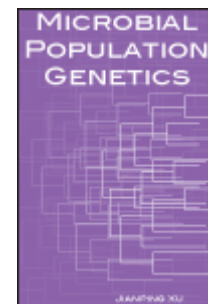


Microbial Population Genetics



Edited by: **Jianping Xu**

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Microbial population genetics is a rapidly advancing field of investigation with relevance to many areas of science. The subject encompasses theoretical issues such as the origins and evolution of species, sex and recombination. Population genetics lays the foundations for tracking the origin and evolution of antibiotic resistance and deadly infectious pathogens and is also an essential tool in the utilization of beneficial microbes.

Written by leading researchers in the field, this invaluable book details the major current advances in microbial population genetics and genomics. Distinguished international scientists introduce fundamental concepts, describe genetic tools and comprehensively review recent data from SNP surveys, whole-genome DNA sequences and microarray hybridizations. Chapters cover broad groups of microorganisms including viruses, bacteria, archaea, fungi, protozoa and algae. A major focus of the book is the application of molecular tools in the study of genetic variation. Topics covered include microbial systematics, comparative microbial genomics, horizontal gene transfer, pathogenic bacteria, nitrogen-fixing bacteria, cyanobacteria, microalgae, fungi, malaria parasites, viral pathogens and metagenomics.

An essential volume for everyone interested in population genetics and highly recommended reading for all microbiologists.

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