

Molecular Architecture and Assembly of the Eukaryotic Proteasome (Robert J. TOMKO JR., Mark HOCHSTRASSER); Design of Protein Catalysts (Donald HILVERT); Hydrogen Tunneling Links Protein Dynamics to Enzyme Catalysis (Judith P. KLINMAN, Amnon KOHEN); Methylethylthritol Phosphate Pathway of Isoprenoid Biosynthesis (Lishan ZHAO, Wei-chen CHANG, Youli XIAO, Hung-wen LIU, Pinghua LIU); Posttranslational Biosynthesis of the Protein-Derived Cofactor Tryptophan Tryptophylquinone (Victor L. DAVIDSON, Carrie M. WILMOT); Mitochondrial Complex I (Judy HIRST); Photosystem II: The Reaction Center of Oxygenic Photosynthesis (David J. VINYARD, Gennady M. ANANYEV, G. Charles DISMUKES); The Voltage-Gated Calcium Channel Functions as the Molecular Switch of Synaptic Transmission (Daphne ATLAS); Sphingosine-1-Phosphate and Its Receptors: Structure, Signaling, and Influence (Hugh ROSEN, Raymond C. STEVENS, Michael HANSON, Edward ROBERTS, Michael B.A. OLDSTONE); Membrane Fission Reactions of the Mammalian ESCRT Pathway (John McCULLOUGH, Leremy A. COLF, Wesley I. SUNDQUIST); Signal Recognition Particle: An Essential Protein-Targeting Machine (David AKOPIAN, Kuang SHEN, Xin ZHANG, Shu-ou SHAN); Peroxisome Formation and Maintenance Are Dependent on the Endoplasmic Reticulum (Henk F. TABAK, Ineke BRAAKMAN, Adabella VAN DER ZAND); Systemic Amyloidoses (Luis M. BLANCAS-MEJIA, Marina RAMIREZ-ALVARADO); Nanobodies: Natural Single-Domain Antibodies (Serge MUYLDERMANS).

Ein Autorenindex für die Bände 78 bis 82 ergänzt den vorliegenden Band. Außerdem ist ein kumulierender Index der Titel, geordnet nach Themengebieten für die Bände 78 bis 82 angefügt. Auch Band 82 ist online unter <http://biochem.annualreviews.org> verfügbar.

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Band 46 des Annual Review of Genetics beginnt mit einem Artikel von Gioacchino NATOLI und Jean-Cristophe ANDRAU mit dem Titel: Noncoding Transcription at Enhancers: General Principles and Functional Models.

*Folgende Übersichtsartikel aus dem Gesamtgebiet der Genetik schließen sich an:*

Transposable Elements: An Abundant and Natural Source of Regulatory Sequences for Host Genes (Rita REBOLLO, Mark T. ROMANISH, Dixie L. MAGER); Disentangling the Many Layers of Eukaryotic Transcriptional Regulation (Katherine M. LELLI, Matthew SLATTERY, Richard S. MANN); Biosynthesis and Function of Posttranscriptional Modifications of Transfer RNAs (Basma EL YACOUBI, Mare BAILLY, Valérie de CRÉCY-LAGARD); Generics of Reproduction and Regulation of Honeybee (*Apis mellifera* L.) Social Behavior (Robert E. PAGE JR, Olav RUEPEL, Gro V.

AMDAM); Chromosome Replication and Segregation in Bacteria (Rodrigo REYES-LAMOTHE, Emilien NICOLAS, David J. SHERRATT); Genetics of Aggression (Robert R.H. ANHOLT, Trudy F.C. MACKAY); The Unfolded Protein Response in Secretory Cell Function (Kristin A. MOORE, Julie HOLLIER); Generics of Climate Change Adaptation (Steven J. FRANKS, Ary A. HOFFMANN); Border Crossings: Colicins and Transporters (Karen S. JAKES, William A. CRAMER); The Biosynthetic Capacities of the Plastids and Integration Between Cytoplasmic and Chloroplast Processes (Norbert ROLLAND, Gilles CURIEN, Giovanni FINAZZI, Marcel KUNTZ, Eric MARÉCHAL, Michel MATRINGE, Stéphane RAVANEL, Daphné SEIGNEURIN-BERNY); Fusion and Fission: Interlinked Processes Critical for Mitochondrial Health (David C. CHAN); Regeneration and Transdetermination in *Drosophila* Imaginal Discs (Melanie I. WORLEY, Linda SETIAWAN, Iswar K. HARIHARAN); The CRISPRs, They Are A-Changin': How Prokaryotes Generate Adaptive Immunity (Edze R. WESTRA, Daan C. SWARTS, Raymond H.J. STAALS, Matthijs M. JORE, Stan J.J. BROUNS, John VAN DER OOST); Evolutionary Implications of Horizontal Gene Transfer (Michael SYVANEN); Plant Virus Metagenomics: Biodiversity and Ecology (Marilyn J. ROOSSINCK); Probing Mechanisms That Underlie Human Neurodegenerative Disease in *Drosophila* (M. JAISWAL, H. SANDOVAL, K. ZHANG, V. BAYAT, H.J. BELLEN); Uncovering the Molecular and Cellular Mechanisms of Heart Development Using the Zebrafish (David STAUDT, Didier STAINIER); 5-Methylcytosine DNA Demethylation: More Than Losing a Methyl Group (Don-Marc FRANCHINI, Kerstin-Maike SCHMITZ, Svend K. PETERSEN-MAHRT); RNA as a Structural and Regulatory Component of the Centromere (Jonathan I. GENT, R. Kelly DAWE); Mutations Arising During Repair of Chromosome Breaks (Anna MALKOVA, James E. HABER); Recessively Inherited Forms of Osteogenesis Imperfecta (Peter H. BYERS, Shawna M. PYOTT); Neural Regeneration in *Caenorhabditis elegans* (Rachid EL BEJANI, Marc HAMMARLUND); Genetics of *Borrelia burgdorferi* (Dustin BRISSON, Dan DRECKTRAH, Christian H. EGGERS, D. Scott SAMUELS); Dosage Compensation of the Sex Chromosomes (Christine M. DISTECHE); Memories from the Polycomb Group Proteins (Chiara LANZUOLO, Valerio ORLANDO); Understanding the Relationship Between Brain Gene Expression and Social Behavior: Lessons from the Honey Bee (Amro ZAYED, Gene E. ROBINSON); Identity by Descent Between Distant Relatives: Detection and Applications (Sharon R. BROWNING, Brian L. BROWNING); Paleopopulation Genetics (Jeffrey D. WALL, Montgomery SLATKIN); Active Transposition in Genomes (Cheng Ran Lisa HUANG, Kathleen H. BURNS, Jef D. BOEKE); Rules of Engagement: Molecular Insights from Host-Virus Arms Races (Matthew D. DAUGHERTY, Harmit S. MALIK); Brassinosteroid Signaling Network and Regulation of Photomorphogenesis (Zhi-Yong WANG, Ming-Yi BAI, Eunkyoo OH, Jia-Ying ZHU).

Der Band ist online unter <http://genet.annualreviews.org> verfügbar.

Ebenso wie vorher erschienene Bände dieser Buchreihe bietet Band 46 des Annual Review of Genetics wertvolle Informationen aus dem gesamten Forschungsgebiet der Genetik.

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