

Sustainable Development and Biodiversity

Volume 15

Series editor

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Dinesh K. Maheshwari
Editor

Endophytes: Biology and Biotechnology

Volume 1

 Springer

Editor

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Preface

A two volume set is presented on endophytes under the series “Sustainable development and biodiversity”. Endophytes are diverse microbial community comprising of archaeal, bacterial including actinobacteria, fungal and protistic taxa inhabiting in all plants and play major roles in plant growth, fitness and diversification, and this diversity is an integral component of ecology. The microbial world in general and endophytes in particular reflect unique genetic and functional (metabolic) diversity. In the recent scenario, significant attention is being paid to endophytes for metabolites of biotechnological applications for sustainable development. Their diversity varies from genotype to genotype, environment to environment and species to species.

The Volume I “Endophytes: Biology and Diversity” focuses on our current understanding of microbial endophytes such as bacterial endophytes in host colonization, quorum quenching enzymes from endophytes, fungal endophytes for plant and human health, endophytes for agroforestry and biopharmacy, endophytic bacteria and actinobacteria as beneficial partners for intensification of agriculture, genomic features and ecology, diversity and their potential biotechnological applications, promising role of fungal and mycorrhizal endophytes towards eco-friendly green technology and future research. These chapters present a detailed account on the basis for their classification, identification and production of useful metabolites.

This book will be useful to botanists, microbiologists, ecologists, plant pathologists, physiologists, agronomists, molecular biologists, environmentalists, conservationists and NGOs working for the protection of species, loss of genetic material and exploitation of useful endophytes. I am thankful to the contributors of these books for their cooperation and patience in the compilation of this task. I am also thankful for Springer team, particularly Drs. R. Valeria and Takeesha, for their constant support in the publication of this work.

Haridwar, India

Dinesh K. Maheshwari

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