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Altri autori (Persone)	DyakovYu. T (Yuri T.) DzhavakhiyaV. G (Vitaly G.) KorpelaTimo <1945->
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Nota di contenuto	Front cover; Title page; Copyright page; Table of Contents; Preface; Contributors; Part 1: Introduction to molecular phytopathology; Chapter 0: Overview on parasitism; Types of host-parasite relationship; Features of parasites; Selected Literature; Chapter 1: Plant parasite microorganisms; Fungal plant pathogens; Bacterial plant pathogens; Plant viruses and viral plant diseases; Parasitic nematodes as plant pathogens; Selected Literature; Chapter 2: Structural basis of plant-pathogen interactions; Alterations of plant and pathogen structures during infection process Structural features of the plant cell response to infections Biotrophic infections; Necrotrophic infections; Conclusion; Selected Literature; Chapter 3: Advanced methods of plant pathogen diagnostics; Antigen-antibody interaction-based diagnostics; Diagnostics based on nucleic acid analysis; Conclusion; Using plant pathogen metabolites in diagnostics and research of plant-pathogen relationships; Selected Literature; Chapter 4: Phenomenology of plant-parasite relations; Types of resistance; Genetics of resistance; Phenotypic manifestation of resistance; Relations with parasites

Selected Literature Part 2: Biochemistry and molecular biology of plant-parasite relations; Chapter 5: Horizontal pathosystem: parasite attack factors; Biosynthetic processes during fungal differentiation and penetration; Suppression of plant defenses; Changes in metabolism of infected cells and tissues; Transport in the plant; Selected Literature; Chapter 6: Horizontal pathosystem: resistance factors; Anatomical-morphological resistance factors; Regulation of onto genesis and damage reparation; Nutrient value of infected organs and tissues; Biochemical resistance factors; Selected Literature
Chapter 7: Vertical pathosystem: a virulence genes and their products Molecular interpretation of genetic data; Abiogenic elicitors; Nonspecific biogenic elicitors; Endogenous plant or secondary elicitors; Avirulence genes and specific elicitors; Selected Literature; Chapter 8: Vertical pathosystem: resistance genes and their products. Signal transduction; Resistance genes and susceptibility genes; Signal transduction; Conclusion; Selected Literature; Chapter 9: Hypersensitivity; Morphological alterations in cells during apoptosis and necrosis
Genes involved in plant cell death - paranoid mutantsSignalling; Conclusion; Selected Literature; Chapter 10: Immune response; Phytoalexins; PR-proteins; Antiviral proteins; Inhibitor of viral replication; Proteinase inhibitors; Phenylpropanoids and lignin; Oxyproline-rich glycoproteins; Modification of plant gene expression at nematode invasion; Systemic acquired resistance; Selected Literature; Chapter 11: RNA silencing as a general defence mechanism against pathogens; Introduction; Coexistence and discovery of RNA silencing; Key characteristics and triggers of RNA silencing
Why RNA silencing mechanism exists?

Sommario/riassunto

This book offers a collection of information on successive steps of molecular 'dialogue' between plants and pathogens. It additionally presents data that reflects intrinsic logic of plant-parasite interactions. New findings discussed include: host and non-host resistance, specific and nonspecific elicitors, elicitors and suppressors, and plant and animal immunity. This book enables the reader to understand how to promote or prevent disease development, and allows them to systematize their own ideas of plant-pathogen interactions.* Offers a more extensive scope of the problem as compar