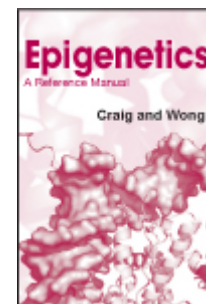


Epigenetics

A Reference Manual



Edited by: Jeffrey M. Craig and Nicholas C. Wong

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Epigenetics is the study of changes in gene expression caused by mechanisms other than changes in the DNA sequence. Epigenetics is a rapidly advancing field with an increasing impact on biological and medical research.

The editors of this book have assembled top-quality scientists from diverse fields of epigenetics to produce a major new volume. Comprehensive and cutting-edge, the 26 chapters in this book constitute a key reference manual for everyone involved in epigenetics, DNA methylation, cancer epigenetics and related fields. Topics include: early life environment, DNA methylation and behavior, histone acetyltransferase biology, transgenerational epigenetic inheritance, mammalian X inactivation, epigenetic memory in plants, polycomb-group regulation, centromeres and telomeres, DNA sequence contribution to nucleosome distribution, macrosatellite epigenetics, histones, cell-fate specification and reprogramming, DNA methylation in cancer, variant histone H2A and cancer development, RNA modification, paramutation in plants, DNMT3L dependent methylation during gametogenesis, non-coding RNA, bisulphite-enabled technologies, rapid analysis of DNA methylation, microarray mapping, DNA methylation profiling, ChIP-sequencing, genome-wide DNA methylation analysis, and epigenetics in maize. In addition there are useful chapters on bioinformatics in epigenomics, online resources and tools for epigeneticists, and educational resources for epigeneticists.

This up-to-date reference manual is an essential book for those working in the field and for scientists in other disciplines it represents a major information resource on the fascinating and fast-moving field of epigenetics.

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