

Figure 9.26

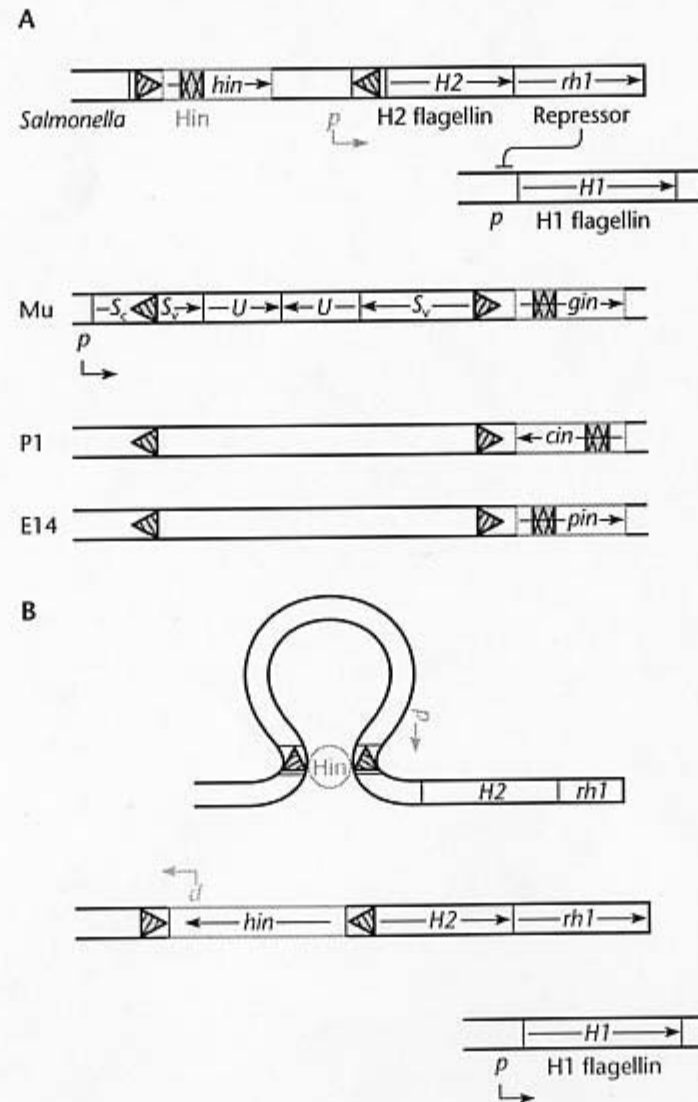
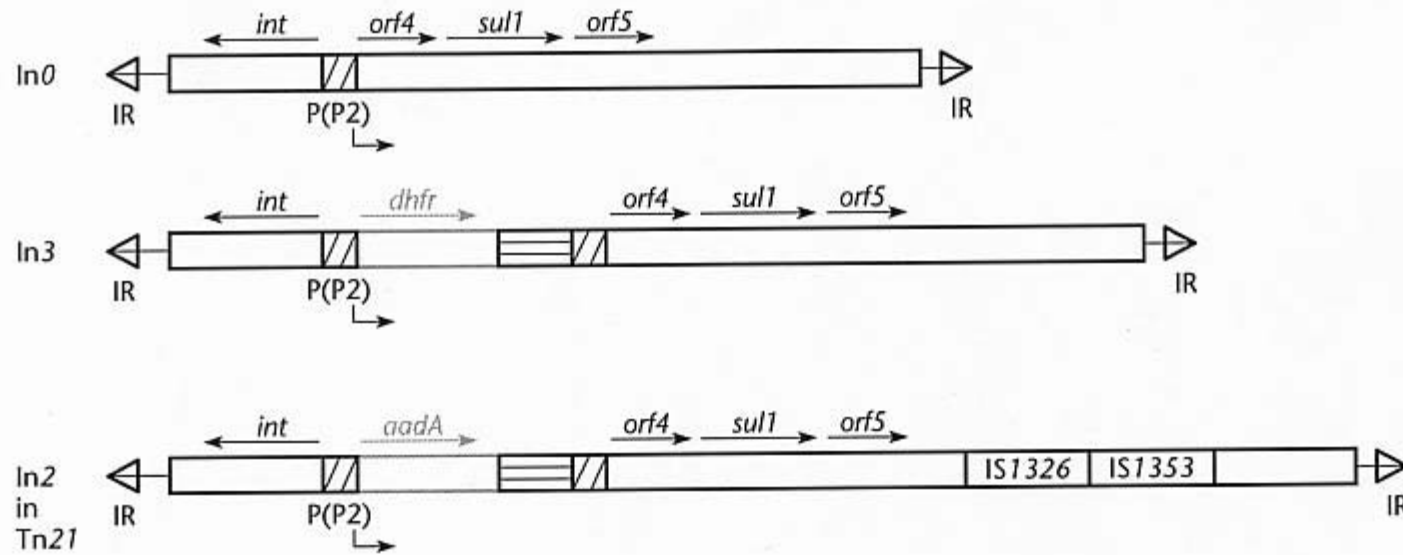






