

Chapter 25 – DNA Metabolism

25.1 DNA Replication

The following sub-sections are important:

- The Introduction
- DNA Replication Follows a Set of Fundamental Rules
- DNA Is Degraded By Nucleases
- DNA Is Synthesized by Polymerases
- Replication is Very Accurate
- E.coli has at Least Five DNA Polymerases
- DNA Replication Requires Many Enzymes and Protein Factors
- Replication of the E. coli Chromosome Proceeds in Stages. There is an absolutely exorbitant amount of information in this section. You do not need to know everything in the text, but you do need to be comfortable with what is occurring in each stage and the proteins involved. Figures 25-12, 25-13, 25-14, and 25-15 cover this best.
- Replication in Eukaryotic Cells is Similar but More Complex

25.2 DNA Repair

The following sub-sections are important:

- The Introduction
- Mutations are Linked to Cancer
- All Cells Have Multiple Repair Systems