1. Record Nr. UNINA9910298301403321

Titolo	Plant signaling : understanding the molecular crosstalk / / Khalid Rehman Hakeem, Reiaz Ul Rehman, Inayatullah Tahir, editors
Pubbl/distr/stampa	New Delhi : , : Springer, , 2014
ISBN	81-322-1542-7
Edizione	[1st ed. 2014.]
Descrizione fisica	1 online resource (x, 355 pages) : illustrations (some color)
Collana	Gale eBooks
Disciplina	571.6 572
Soggetti	Plant cellular signal transduction
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	1. Plant signaling: response to reactive oxygen species -- 2. SNARE proteins as signalling elements -- 3. Plant Rab GTPases in membrane trafficking and signaling -- 4."PtdIns4P and PtdIns(4,5)P2 as signalling phosphoinositides involved in tip growth " -- 5. Sugar signaling in plant growth and development -- 6. Nitrogen regulation and signalling in plants -- 7. "Phosphorus deficiency in plants: responses, adaptive mechanisms and signaling" -- 8. Reactive oxygen species-associated mechanism of acclamatory stress tolerance, signaling and redox-regulated gene expression in plants -- 9. Cyclic nucleotide gated channels-Essential signalling components in plants for fertilization and immunity responses -- 10. Signaling in response to cold stress -- 11. Cell Signaling during Drought and Salt Stress -- 12. Heat signaling and stress responses in photosynthesis -- 13. Senescence: Regulation and Signaling -- 14. Molecular builders of cell walls of Lignocellulosic feedstock: a source for biofuels -- 15. Recent Trends in Jasmonate Signaling Pathway -- 16. Salicylic acid signaling -- 17. Ethylene signaling in plants- introspection -- 18. Plant, Mycorrhizal fungi and bacterial network -- 19. Self-Incompatibility patterns and signal transduction -- 20. Plant Disease Resistance genes: From perception to signal transduction. .
Sommario/riassunto	Plant signalling has emerged as an integrated field which has become indispensable in recent times to study any biological process. Over the last decade, an enormous amount of information has been generated in

this field and the advances in information technology gave birth to bioinformatics which has helped greatly in managing the galaxy of information. It is now possible to view the different information's in a systems biology approach which has unravelled the association/ new processes and thus helped us enormously in understanding of the biological processes. The present book is an attempt at understanding the plant signalling processes with different perspectives. Even though the plants are sessile but there exists a tremendous interconnected network of perception at morphological, physiological and molecular levels. The impact of the surrounding environment in terms of abiotic and biotic stresses is significant in terms of its survival, adaptation and productivity for the human welfare. The plants possess a wide array of processes at the organ, tissue and cellular levels which are governed by a plethora of molecules. The molecules govern individual processes and these exists a cross talk between them to form a complex network of processes. The book tries to envision how different processes are operating at different points in the life cycle of the plant.