
Preface

Network-based representations have become pervasive in most fields in biology. Focusing on networks applied to bacteria, this volume provides authoritative descriptions of various experimental and computational methods enabling the characterization and analysis of molecular interaction networks.

Intended primarily for postgraduate students and researchers working in the field of experimental and computational microbiology, this volume combines up-to-date reviews along with detailed protocols written by the developers of bioinformatics resources (databases and software tools). Each protocol emphasizes the crucial steps and the way to set up the parameters in order to obtain the best results.

The first section provides an extensive coverage of various experimental and *in silico* approaches aiming at the characterization of network components. The second section is devoted to the presentation of computational approaches to analyze the topology of molecular networks. The third and last section further introduces a variety of methods and tools enabling to generate qualitative or quantitative dynamical models of molecular processes in bacteria.

Altogether, the volume constitutes a practical guide of methods and tools to characterize, retrieve, visualize, analyze, and manipulate molecular networks.

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