

Preface

Researchers studying "Microbial Systematics" are few as compared to the other specializations in Natural Sciences. I have long felt the need for an updated text covering the basic and applied approaches for microbial classification, identification, taxonomy, diversity, ecology, applications. Science is progressing at a fast pace and new technologies are rapidly emerging. The use of basic methodologies and new-generation sequencing techniques for evolutionary analysis of microorganisms can be exploited consistently to generate vast amount of information. Parallels to generation, and use of new technologies, microorganisms are used for various applications. There is an urgent need to have a volume, which includes earlier research. This book provides a paradigm shift for the systematics community. It has also uncovered other facets of microbial systematics including microbiome and their societal applications. Moreover, systematic studies on microorganisms have been exploited for their re-classification and applications based on the identification of genes, ability to produce macromolecules, and their uses in research and industries. It inspires scientists in the field of microbial ecology to explore microorganisms, soil microbiota, human and animal microbiome, patterns of survival and secretions of biomolecules, which is a key for today's researchers and future generation of scientists. This book came into existence with the enormous support from authors and experts. I am most grateful to the author(s) of the book chapters who have generously provided their research literature and shared views to shape this book. I am thankful to Dr. Juan M. Gonzalez, Microbial Diversity and Microbiology of Extreme Environments Research Group, Agencia Estatal Consejo Superior de Investigaciones Científicas, IRNAS-CSIC, Sevilla, Spain for explaining his views about Microbial Systematics in real time, Prof. Wen-Jun Li, an internationally renowned scientist in microbial systematics and microbial ecology, State Key Laboratory of Biocontrol and Guangdong Provincial Key Laboratory of Plant Resources, School of Life Sciences, Sun Yat-Sen University, Guangzhou, PR China for his contribution in the form of book chapter, I am indebted to Dr. Yogesh S. Shouche, Scientist "G" and Principal Investigator, National Centre for Microbial Resource, National Centre for Cell Science, Pune, India for critical evaluation of research and fair judgments time-to-time, Dr. Vipin Chandra Kalia, Chief Scientist, CSIR-Institute of Genomics and Integrative Biology, Delhi, Scientist at Konkuk University, Seoul, Republic of Korea for his moral support, I am grateful to Professor William B. Whitman, University of Georgia, USA and Professor Brian P. Hedlund, University of Nevada, Las Vegas, USA for their encouragement and motivation during series of BISMis meetings, and

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