

TABLE OF CONTENTS

Preface.....	IX
Chapter 1 Meta-Analysis of Gene Expression Signatures Reveals Hidden Links among Diverse Biological Processes in Arabidopsis.....	1
Liming Lai, Steven X. Ge	
Chapter 2 A Colloidal Singularity Reveals the Crucial Role of Colloidal Stability for Nanomaterials <i>In-Vitro</i> Toxicity Testing: nZVI-Microalgae Colloidal System as a Case Study.....	9
Soledad Gonzalo, Veronica Llana, Gerardo Pulido-Reyes, Francisca Fernández-Piñas, Jean Claude Bonzongo, Francisco Leganes, Roberto Rosal, Eloy García-Calvo, Ismael Rodea-Palomares	
Chapter 3 Interacting Microbe and Litter Quality Controls on Litter Decomposition: A Modeling Analysis.....	21
Daryl Moorhead, Gwenaëlle Lashermes, Sylvie Recous, Isabelle Bertrand	
Chapter 4 Multiple Complexes of Nitrogen Assimilatory Enzymes in Spinach Chloroplasts: Possible Mechanisms for the Regulation of Enzyme Function.....	33
Yoko Kimata-Arigo, Toshiharu Hase	
Chapter 5 The Shade Avoidance Syndrome in Arabidopsis: The Antagonistic Role of Phytochrome A and B Differentiates Vegetation Proximity and Canopy Shade.....	42
Jaime F. Martínez-García, Marçal Gallemí, María José Molina-Contreras, Briardo Llorente, Maycon R. R. Bevilacqua, Peter H. Quail	
Chapter 6 Whole Plastome Sequences from Five Ginger Species Facilitate Marker Development and Define Limits to Barcode Methodology.....	53
Justin N. Vaughn, Srinivasa R. Chaluvadi, Tushar, Latha Rangan, Jeffrey L. Bennetzen	
Chapter 7 A Model for Cell Wall Dissolution in Mating Yeast Cells: Polarized Secretion and Restricted Diffusion of Cell Wall Remodeling Enzymes Induces Local Dissolution.....	61
Lori B. Huberman, Andrew W. Murray	
Chapter 8 Photosynthetic Diffusional Constraints Affect Yield in Drought Stressed Rice Cultivars during Flowering.....	73
Marco Lauteri, Matthew Haworth, Rachid Serraj, Maria Cristina Monteverdi, Mauro Centritto	
Chapter 9 Intraspecific Trait Variation Driven by Plasticity and Ontogeny in <i>Hypochaeris radicata</i>.....	85
Rachel M. Mitchell, Jonathan D. Bakker	

Chapter 10	Proteomic Analysis of MG132-Treated Germinating Pollen Reveals Expression Signatures Associated with Proteasome Inhibition.....	93
	Candida Vannini, Marcella Bracale, Rita Crinelli, Valerio Marconi, Paola Campomenosi, Milena Marsoni, Valeria Scoccianti	
Chapter 11	Evaluation of the Agronomic Performance of Atrazine-Tolerant Transgenic japonica Rice Parental Lines for Utilization in Hybrid Seed Production.....	103
	Luhua Zhang, Haiwei Chen, Yanlan Li, Yanan Li, Shengjun Wang, Jinping Su, Xuejun Liu, Defu Chen, Xiwen Chen	
Chapter 12	Computational Prediction of Candidate Proteins for S-Nitrosylation in <i>Arabidopsis thaliana</i>.....	111
	Mounira Chaki, Izabella Kovacs, Manuel Spannagl, Christian Lindermayr	
Chapter 13	Molecular Characterization of Three PRORP Proteins in the Moss <i>Physcomitrella patens</i>: Nuclear PRORP Protein is not Essential for Moss Viability.....	123
	Chieko Sugita, Yoshihiro Komura, Korechika Tanaka, Kazuki Kometani, Hiroyuki Satoh, Mamoru Sugita	
Chapter 14	Perspectives on Screening Winter-Flood-Tolerant Woody Species in the Riparian Protection Forests of the Three Gorges Reservoir.....	132
	Fan Yang, Yong Wang, Zhulong Chan	
Chapter 15	Salicylic Acid Alleviates the Adverse Effects of Salt Stress in <i>Torreya grandis</i> cv. <i>Merrillii</i> Seedlings by Activating Photosynthesis and Enhancing Antioxidant Systems.....	143
	Tingting Li, Yuanyuan Hu, Xuhua Du, Hui Tang, Chaohua Shen, Jiasheng Wu	
Chapter 16	The Diurnal Logic of the Expression of the Chloroplast Genome in <i>Chlamydomonas reinhardtii</i>.....	152
	Adam D. Idoine, Alix Boulouis, Jens Rupprecht, Ralph Bock	
Chapter 17	Evolutionary Diversification of New Caledonian <i>Araucaria</i>.....	161
	Mai Lan Kranitz, Edward Biffin, Alexandra Clark, Michelle L. Hollingsworth, Markus Ruhsam, Martin F. Gardner, Philip Thomas, Robert R. Mill, Richard A. Ennos, Myriam Gaudeul, Andrew J. Lowe, Peter M. Hollingsworth	
Chapter 18	The Dinoflagellate <i>Lingulodinium polyedrum</i> Responds to N Depletion by a Polarized Deposition of Starch and Lipid Bodies.....	172
	Steve Dagenais Bellefeuille, Sonia Dorion, Jean Rivoal, David Morse	
Chapter 19	Vacuolar-Iron-Transporter1-Like Proteins Mediate Iron Homeostasis in <i>Arabidopsis</i>.....	182
	Julia Gollhofer, Roman Timofeev, Ping Lan, Wolfgang Schmidt, Thomas J. Buckhout	
Chapter 20	Saharan Dust Deposition may Affect Phytoplankton Growth in the Mediterranean Sea at Ecological Time Scales.....	190
	Rachele Gallisai, Francesc Peters, Gianluca Volpe, Sara Basart, José Maria Baldasano	

Chapter 21	The Photoprotective Role of Spermidine in Tomato Seedlings under Salinity-Alkalinity Stress.....	200
	Lipan Hu, Lixia Xiang, Li Zhang, Xiaoting Zhou, Zhirong Zou, Xiaohui Hu	
Chapter 22	Direct Chloroplast Sequencing: Comparison of Sequencing Platforms and Analysis Tools for Whole Chloroplast Barcoding.....	209
	Marta Brozynska, Agnelo Furtado, Robert James Henry	
Chapter 23	Light Affects the Chloroplast Ultrastructure and Post-Storage Photosynthetic Performance of Watermelon (<i>Citrullus lanatus</i>) Plug Seedlings.....	219
	Qingqing Duan, Wu Jiang, Ming Ding, Ye Lin, Danfeng Huang	

Permissions

List of Contributors

Index