

# DNA Replication

---

**D**NA replication is essential for the propagation of life on Earth. Cells in living organisms must be able to synthesize a complete copy of their DNA with extraordinary precision, so that they can pass this genetic material on to their descendants. DNA replication involves the coordinated interplay and regulation of many complex protein assemblies during the various stages of cell division. When these processes go awry, cancer and other diseases can ensue.

Written and edited by experts in the field, this collection from *Cold Spring Harbor Perspectives in Biology* covers all aspects of DNA replication and its control across all domains of life. The contributors examine the molecular machinery involved in the assembly of replication origin complexes, the establishment of replication forks, unzipping of the double helix, priming of DNA synthesis, and elongation of daughter strands. Chromatin organization and dynamics, lagging-strand maturation, telomere replication, and mechanisms to handle errors and damage in DNA are also discussed.

Including examination of the complex interactions between the core replication machinery and the regulatory circuits that drive cell cycle progression, this volume is an indispensable reference for not only biochemists and molecular biologists, but also cell biologists and all who want to understand this fundamental process of life.



[www.cshperspectives.org](http://www.cshperspectives.org)



**COLD SPRING HARBOR  
LABORATORY PRESS**