Figure 9.25



- int* Phage-like integrase
- sul1* Sulfonamide resistance
- dhfr* Trimethoprim resistance
- aadA* Streptomycin and spectinomycin resistance
-  GTT
-  59-bp element
- P(P2) Strong promoter



Box 9.2

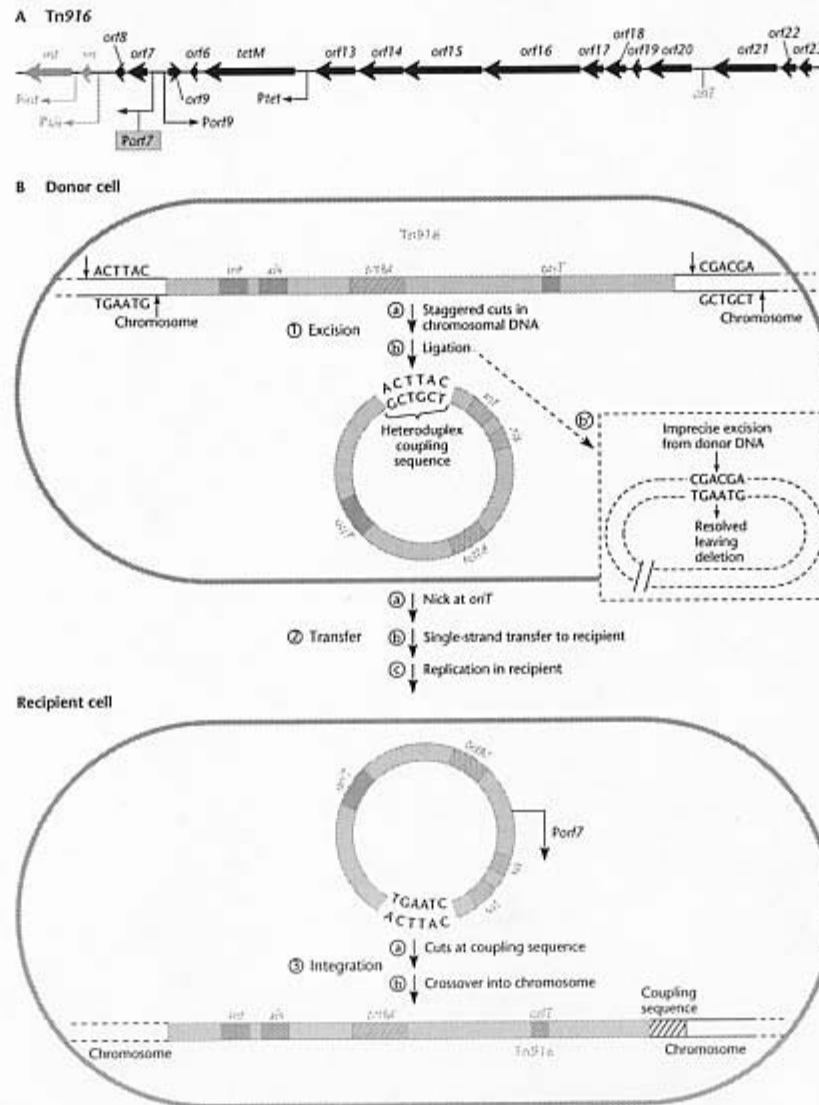


Figure 10.1

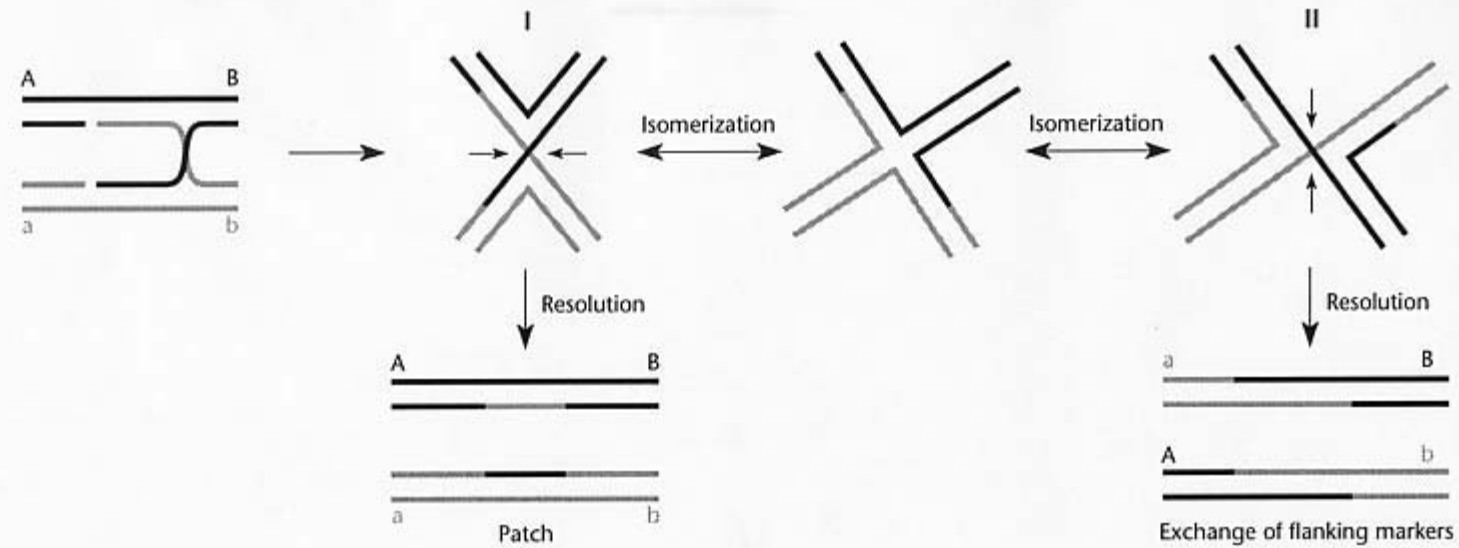


Figure 10.2

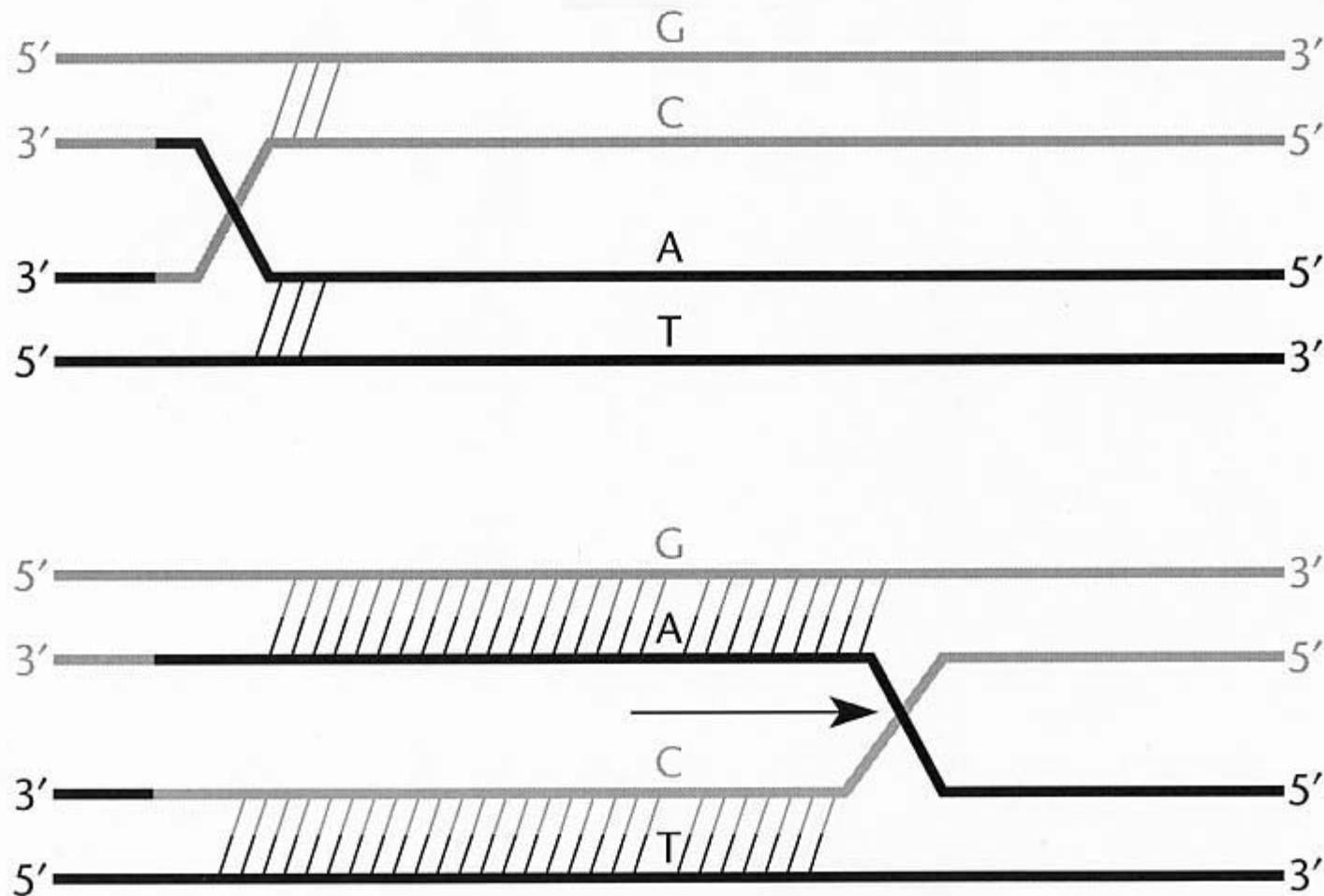


Figure 10.3

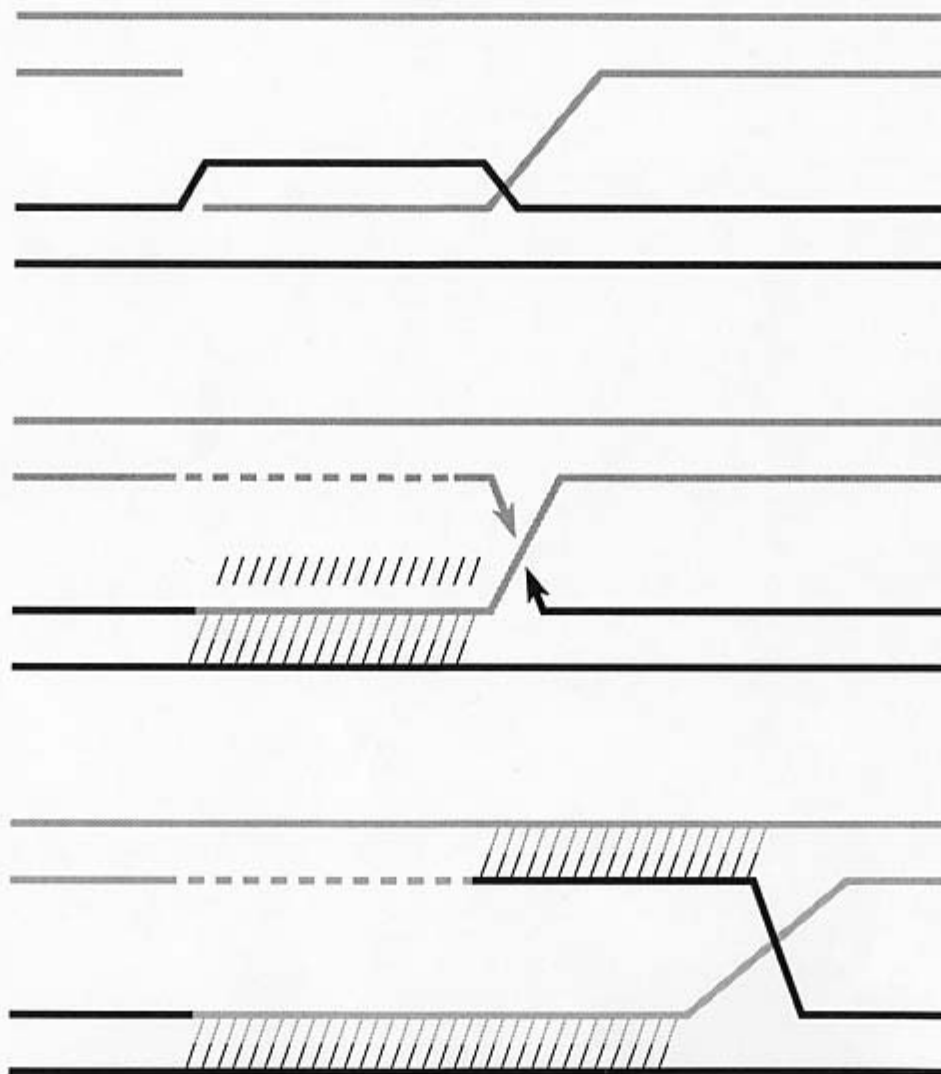


