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Ebenso wie vorher erschienene Bände dieser Buchreihe bietet der Band 43 des Annual Review of Genetics wertvolle Informationen aus dem gesamten Forschungsgebiet der Genetik.

Sabine REDLHAMMER (JKI Braunschweig)

Annual Review of Phytopathology, Vol. 48, 2010. Eds.:

Neal K. VAN ALFEN, George BRUENING, Jan E. LEACH. Palo Alto, Calif., USA, Annual Reviews, 479 S., ISBN 978-0-8243-1348-7, ISSN 0066-4286.

Band 48 des „Annual Review of Phytopathology“ beginnt mit einem Übersichtsartikel von Richard S. HUSSEY mit dem Titel: „Go Where the Science Leads You“. In dem Artikel gibt der Autor einen umfassenden Einblick in sein Wissenschaftler-Leben als Nematologe und seine Forschungsvorhaben, in denen er stets versucht, ein Gleichgewicht zwischen Grundlagenforschung und angewandten Fragestellungen herzustellen. Das Basiswissen zur Biologie der Nematoden und neue biotechnologische/gentechnische Verfahren sollen dazu dienen, die Kontrolle dieser ökonomisch bedeutenden Pflanzenschädlinge in den unterschiedlichsten landwirtschaftlichen Kulturarten zu garantieren.

Weitere Übersichtsartikel aus dem Gesamtgebiet der Phytopathologie schließen sich an:

Induced Systemic Resistance and Plant Responses to Fungal Biocontrol Agents (Michal SHORESH, Gary E. HARMAN, Fatemeh MASTOURI); Plant Proteins Involved in *Agrobacterium*-Mediated Genetic Transformation (Stanton B. GELVIN); Cellular Remodeling During Plant Virus Infection (Jean-François LALIBERTÉ, Hélène SANFAÇON); The Strigolactone Story (Xiaonan XIE, Kaori YONEYAMA, Koichi YONEYAMA); Current Epidemiological Understanding of Citrus Huanglongbing (Tim R. GOTTWALD); Pathogen Refuge: A Key to Understanding Biological Control (Kenneth B. JOHNSON); Companion Cropping to Manage Parasitic Plants (John A. PICKETT, Mary L. HAMILTON, Antony M. HOOPER, Zeyaur R. KHAN, Charles A.O. MIDEGA); Principles of Predicting Plant Virus Disease Epidemics (Roger A.C. JONES, Moin U. SALAM, Timothy J. MALING, Arthur J. DIGGLE, Deborah J. THACKRAY); Potyviruses and the Digital Revolution (Adrian GIBBS, Kazusato OHSHIMA); Role of Small RNAs in Host-Microbe Interactions (Surekha KATIYAR-AGARWAL, Hailing JIN); Quantitative Disease Resistance and Quantitative Resistance Loci in Breeding (Dina A. ST. CLAIR); Engineering Pathogen Resistance in Crop Plants: Current Trends and Future Prospects (David B. COLLINGE, Hans J.L. JØRGENSEN, Ole S. LUND, Michael F. LYNKJÆR); Plant Pathology: A Story About Biology (Thomas R. GORDON, Johan H.J. LEVEAU); Managing Nematodes Without Methyl Bromide (Inga A. ZASADA, John M. HALBRENDT, Nancy KOKALIS-BURELLE, James LAMONDIA, Michael V. MCKENRY, Joe W. NOLING); *Hyaloperonospora arabidopsidis* as a Pathogen Model (Mary E. COATES, Jim L. BEYNON); Playing the “Harp”: Evolution of Our Understanding of *hrp/hrc* Genes (Anastasia P. TAMPAKAKI, Nicholas SKANDALIS, Anastasia D. GAZI, Marina N. BASTAKI, Panagiotis F. SARRIS, Spyridoula N. CHAROVA, Michael KOKKINIDIS, Nickolas J. PANOPOULOS); Ecology of Plant and Free-Living Nematodes in Natural and Agricultural Soil (Deborah A. NEHER); Translational Research on *Trichoderma*: From 'Omics to the Field (Matteo LORITO, Sheridan L. WOO, Gary E. HARMAN, Enrique MONTE); *Xanthomonas* AvrBs3 Family-Type III Effectors: Discovery and Function (Jens BOCH, Ulla BONAS); *Cowpea mosaic* Virus: The Plant Virus-Based Biotechnology Workhorse (Frank SAINSBURY,

M. Carmen CAÑIZARES, George P. LOMONOSOFF); Studying Plant-Pathogen Interactions in the Genomics Era: Beyond Molecular Koch's Postulates to Systems Biology (David J. SCHNEIDER, Alan COLLMER).

