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Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	Part I: Introduction -- An Update on Human Fungal Diseases: A Holistic Overview -- Part II: Plant Extracts and Essential Oils as antifungals -- Composition of different species of Lamiaceae plant family: A potential bio-source of terpenoids and antifungal agents -- Plant Essential Oils and their Active Ingredients -- Essential Oils and Their Compounds for Applications in Fungal Diseases: Conventional and Non-conventional Approaches -- Antifungal efficacy of plant essential oils against Candida, Aspergillus and Cryptococcus species -- Unveiling the Potential of Essential Oils as Antifungal Agents Against Non-albicans Candida Species: Mechanisms of Action and Therapeutic Implications -- Part III: Plant derived natural compounds as antifungals -- Molecules of natural origin as inhibitors of signal transduction pathway in Candida albicans -- Harnessing the antifungal potential of natural products -- Clinical Significance, Molecular Formation, and Natural Antibiofilm Agents of Candida albicans -- Futuristic Avenues in Candida Treatment: Exploiting Plant Derived agents as potent inhibitors of Candidiasis -- Antifungal efficacy of Terpenes and mechanism of action against human pathogenic fungi -- Part IV: Plant based

nanoparticles as antifungals -- Exploration of new plant-based nanoparticles with potential antifungal activity and their mode of action -- Green-synthesized nanoparticles: Characterization and Antifungal mechanism of action -- Green-synthesized nanoparticles: Antifungal efficacy and other applications -- Metal nanoparticles: management and control of phytopathogenic fungi -- Phytosynthesized Nanoparticles: Antifungal activity and mode of action -- Antifungal Efficacy of Plant-based Nanoparticles as a putative tool for antifungal therapy -- Part V: Plant based chemical derivatives as antifungals -- Antifungal Efficacy of Natural Product-Based Chemical Derivatives -- Therapeutic potential of phytochemicals and their derivatives as antifungal candidates: Recent discovery and development -- Bioactive Heterocyclic Analogs as Antifungal Agents: Recent Advances and Future Aspects -- Part VI: Natural products derived from microbes and other natural sources -- Bioactive potential of Streptomyces spp. against diverse pathogenic fungi -- Antifungal potential of bioactive compounds derived from microbes and other natural sources: Challenges and future scope -- Microbial and plant natural products and their antifungal targets -- Part VII: Toxicology of natural antifungals and other applications -- Toxicology of antifungal and antiviral drugs -- Natural Compounds Toxicity: An Egregiously Overlooked Topic -- Fungal infestation of biodegradable heritage material: application of conservatory treatments and characterization of the article -- Antifungals Discovery and Bioinformatics Tools.

Sommario/riassunto

This book explores the antifungal properties of natural products and reviews their antifungal mechanism. An introductory chapter illustrates the various fungal pathogenic species, common fungal diseases, and general mechanisms of action of various antifungal classes, including natural products. The book comprises seven sections and each section contains chapters on the efficacy and antifungal mode of action of plant extracts, essential oils, natural compounds, their derivatives, and plant-based nanoparticles. A section summarizes the antifungal efficacy of compounds derived from sources other than plants, like microbes. Besides compound toxicity, the book explores the antifungal mode of action and efficacy against the virulence and pathogenicity of fungal pathogens like Candida, Aspergillus, Cryptococcus, Histoplasma, and other pathogenic fungi. Further, the book also describes recent advancements in the discovery of novel drug targets and therapeutic strategies that are non-toxic and more efficacious for combating drug resistance. This book is an invaluable source for researchers working in the field of fungal biochemistry, anti-microbial, and anti-bacterial and undergraduate and postgraduate students of microbiology and pharmacology.