Fungi :
Diversity and Biotechnology

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FUNGI : DIVERSITY AND BIOTECHNOLOGY

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FOREWORD

The science of mycology had beginning in the eighteenth century. By now, fungi are the concern of the taxonomists, morphologists, geneticists, ecologists, phytopathologists, physicians, biochemists, molecular biologists, human doctors and commercial microbiologists.

"*Fungi : Diversity and Biotechnology*" provides a broad overview of mycology: it explores the diversity of keratinophilic, marine and those involved in bio-deterioration causing losses in paper industry and role of fungal biotechnology in pulp and paper industry. Considering the sustainability of environment, ectomycorrhiza and arbuscular mycorrhizal (AMF) fungi can be applied as biofertilizers in nurseries and plantations. Moreover, answers for questions of bioremediation with special regards to handling toxic metals in waste-water, recycling of agro-wastes, etc. has been incorporated.

The contributions to industrial applications include different fields of fungal biotechnology, such as, biotransformation, industrial enzymology and vaccination for fungal infections. The reader can gather information about biology of edible mushrooms and *Phansomba*, a folk medicinal mushroom. The increasing importance of biological control against plant pathogens account for reviewing the role of *Trichoderma* species as potential biocontrol agent against soil-borne and other fungus parasites; fungi can be applied as insecticides and for the control of malaria - vector - mosquitoes. The opportunistic mycotic infections caused by species of *Candida, Cryptococcus* and *Aspergillus* species are increasing in human hosts rendered susceptible by some predisposing factors, like AIDS infection. The readers should find aeromycology and prospects of keratinophilic fungi as useful topics.

It is hoped that this book will enrich the background of those who have already basic mycological knowledge and will provide contributions to current trends in mycology.

All the contributors confess :

"*Inter silvas fungorum querere verum!*" (free version of Horatius Epist. 2.2.45)

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