

# **Bacterial Replication**

## I. DNA Structure

## II. Mechanism of DNA Replication (Building a Replication Fork)

Primers Templates Accessories

Polymerases, Editors, Clamps, Clamp Loaders, Helicases

Messelson-Stahl Experiment

Leading and Lagging Strand, Okazaki Fragments

Proofing-reading what was written: Mismatch Repair, DnaQ

## III. Replication Initiation, Termination, and the Cell Cycle

Origin of Replication

Termination of Replication

## IV. Supercoiling and Packaging

Compartmentalization

Topoisomerases, Accessibility, Organization

## V. Antibiotics that Block Replication

## VI. Molecular Biology and DNA manipulation

Restriction Endonucleases

Cloning, DNA Libraries

Hybridizations, Southern Blots

PCR, polymerase chain reaction