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Organization of the Prokaryotic Genome

Robert L. Charlebois, Editor

The field of genomics has seen dramatic expansion in the years following the publication of the first prokaryotic genome sequence, that of *Haemophilus influenzae* Rd. Much of the present effort in genomics lies in sequence production, annotation, and other bioinformatic analyses and in the beginnings of genetic and biochemical characterization of ORFs. *Organization of the Prokaryotic Genome* contributes to the field by examining the importance of gene organization in the genome and its role in the shaping of life. Intended to review and direct progress in our understanding of genome organization, this book explores the way in which genes interact with their neighbors. Organized hierarchically, it addresses four major areas: description, forces that shape the genome, the genome's influence on gene expression, and future directions. Chapters within each section address more focused topics and guide the reader toward a broader perspective of viewing the genome as an integrated system.

Modification and Editing of RNA

Henri Grosjean and Rob Benne, Editors

This important volume examines the various aspects of posttranscriptional RNA processing, including biosynthetic, genetic, and functional aspects of nucleoside modification and editing by nucleoside conversion as well as by nucleoside insertion/deletion. Written by leading researchers in the field, it includes descriptions of the different types of modification and editing, identification of the corresponding enzymes, discussion of *cis*- and *trans*-acting sequences, machineries, mechanisms, cellular locations, the biological role of individual modified or edited bases, involvement in diseases like cancer and AIDS, and possible evolutionary connections between different processes. *Modification and Editing of RNA* is a valuable reference for researchers, teachers, and students and will be a useful tool for the planning of future research to answer the many questions that remain.

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