

Bassler, B.L., Lichten, M., Schüpbach, G. (ed): **Annual Review of Genetics. Vol. 45.** - Annual Reviews, Palo Alto, 2011. 469 pp. ISBN 978-0-8243-1245-9

Annual Reviews is a nonprofit organization whose mission is to provide periodic examinations of advances in a various areas of research, one of them being the genetics. The first volume in this series was published in 1967 and the current volume No. 45 offers a selection of twenty highly interesting reviews written by respected authors and covering hot areas of genetic research. Plant scientists will find interesting a review on Genetics and Control of Tomato Fruit Ripening and Quality Attributes by Harry J. Klee and James J. Giovannoni and a review on The Rules of Engagement in the Legume-Rhizobial Symbiosis by Giles E.D. Oldroyd, Jeremy D. Murray, Philip S. Poole, and J. Allan Downie. Although not primarily focusing on plants, a review on The Genetics of Hybrid Incompatibilities by Shamoni Maheshwari and Daniel A. Barbash is certainly worth reading. There are two chapters with a general significance and of interest to plant geneticists. The first of them, Double-Strand Break End Resection and Repair Pathway Choice was written by Lorraine S. Symington and Jean Gautier, while the second review was prepared by Celina Juliano, Jianquan Wang, and Haifan Lin and is on Uniting Germline and Stem Cells: The Function of Piwi Proteins and the piRNA Pathway in Diverse Organisms. The progress in genetics reveals tissue heterogeneity and differences between individual cells and thus the analysis at single cell level receives a growing attention. It is thus fortunate

that the current volume contains a review on Genomic Analysis at the Single-Cell Level by Tomer Kalisky, Paul Blainey, and Stephen R. Quake. The remaining reviews are equally interesting for geneticists and include accounts on Comparative Genetics and Genomics of Nematodes: Genome Structure, Development, and Lifestyle, Uncovering the Mystery of Gliding Motility in the Myxobacteria, Toxin-Antitoxin Systems in Bacteria and Archaea, Genetic and Epigenetic Networks in Intellectual Disabilities, Axis Formation in Hydra, A Genetic Approach to the Transcriptional Regulation of Hox Gene Clusters, V(D)J Recombination: Mechanisms of Initiation, Human Copy Number Variation and Complex Genetic Disease, DNA Elimination in Ciliates: Transposon Domestication and Genome Surveillance, CRISPR-Cas Systems in Bacteria and Archaea: Versatile Small RNAs for Adaptive Defense and Regulation, Human Mitochondrial tRNAs: Biogenesis, Function, Structural Aspects, and Diseases, Maternal and Zygotic Control of Zebrafish Dorsoventral Axial Patterning, Genomic Imprinting: A Mammalian Epigenetic Discovery Model, Sex in Fungi, Uniting Germline and Stem Cells: The Function of Piwi Proteins and the piRNA Pathway in Diverse Organisms. The Annual Reviews can be congratulated on another excellent treatise on genetics. They can be accessed online at <http://www.annualreviews.org>

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