LATEST DISCOVERIES IN RNA AND DNA EDITING RESEARCH, WITH EXPERT FORECASTS OF THE FIELD'S FUTURE DIRECTIONS

RNA and DNA Editing assembles a team of leading experts who present the latest discoveries in the field alongside the latest models and methodology. In addition, the authors set forth the many open questions and suggest routes for further investigation. Overall, the book serves as a practical guide for professionals in the field who need to understand the interrelationship of RNA and DNA editing with other chemical and biological processes.

This book is divided into four sections, providing a clear, contextual map of the field:

Diversification of the Proteome through RNA and DNA Editing discusses the occurrence of editing sites within transcriptomes and their distribution within individual RNAs in order to explore why nucleic acid sequences are edited instead of encoded genomically

Functional Coordination of RNA Editing with Other Cellular Mechanisms brings to the forefront why RNA and DNA editing is essential for cell survival and adaptation

Predictive Studies underscores the power of computational approaches in identifying novel editing sites and predicting the biological consequences of editing at these sites

Structural Approaches presents comparative structural analyses that suggest conserved protein folds and implicate, in some instances, their ancient phylogenic origins as components of editing machinery

This book not only discusses the current state of research in depth, it also gives new contributors an opportunity to express their vision. The perspectives voiced by these authors are provocative and intended to motivate discussion and inspire new experiments. Finally, this book will promote new hypotheses and models that can serve as springboards for the next generation of discoveries in the field.

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