Handbook of Translational Transcriptomics

Research, Protocols and Applications

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Handbook of Translational Transcriptomics: Research, Protocols and Applications provides a comprehensive overview of the field of transcriptomics. With an emphasis on the various protocols and techniques available for investigation, it acts as a practical guide to researchers for implementing their own investigations in the field.

This book begins with an overview of the past, present, and potential approaches in the field of transcriptomics, with discussions of choosing the correct approach based on the research needed. It also highlights the pros and cons of each approach. Following this, it explores techniques and protocols for investigating specific approaches focusing on RNA sequencing, expression arrays, and gene expression. It then delves into data analysis and offers recommendations, guidelines, and approaches related to data interpretation. This book also considers the translation of transcriptomics to clinical use and applications in molecular diagnostics, biomarkers in medicine, and personalized medicine specific to oncology, as well as biotechnology for pharmaceutical research.

Handbook of Translational Transcriptomics: Research, Protocols and Applications is a detailed reference that provides a complete view of transcriptomics, ranging from methods to handling data and medical applications. This book is an invaluable guide for researchers working across molecular biology, genetics, bioinformatics and related fields, as well as graduate and PhD students in these areas.

Key Features

- Features practical guidance and protocols for researchers to replicate transcriptomic methods and techniques, including wet lab techniques.
- Includes useful information on analyzing and interpreting transcriptomic data.
- Offers a detailed introduction into translational transcriptomics, exploring both coding and noncoding RNAs including microRNA.
- Investigates clinical implications of transcriptomics and applications to treating disease.
- Considers some experimental and bioinformatic techniques in the field of transcriptomics, as well as more established approaches.

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