Figure 10.4

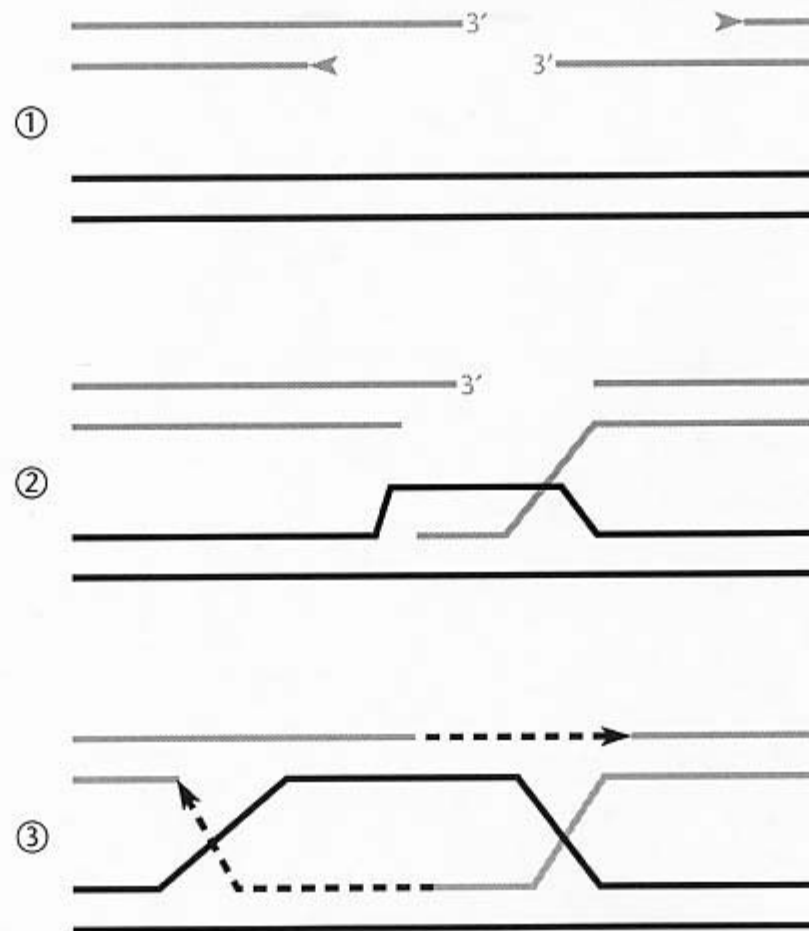


Table 10.1

TABLE 10.1 Some genes encoding recombination functions in <i>E. coli</i>			
Gene	Mutant phenotype	Enzymatic activity	Probable role in recombination
<i>recA</i>	Recombination deficient	Enhanced pairing of homologous DNAs	Synapse formation
<i>recBC</i>	Reduced recombination	Exonuclease, ATPase, helicase, <i>chi</i> -specific endonuclease	