

Preface

Plants are rich sources of beneficial secondary metabolites which are attractive as flavors, fragrances, pesticides, pharmaceuticals, and antimicrobials. The use of plants for combating different fungal pathogens of humans and animals dates back to the beginning of human civilization. Plants and plant-derived products are well known in 'Ayurveda' (ancient science of life) and in other traditional systems as antifungal remedies. They are important sources for a diverse range of antifungal metabolites. The extracts and oils from plants have usually no side effects and as a unique advantage, they are within the reach of the common people all over the world. Aside from a brilliant role to combating fungal diseases of human beings, plant-derived natural products can also be used for the management of phytopathogens of fungal origin. It is a natural way of coping with fungal infections.

Worldwide occurrence of fungal infections, especially from commensal pathogens such as *Candida*, has been dramatically increased in recent years due to a continuous increase in immunosuppressive conditions like AIDS, organ transplantation, cancer, and diabetes mellitus. Increasing trends of health organizations and pharmaceutical industries to use plants as safe and effective alternative sources of synthetic antifungals is due to major problems of slow growing and high costs of synthetic pharmaceuticals, their life-threatening side effects, rapid increasing of new fungal infections, and the dramatic emergence of multidrug resistance fungal pathogens. World trade in medicinal plants is now more than 43 billion dollars and is predicted to reach to 5 trillion dollars in 2050.

The main goal of this book is to provide information to readers regarding use of different medicinal plants and their bioactive metabolites in combating various fungal diseases of humans, animals, and plants.

The book has been divided into four parts: Part I incorporates global distribution of antifungal compounds, Part II deals with antifungal activities of plants and plant-derived natural products, Part III includes plants used in 'Ayurveda' and traditional systems for treatment of fungal diseases, and Part IV discusses the use of plant-derived products to protect fungal diseases of plants/fruits.

The book will be of utmost importance to students, researchers, and teachers of medicine, botany, mycology, microbiology, and pharmacology. The readers should find the book full of information and reader-friendly.

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