

Ankara University, Faculty of Agriculture , Department of Fisheries and
Aquaculture, Programme of Fisheries and Aquaculture

AQS104: Biochemistry

Reference: Nelson, D. L., Lehninger, A. L., & Cox, M. M.
(2008). *Lehninger Principles of Biochemistry (5th edition)*. Macmillan.

AQS104 BIOCHEMISTRY: Weekly Programme	
1. Week: <ul style="list-style-type: none">• The foundations of biochemistry• Water	8. Week: <p>Principles of metabolic regulation The citric acid cycle</p>
2. Week: <ul style="list-style-type: none">• Amino acids, peptides, and proteins• The three-dimensional structure of proteins	9. Week: <p>Fatty acid catabolism Amino acid oxidation and the production of urea</p>
3. Week: <ul style="list-style-type: none">• Protein function• Enzymes	10. Week: <p>Oxidative phosphorylation and photophosphorylation Carbohydrate biosynthesis in plants and bacteria</p>
4. Week: <ul style="list-style-type: none">• Carbohydrates and Glycobiology• Nucleotides and Nucleic Acids	11. Week: <p>Lipid biosynthesis Biosynthesis of amino acids, nucleotides, and related molecules</p>
5. Week: <ul style="list-style-type: none">• DNA-based information technologies• Lipids	12. Week: <p>Hormonal