMENTAL AND BEHAVIORAL GENETICS

707–723 Human SOD1 ALS Mutations in a *Drosophila* Knock-In Model Cause Severe Phenotypes and Reveal Dosage-Sensitive Gain- and Loss-of-Function Components
Şahin, Aslı, Aaron Held, Kirsten Bredvik, Paxton Major, Toni-Marie Achilli, Abigail G. Kerson, Kristi Wharton, Geoff Stilwell, and Robert Reenan

725–735 A Zebrafish Model for a Human Myopathy Associated with Mutation of the Unconventional Myosin MYO18B
Gurung, Ritika, Yosuke Ono, Sarah Baxendale, Samantha Lin Chiou Lee, Steven Moore, Meredith Calvert, and Philip W. Ingham
737–748 The *Caenorhabditis elegans* NF2/Merlin Molecule NFM-1 Nonautonomously Regulates Neuroblast Migration and Interacts Genetically with the Guidance Cue SLT-1/Slit
Josephson, Matthew P., Rana Aliani, Megan L. Norris, Matthew E. Ochs, Mahkta Gujar, and Erik A. Lundquist

749–759 H$_2$O$_2$-Sensitive Isoforms of *Drosophila melanogaster* TRPA1 Act in Bitter-Sensing Gustatory Neurons to Promote Avoidance of UV During Egg-Laying
Guntur, Ananya R., Bin Gou, Pengyu Gu, Ruo He, Ulrich Stern, Yang Xiang, and Chung-Hui Yang

761–773 Feeding-Related Traits Are Affected by Dosage of the *foraging* Gene in *Drosophila melanogaster*
Allen, Aaron M., Ina Anreiter, Megan C. Neville, and Marla B. Sokolowski

775–785 Starvation-Induced Stress Response Is Critically Impacted by Ceramide Levels in *Caenorhabditis elegans*
Cui, Mingxue, Yi Wang, Jonathon Cavaleri, Taylor Kelson, Yudong Teng, and Min Han

787–801 The Effect of an Extreme and Prolonged Population Bottleneck on Patterns of Deleterious Variation: Insights from the Greenlandic Inuit
Pedersen, Casper-Emil T., Kirk E. Lohmueller, Niels Grarup, Peter Bjerregaard, Torben Hansen, Hans R. Siegismund, Ida Moltke, and Anders Albrechtsen

803–825 Selection Limits to Adaptive Walks on Correlated Landscapes
Heredia, Jorge Pérez, Barbora Trubenová, Dirk Sudholt, and Tiago Paixão

827–841 Evolution of Resistance Against CRISPR/Cas9 Gene Drive
Unckless, Robert L., Andrew G. Clark, and Philipp W. Messer

843–856 Statistical Methods for Identifying Sequence Motifs Affecting Point Mutations
Zhu, Yicheng, Teresa Neeman, Von Bing Yap, and Gavin A. Huttley

857–870 Inferring Ancestral Recombination Graphs from Bacterial Genomic Data
Vaughan, Timothy G., David Welch, Alexei J. Drummond, Patrick J. Biggs, Tessy George, and Nigel P. French

871–890 Genomic Trajectories to Desiccation Resistance: Convergence and Divergence Among Replicate Selected *Drosophila* Lines
Griffin, Philippa C., Sandra B. Hangartner, Alexandre Fournier-Level, and Ary A. Hoffmann

891–917 Correlated Mutations and Homologous Recombination Within Bacterial Populations
Lin, Mingzhi and Edo Kussell
GENETICS OF COMPLEX TRAITS

919–924 Recombinant Haplotypes Narrow the ARMS2/HTRA1 Association Signal for Age-Related Macular Degeneration
OPEN ACCESS

925–937 The Genomic Architecture of Interactions Between Natural Genetic Polymorphisms and Environments in Yeast Growth
Wei, Xinzhu and Jianzhi Zhang

939–953 Evaluating Sequence-Based Genomic Prediction with an Efficient New Simulator
Pérez-Enciso, Miguel, Natalia Forneris, Gustavo de los Campos, and Andrés Legarra

955–965 Dwarfism and Altered Craniofacial Development in Rabbits Is Caused by a 12.1 kb Deletion at the HMGA2 Locus
Carneiro, Miguel, Dou Hu, John Archer, Chungen Feng, Sandra Afonso, Congying Chen, José A. Blanco-Aguilar, Hervé Garreau, Samuel Boucher, Paula G. Ferreira, Nuno Ferrand, Carl-Johan Rubin, and Leif Andersson

967–978 Human Facial Shape and Size Heritability and Genetic Correlations

979–992 Genetic Mechanisms Leading to Sex Differences Across Common Diseases and Anthropometric Traits
Traglia, Michela, Dina Bseiso, Alexander Gusev, Brigid Adviento, Daniel S. Park, Joel A. Mefford, Noah Zaitlen, and Lauren A. Weiss
HIGHLIGHTED ARTICLE

993–1002 Emergence of a Novel Chimeric Gene Underlying Grain Number in Rice
Chen, Hao, Yanyan Tang, Jianfeng Liu, Lubin Tan, Jiahuan Jiang, Mumu Wang, Zuofeng Zhu, Xianyou Sun, and Chuanqing Sun