Der Band ist unter <http://www.annualreviews.org> auch online verfügbar. Ebenso wie vorher erschienene Bände ist auch der Band 48 der Reihe „Annual Review of Phytopathology“ eine äußerst wertvolle Informationsquelle phytopathologischer Forschungsergebnisse bzw. Literatur.

Sabine REDLHAMMER (JKI Braunschweig)

Annual Review of Plant Biology, Vol. 61, 2010. Eds.:

Sabeeha MERCHANT, Winslow R. BRIGGS, Donald ORT. Palo Alto, Calif., USA, Annual Reviews, 740 S., ISBN 978-0-8243-0661-8, ISSN 1543-5008.

Der vorliegende Band 61 beginnt mit einem Artikel von Winslow R. BRIGGS mit dem Titel „A Wandering Pathway in Plant Biology: From Wildflowers to Phototropins to Bacterial Virulence“. Der Autor schildert darin seinen beruflichen Werdegang von der Pflanzentaxonomie bis hin zur Pflanzenphotobiologie.

Weitere Übersichtsartikel aus dem gesamten Fachgebiet der Pflanzenbiologie schließen sich an:

Structure and Function of Plant Photoreceptors (Andreas MÖGLICH, Xiaojing YANG, Rebecca A. AYERS, Keith MOFFAT); Auxin Biosynthesis and Its Role in Plant Development (Yunde ZHAO); Computational Morphodynamics: A Modeling Framework to Understand Plant Growth (Vijay CHICKARMANE, Adrienne H.K. ROEDER, Paul T. TARR, Alexandre CUNHA, Cory TOBIN, Elliot M. MEYEROWITZ); Female Gametophyte Development in Flowering Plants (Wei-Cai YANG, Dong-Qiao SHI, Yan-Hong CHEN); Doomed Lovers: Mechanisms of Isolation and Incompatibility in Plants (Kirsten BOMBLIES); Chloroplast RNA Metabolism (David B. STERN, Michel GOLDSCHMIDT-CLERMONT, Maureen R. HANSON); Protein Transport into Chloroplasts (Hsou-min LI, Chi-Chou CHIU); The Regulation of Gene Expression Required for C₄ Photosynthesis (Julian M. HIBBERD, Sarah COVSHOFF); Starch: Its Metabolism, Evolution, and Biotechnological Modification in Plants (Samuel C. ZEEMAN, Jens KOSSMANN, Alison M. SMITH); Improving Photosynthetic Efficiency for Greater Yield (Xin-Guang ZHU, Stephen P. LONG, Donald R. ORT); Hemicelluloses (Henrik Vibe SCHELLER, Peter ULVSKOV); Diversification of P450 Genes During Land Plant Evolution (Masaharu MIZUTANI, Daisaku OHTA); Evolution in Action: Plants Resistant to Herbicides (Stephen B. POWLES, Qin YU); Insights from the Comparison of Plant Genome Sequences (Andrew H. PATERSON, Michael FREELING, Haibao TANG, Xiyin WANG); High-Throughput Characterization of Plant Gene Functions by Using Gain-of-Function Technology (Youichi KONDOU, Mieka HIGUCHI, Minami MATSUI); Histone Methylation in Higher Plants (Chunyan LIU, Falong LU, Xia CUI, Xiaofeng CAO); Genetic and Molecular Basis of Rice Yield (Yongzhong XING, Qifa ZHANG); Genetic Engineering for Modern Agriculture: Challenges and Perspectives (Ron MITTLER, Eduardo BLUMWALD); Metabolomics for Functional Genomics, Systems Biology, and Biotechnology (Kazuki SAITO, Fumio MATSUDA); Quantitation in Mass-Spectrometry-Based Proteomics (Waltraud X. SCHULZE, Björn USADEL); Metal Hyperaccumulation in Plants (Ute KRÄMER); Arsenic as a Food Chain Contaminant: Mechanisms of Plant Uptake and Metabolism and Mitigation Strategies (Fang-Jie ZHAO, Steve P. McGRATH, Andrew A. MEHARG); Guard Cell Signal Transduction Network: Advances in Understanding Abscisic Acid, CO₂, and Ca²⁺ Signaling (Tae-Houn KIM, Maik BÖHMER, Honghong HU, Noriyuki