Initiates recombination by separating strands cutting DNA at the <i>chi</i> site
<i>recD</i>	Rec ⁺ χ independent	Exonuclease	Degrades 3' ends
<i>recF</i>	Reduced plasmid recombination	Binds ATP and single-stranded DNA	Substitutes for RecBCD at gaps
<i>recJ</i>	Reduced recombination in RecBC ⁻	Single-stranded exonuclease	Substitutes for RecBCD at gaps
<i>recN</i>	Reduced recombination in RecBC ⁻	ATP binding	Substitutes for RecBCD at gaps
<i>recO</i>	Reduced recombination in RecBC ⁻	DNA binding and renaturation	Substitutes for RecBCD at gaps
<i>recQ</i>	Reduced recombination in RecBC ⁻	DNA helicase	Substitutes for RecBCD at gaps
<i>recR</i>	Reduced recombination in RecBC ⁻	Binds double-stranded DNA	Substitutes for RecBCD at gaps
<i>recG</i>	Reduced Rec in RuvA ⁻ B ⁻ C ⁻	Branch-specific helicase	Migration of Holliday junctions
<i>ruvA</i>	Reduced recombination in RecG ⁻	Binds to Holliday junctions	Migration of Holliday junctions
<i>ruvB</i>	Reduced recombination in RecG ⁻	Holliday junction-specific helicase	Migration of Holliday junctions
<i>ruvC</i>	Reduced recombination in RecG ⁻	Holliday junction-specific nuclease	Resolution of Holliday junctions
<i>priA, priB, priC, dnaT</i>	Reduced recombination	Helicase?	Reload replication forks

