

EPIGENETICS

Second Edition

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Front cover artwork: Depicted is a schematic representation of the chromatin template. Epigenetic regulation affects and modulates this template through noncoding RNAs (ncRNAs) that associate with it, through covalent modification of histone tails (mod), methylation of DNA (Me), remodeling factors (blue oval), and nucleosomes that contain standard as well as variant histone proteins (the yellow nucleosome). In the background is a representation of several model organisms in which epigenetic control has been studied. From *top left to bottom right*: Pair of mouse chromosomes that may differ in their genomic imprint; a *Saccharomyces cerevisiae* colony, showing epigenetically inherited variegation of gene expression; anatomy of *Caenorhabditis elegans*; illustration of *Tetrahymena thermophila*, showing the large “active” macronucleus and the smaller “silent” micronucleus; *Drosophila melanogaster*; maize section with kernel color variegation; *Arabidopsis* flower.

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