

PREFACE

Mycology is the branch of biology that deals with the study of fungi. Fungi are the diverse group of microorganisms and playing a vital role in the commercial application in agriculture, food, environment and medicine due to its simple model systems. Many fungi produce biological active compounds as secondary metabolites, which have potential to use in various beneficial applications based on its characteristics. Molecular mycology is playing an important role in fungal applications. Also, advances in molecular tools have created a new path for the mycological research and applications in different sectors. Molecular mycology includes molecular markers, DNA techniques, cloning and bioinformatics. This book covers most important aspects in molecular mycology and focuses on the application of fungal secondary metabolites in ecosystem management and sustainable agriculture, application of DNA recombinant techniques to improve industrially important fungal species, different molecular markers and genetic approaches for the taxonomical identification of fungi and also dealt with the bioinformatics tool for the identification fungal species and its secondary metabolites.

This book provides a complete overview of recent developments and applications in molecular mycology. It serves as a comprehensive guide for the identification of fungi and the application of fungal biomolecules in agriculture, food, environment, and pharmaceutical sectors by providing detailed information about application of molecular markers and bioinformatics tools for mycology.

This book has been well written and is based on the authors' renowned expertise and contribution to the various aspects of fungal biology. This book is an excellent source for molecular mycology tools and applications in various fields. This book is equally very suitable for undergraduate and postgraduate biology students and biotechnologists from

research institutes, academia and for industry. The authors are indebted to Mr. Ashish Kumar, Apple Academic Press, and AAP staff members for their foresight and valuable and diligent support throughout the publishing task.

—Devarajan Thangadurai, PhD

Jeyabalan Sangeetha, PhD

Muniswamy David, PhD