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Nota di contenuto	Chapter 1. Plant Metabolomics: Current status and prospects -- Chapter 2. Plant Metabolites: Methods for Isolation, Purification and Characterization -- Chapter 3. Molecular markers and their application in the identification of elite germplasm -- Chapter 4. Cell and protoplast culture for production of plant metabolites -- Chapter 5. Hairy Root Culture: Secondary Metabolite Production in a Biotechnological Perspective -- Chapter 6. Methods for enhanced production of metabolites under in vitro conditions -- Chapter 7. Invasive alien plants: a potential source of unique metabolites -- Chapter 8. Modified Plant Metabolites as Nutraceuticals -- Chapter 9. Ethnomedicine and role of plant metabolites -- Chapter 10. Herbal Cosmeceuticals -- Chapter 11. Plant secondary metabolites as nutraceuticals -- Chapter 12. Bioactive secondary metabolites from lichens -- Chapter 13. Algal Metabolites and Phyco-medicine -- Chapter 14. Bioactive Metabolites in Gymnosperms -- Chapter 15. Flavonoids for Therapeutic Applications -- Chapter 16. Plant-based pigments: novel extraction technologies and applications -- Chapter 17. Plant Lectins: Sugar Binding Properties and Biotechnological Applications -- Chapter 18. Plant metabolites as Immunomodulators -- Chapter 19. Polyphenols: an overview of food sources and associated bioactivities -- Chapter 20. Plant metabolites against enteropathogens

-- Chapter 21. Molecular chaperones and their applications -- Chapter 22. Bioprospecting of ethno-medicinal plants for wound healing.

Sommario/riassunto

Food security and the medicinal needs of billions of people around the world are pressing global issues, and the biodiversity and sustainable utilization of plants is of great significance in this context. Further, ethnobotanical studies are vital in the discovery of new drugs from indigenous medicinal plants, and plants with industrially important metabolites need to be cultivated to meet the growing market demand. In addition, the production of plant metabolites under in vitro conditions also has tremendous possibilities. The totipotency of plant cells plays a valuable role in the sustainable utilization of plant resources through cell, tissue and organ culture. At the same time, production can be enhanced using productive cell lines, treatment with elicitors, changing nutritional parameters and metabolic engineering. This book provides state-of-the-art information on biodiversity, conservation, ethnobotany, various aspects of In vitro secondary metabolite production, bioprospecting from various plant groups and drug discovery. It also discusses methods of extracting and characterizing drug leads from plant sources.
