
Preface

The discovery of wide-spread RNA-based regulation in bacteria has led to new evaluations of the importance of bacterial regulatory RNA in every aspect of bacterial physiology, including pathogenesis, quorum sensing, biofilm formation, stress responses, developmental programs, and growth regulation. These studies have employed well-established RNA techniques as well as newly developed genomic and bioinformatic tools. This volume collects many of the most important methods for studying bacterial regulatory RNA written by outstanding experts in the field.

The methods are presented in six sections. Part I covers techniques to identify regulatory RNAs using genomic and experimental approaches. Part II follows with methods for characterizing the function and expression of regulatory RNAs in bacterial cells. A comprehensive overview of RNA structure prediction and methods to determine RNA structure and stability is presented in Part III. Finally, Parts IV–VI contain methods for characterizing interactions between regulatory RNAs and proteins, other RNAs, and larger complexes such as RNA polymerase and the ribosome. Each method is written to guide both new and experienced users and includes a Notes section with advice and tips from the authors.

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