

RNA-Based Regulation in Human Health and Disease

Volume 19



Edited by
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Rajesh Pandey's lab focuses on Integrative Genomics of Host-Pathogen wherein RNA plays a central role towards modulating pathogenicity. *RNA-Based Regulation in Human Health and Disease* offers an in-depth exploration of RNA-mediated genome regulation at different hierarchies. Beginning with a multitude of canonical and noncanonical RNA populations, especially noncoding RNA in human physiology and evolution, further sections examine the various classes of RNAs (from small to large noncoding and extracellular RNAs), functional categories of RNA regulation (RNA-binding proteins, alternative splicing, RNA editing, antisense transcripts, and RNA G-quadruplexes), dynamic aspects of RNA regulation modulating physiological homeostasis (aging), role of RNA beyond humans, tools and technologies for RNA research (wet lab and computational), and future prospects for RNA-based diagnostics and therapeutics. One of the core strengths of the book includes spectrum of disease-specific chapters from experts in the field highlighting RNA-based regulation in metabolic and neurodegenerative disorders, cancer, inflammatory disease, viral and bacterial infections. We hope the book helps researchers, students, and clinicians appreciate the role of RNA-based regulation in genome regulation, aiding the development of useful biomarkers for prognosis, diagnosis, and novel RNA-based therapeutics.

Key Features:

- Comprehensive information of noncanonical RNA-Based genome regulation modulating human health and disease.
- Defines RNA classes with special emphasis on unexplored hierarchies.
- Disease-specific role of RNA—causal, prognostic, diagnostic.
- Features contributions from leading experts in the field.

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