

Mobile DNA III

An exploration of the many types and roles of DNA rearrangements in fundamental biological processes....

Virtually all organisms contain multiple mobile DNAs that can move from place to place, and in some organisms, mobile DNA elements make up a significant portion of the genome. *Mobile DNA III* provides a comprehensive review of recent research, revealing the many important roles that mobile DNAs play in genome structure, function, and evolution.

Editor-in-Chief Nancy L. Craig assembled a team of multi-disciplinary experts to develop this cutting-edge resource that

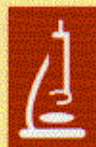
- covers the specific molecular mechanisms involved in recombination, including a detailed structural analysis of the enzymes responsible
- presents a detailed account of the many different recombination systems that can rearrange genomes
- examines the tremendous impact of mobile DNA in virtually all organisms

Mobile DNA III is valuable as in-depth supplemental reading for upper level life sciences students and as a reference for investigators exploring new biological systems. Biomedical researchers will find documentation of recent advances in understanding the spread of antibiotic resistance and virulence determinants, the replication mechanisms of retroviruses including HIV, strategies for antigenic variation of pathogens to escape detection by the immune system, and strategies for the diversification of immune responses. Researchers in many fields will find new information about varied strategies for genome engineering. It allows specialists to pick and choose advanced reviews of specific elements and to be drawn in by unexpected parallels and contrasts among the elements in diverse organisms.

Mobile DNA III provides the most lucid reviews of these complex topics available anywhere.



Nancy L. Craig, is an Investigator with the Howard Hughes Medical Institute and a Professor in the Department of Molecular Biology & Genetics at the Johns Hopkins University School of Medicine. Dr. Craig is a member of the National Academy of Sciences and a Fellow of the American Association for the Advancement of Science, American Academy of Microbiology, and the American Academy of Arts and Sciences.



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"Mobile DNA III provides a one-stop-shop for anyone wanting to keep abreast of current understanding of the activity of these elements and the enzymes that they encode. It will be an invaluable resource for some time to come."

David Finnegan,
Institute of Cell Biology,
University of Edinburgh,
King's Buildings

ISBN 9781555819200



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