

Contents

1	Physiological, Metabolic, and Molecular Responses of Plants to Abiotic Stress	1
	Vicent Arbona, Matías Manzi, Sara I. Zandalinas, Vicente Vives-Peris, Rosa M. Pérez-Clemente, and Aurelio Gómez-Cadenas	
2	Molecular Network of Monoterpene Indole Alkaloids (MIAs) Signaling in Plants with Reference to <i>Catharanthus roseus</i> (L.) G. Don	37
	Shabnam Akhtar, Javed Ahmad, and Altaf Ahmad	
3	Glutamate Receptor-Like Ion Channels in <i>Arabidopsis thaliana</i>	69
	Hemant, Mohamed M. Ibrahim, Maryam Sarwat, and Altaf Ahmad	
4	Phosphate Signaling in Plants: Biochemical and Molecular Approach	83
	Gurjeet Kaur, V. Prabhavathi, Kiran Bamel, and Maryam Sarwat	
5	Glycinebetaine-Mediated Abiotic Oxidative-Stress Tolerance in Plants: Physiological and Biochemical Mechanisms	111
	Vinay Kumar, Varsha Shriram, Tahsina Sharmin Hoque, Md. Mehedi Hasan, David J. Burritt, and Mohammad Anwar Hossain	
6	Role of Plant Calreticulins in Calcium Signaling	135
	Maryam Sarwat and Narendra Tuteja	
7	DNA Damage, Response, and Repair in Plants Under Genotoxic Stress	151
	Uzma Fatima, Mohd Farhan Khan, Jamal e Fatima, Uzma Shahab, Saheem Ahmad, and Mohd. Aslam Yusuf	
8	Plant Responses to Salinity Through an Antioxidative Metabolism and Proteomic Point of View	173
	J.A. Hernández, G. Barba-Espín, M.J. Clemente-Moreno, and P. Díaz-Vivancos	

9	Tolerance Response Mechanisms to Iron Deficiency Stress in Citrus Plants	201
	Mary-Rus Martínez-Cuenca, Amparo Primo-Capella, and M. Angeles Forner-Giner	
10	Brassinosteroids: Physiological Roles and its Signalling in Plants. . . .	241
	Mohammad Yusuf, Tanveer Alam Khan, and Qazi Fariduddin	
11	Trehalose: Metabolism and Role in Stress Signaling in Plants.	261
	Riffat John, Vaseem Raja, Mubashir Ahmad, Nelofer Jan, Umer Majeed, Sujat Ahmad, Umer Yaqoob, and Tanushri Kaul	
12	The Role of Ethylene and Other Signals in the Regulation of Fe Deficiency Responses by Dicot Plants	277
	Francisco Javier Romera, Carlos Lucena, María José García, Esteban Alcántara, and Rafael Pérez-Vicente	
13	Leaf Senescence in Plants: Nutrient Remobilization and Gene Regulation.	301
	Maryam Sarwat	
14	Role of Phytohormones and miRNAs in Nitrogen and Sulphur Deficiency Stress Signaling in Plants	317
	Sadia Iqrar and M.Z. Abdin	
	Index.	341