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Nota di bibliografia	Includes bibliographical references at the end of each chapters and index.
Nota di contenuto	Role of Plant Mediator Complex in Stress Response -- Towards understanding the transcriptional control of abiotic stress tolerance mechanisms in food legumes -- Insights into the small RNA mediated networks in response to abiotic stress in plants -- The Role of Long Non-coding RNAs in abiotic stress tolerance in plants -- Molecular physiology of heat Stress Responses in Plants -- The Omics of cold stress responses in plants -- Drought stress responses and signal

transduction in plants -- Physiological and molecular mechanisms of flooding tolerance in plants -- Salt Adaptation Mechanisms of Halophytes: Improvement of Salt Tolerance in Crop Plants -- UV-B Photoreceptors, their role in photosignaling, physiological responses and abiotic stress in plants -- Analysis of signaling pathways during heavy metal toxicity: A functional genomic perspective -- Nitrogen and Stress -- Signaling pathways in eukaryotic stress, aging and senescence: Common and distinct pathways -- Designing climate smart future crops employing signal transduction components -- Abiotic Stress in Crops: Candidate Genes, Osmolytes, Polyamines and Biotechnological Intervention -- Abiotic stress tolerance and sustainable agriculture: A functional genomic perspective.

Sommario/riassunto

In this volume, several world leaders in plant biology provide insight into stress signaling in plants with a special emphasis on functional genomics aspect. This book utilizes state-of-the-art research in the field of stress mediated signaling to develop a better and holistic understanding of stress perception, its transduction followed by the generation of response. In spite of the advent of different approaches to devise strategies for developing stress tolerant crops towards multiple stress conditions in the field, the success in achieving this goal is still unsatisfactory. Stress tolerance is a very complex process involving a plethora of components starting from stress sensing to generation of final adaptive response. There are several factors, which act as nodes and hubs in the signaling pathways, also serving as master-control switches in regulating myriad stress signaling pathways by affecting diverse target genes or gene products to finally bring-about a stress tolerance response. Therefore, in-depth understanding of these master-control switches and key-components in signal transduction pathway will be highly beneficial for designing crop plants tolerant to multiple stresses in the field.