Figure 10.5

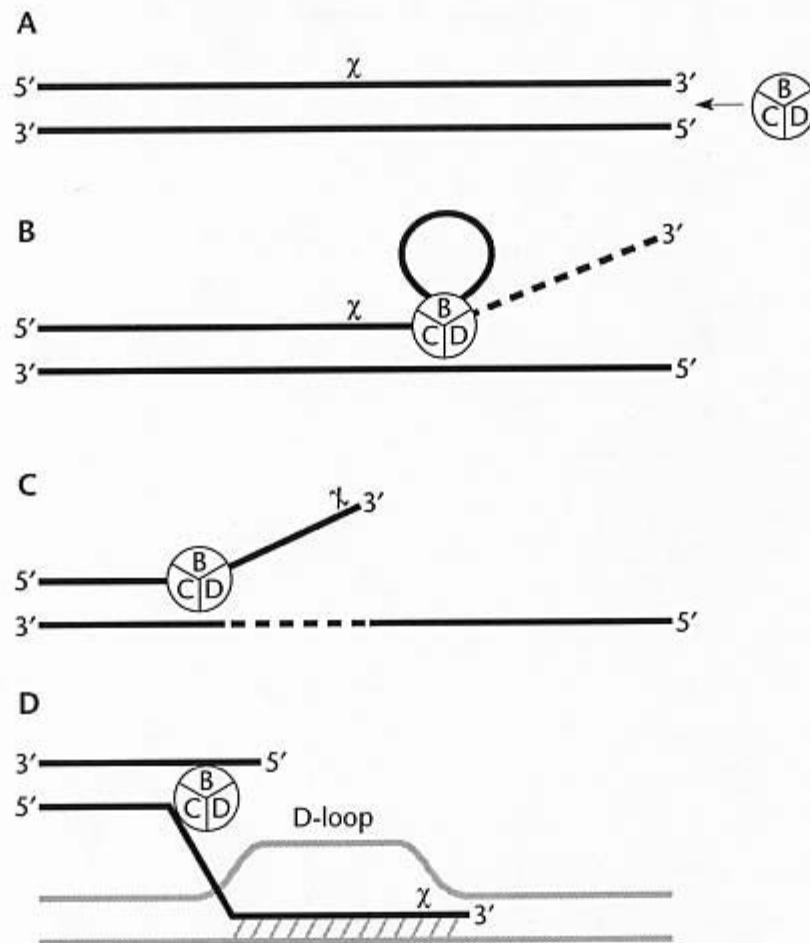


Figure 10.6

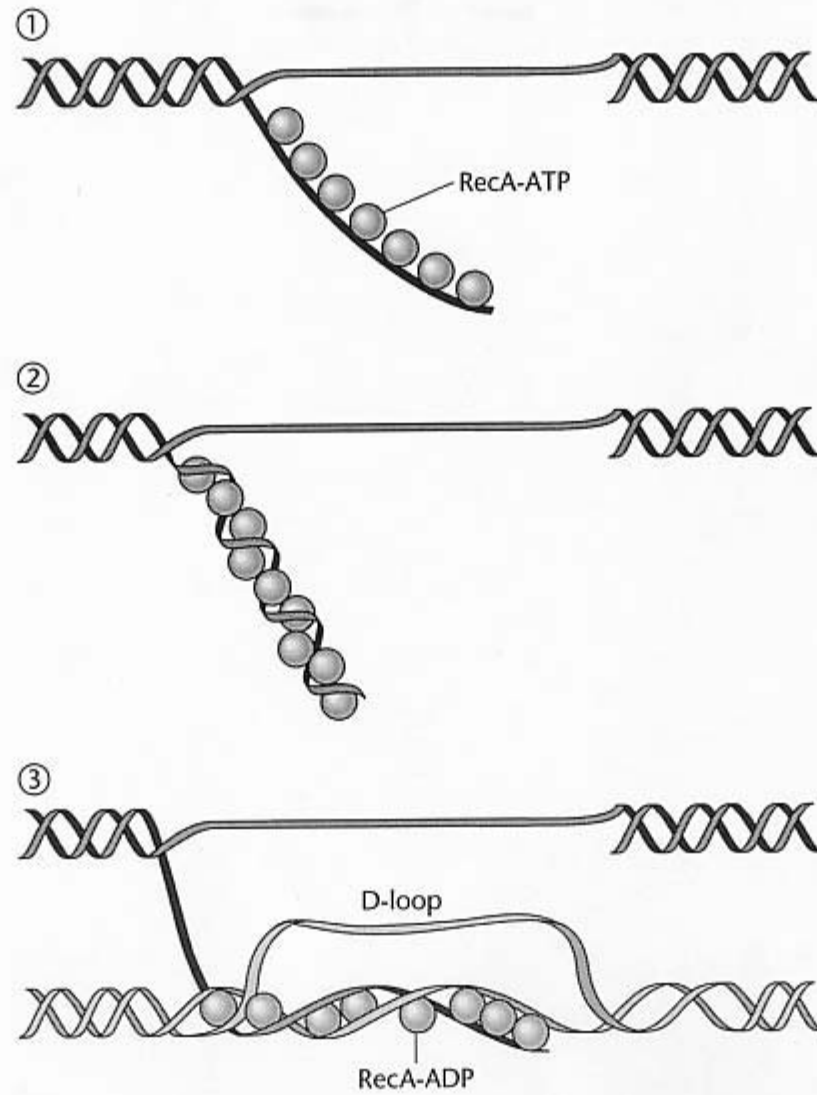


Figure 10.7

