

GENOME DUPLICATION

CONCEPTS, MECHANISMS, EVOLUTION, AND DISEASE

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Genome Duplication provides a comprehensive and readable overview of the underlying principles that govern genome duplication in all forms of life, from the simplest cell to the most complex multicellular organism.

Using examples from the three domains of life – bacteria, archaea, and eukarya – *Genome Duplication* shows how all living organisms store their genome as DNA and how they all use the same evolutionary-conserved mechanism to duplicate it: semi-conservative DNA replication by the replication fork. The text shows how the replication fork determines where organisms begin genome duplication, how they produce a complete copy of their genome each time a cell divides, and how they link genome duplication to cell division.

Genome Duplication explains how mistakes in genome duplication are associated with genetic disorders and cancer, and how understanding genome duplication, its regulation, and how the mechanisms differ between different forms of life, is critical to the understanding and treatment of human disease.

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