
Preface

This new volume on Environmental Microbiology provides an up-to-date view of molecular mechanisms for investigating microbial communities and their biological activities. In particular, it looks at recent advances that have a big impact on the field such as metagenomics and other “omics” technologies, NanoSIMS, and stable isotope probing. As such, this volume should be of broad general interest not only to scientists working directly in environmental microbiology, molecular microbiology, and genomics but also to industrial scientists and educators in molecular microbiology.

This volume is organized into four sections: the first looks at methods involved in sampling environmental microorganisms, the second profiles different methods for investigating the diversity and composition of microbial communities, the third focuses on techniques for analyzing biological activities in situ, and the final section examines high-throughput “omics” approaches for the characterization of environmental microbial communities.

It is an exciting time for environmental microbiologists, and some of the technical advances outlined in this volume should provide an unprecedented glimpse into the structure, composition, and activity of microbial communities across diverse environments and illuminate their impact on global ecological processes. We sincerely thank all of the contributors for sharing their technical knowledge with the wider environmental microbiology community.

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