
Preface

Bacteria are not just important as laboratory tools to understand higher organisms; they are important and interesting in their own right. For instances, they play an essential role in the ecology of earth. They are the only organisms that can fix atmospheric nitrogen, that is convert N_2 to ammonia, which can be used to make nitrogen-containing cellular constituents such as proteins and nucleic acids. Moreover bacteria produce most of the naturally occurring so-called greenhouse gases, such as methane and carbon dioxide, which are in turn used by other types of bacteria.

Bacteria are also worth studying because of their role in disease. They cause many human, plant and animal diseases and new disease are continuously appearing. Knowledge gained from the molecular genetics of bacteria will help in the development of new ways to treat or otherwise control old diseases, as well as new ones.

Molecular Biology has proved to be one of the more fruitful technological approaches sciences, being both very powerful and able to generate valuable intellectual property. This book aims to present examples in the application molecular biology and genetic engineering in bacteriology. This book shows diverse roles of bacteria in the ecosystems and it gives significant contributions from biotechnology approaches. The challenges of these aspects and methodologies inspired us to edit the book entitled *Molecular Biology of Bacteria*.

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