regulation and integration of mammalian metabolism Genes and chromosomes</p>
6. Week: <p>Biological membranes and transport Biosignaling</p>	13. Week: <p>DNA metabolism RNA metabolism</p>
7. Week: <p>Bioenergetics and biochemical reaction types Glycolysis, gluconeogenesis, and the pentose phosphate pathway</p>	14. Week: <p>Protein metabolism Regulation of gene expression</p>

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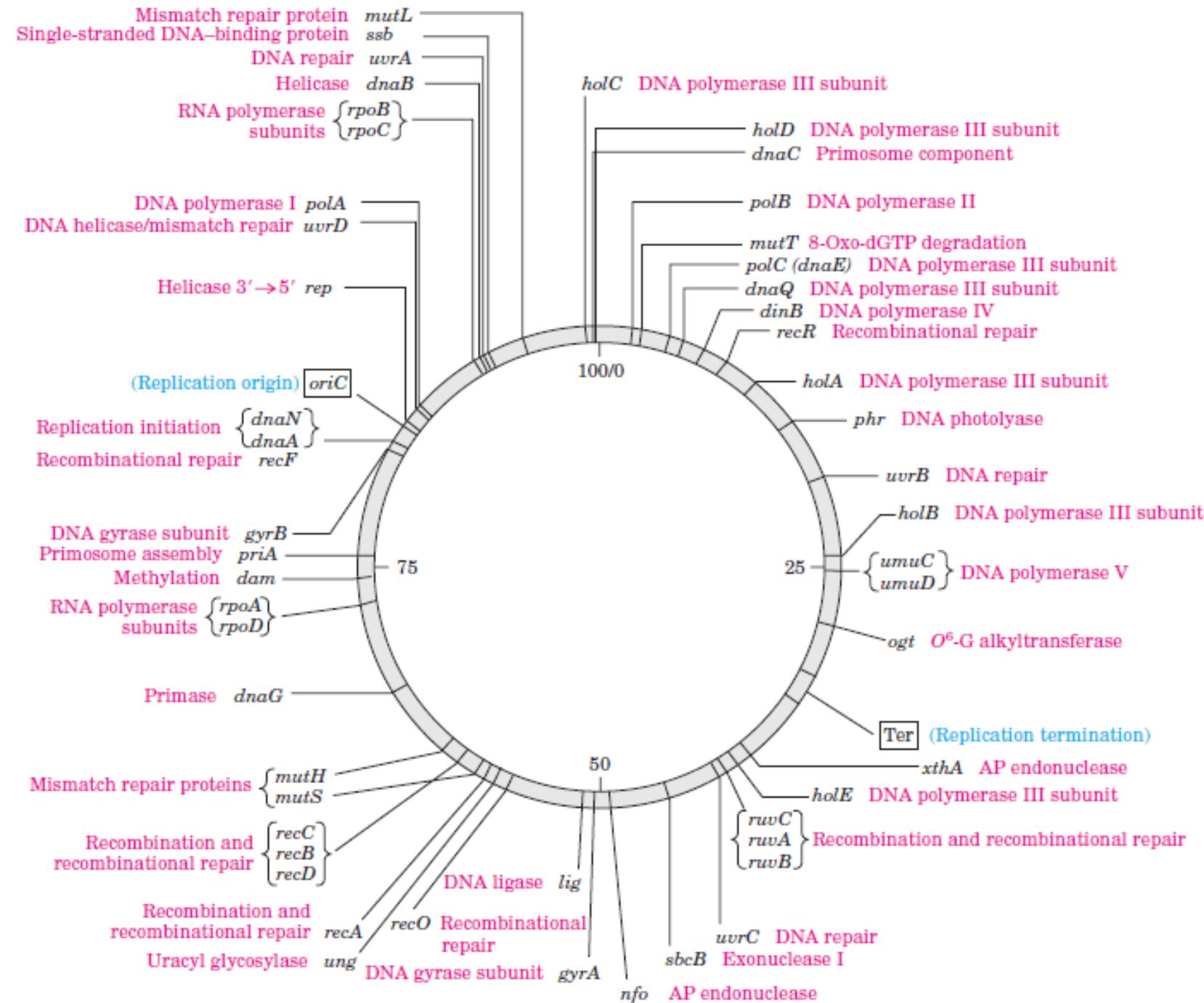
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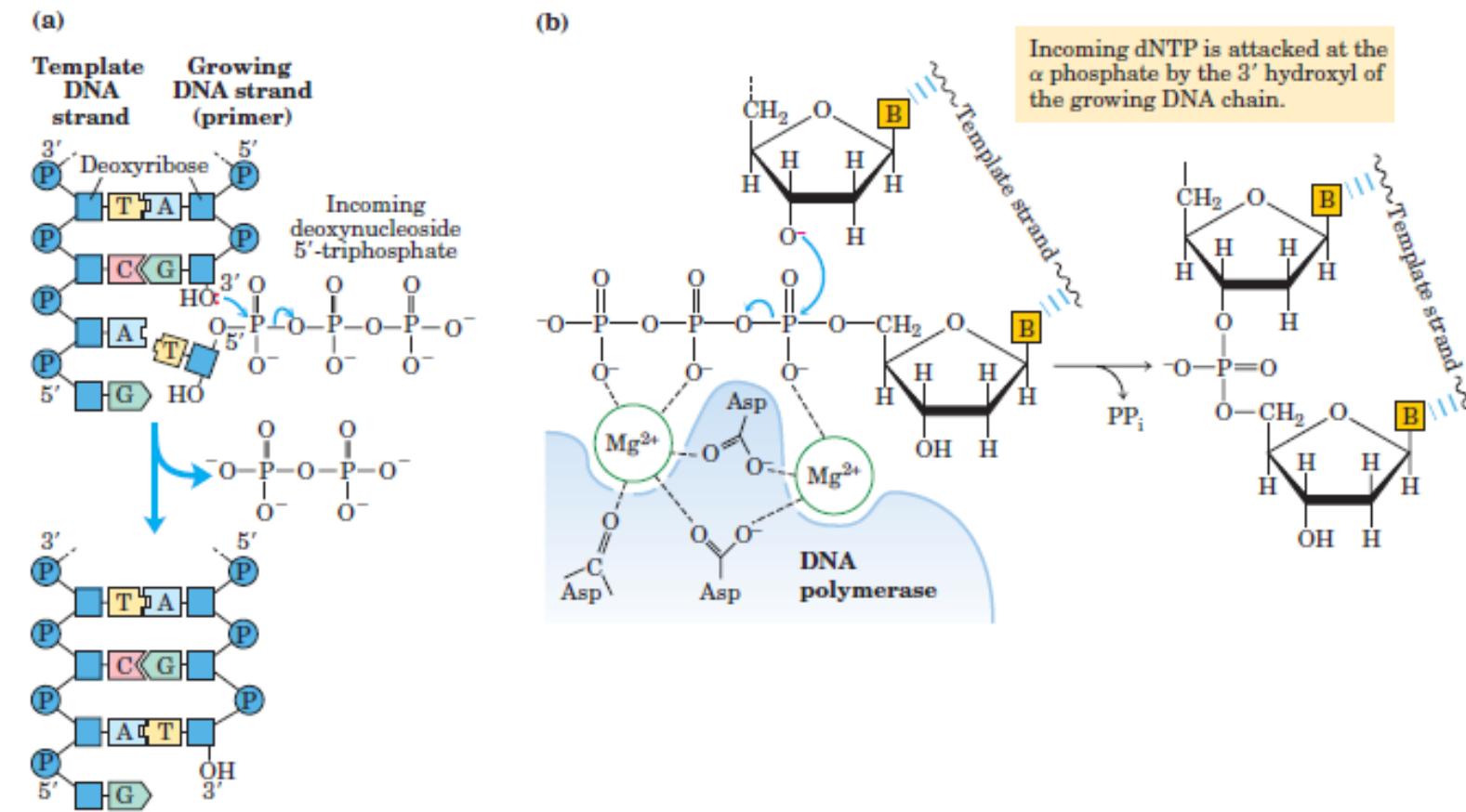
13. Week:

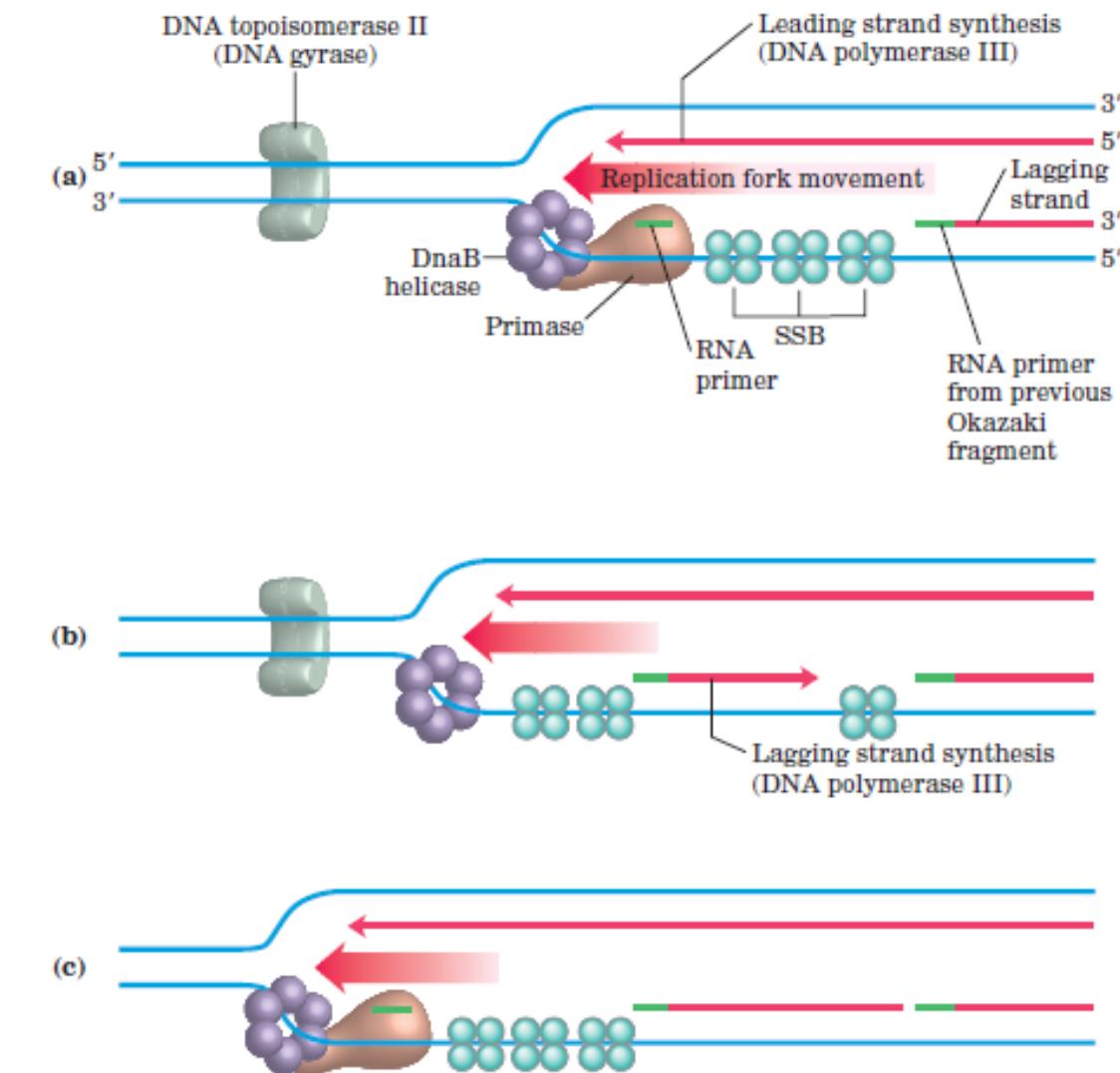
DNA Metabolism

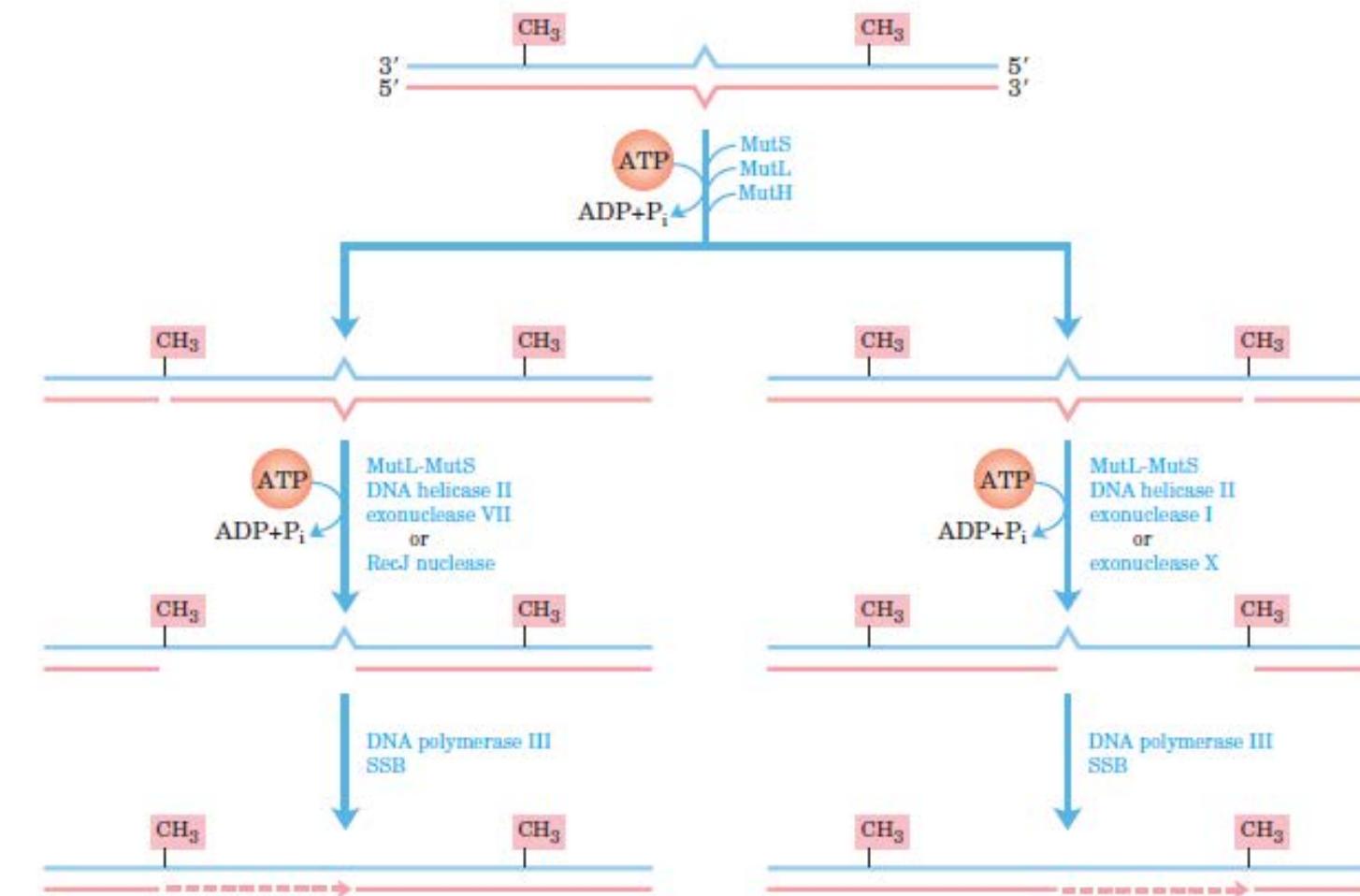
RNA Metabolism

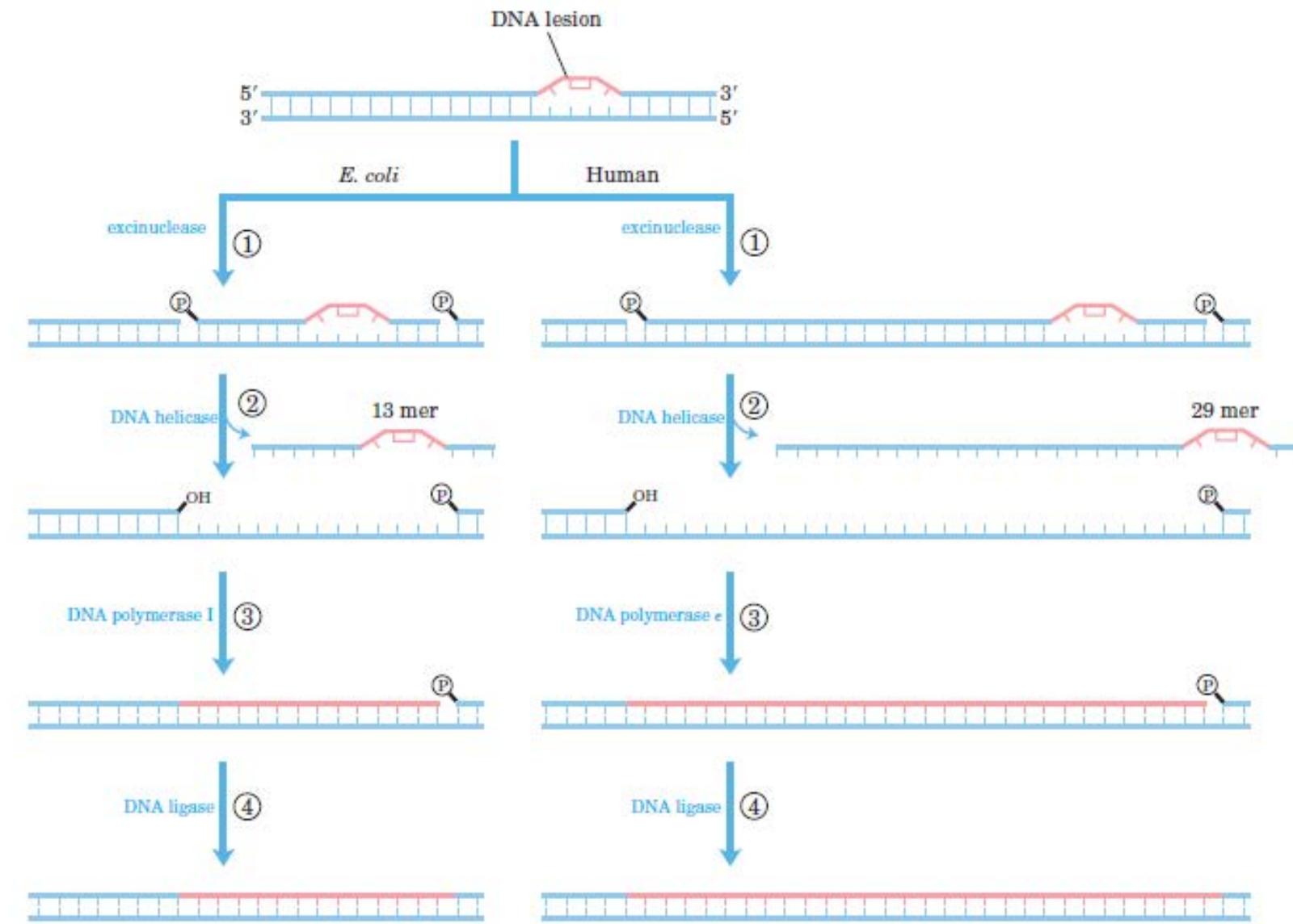
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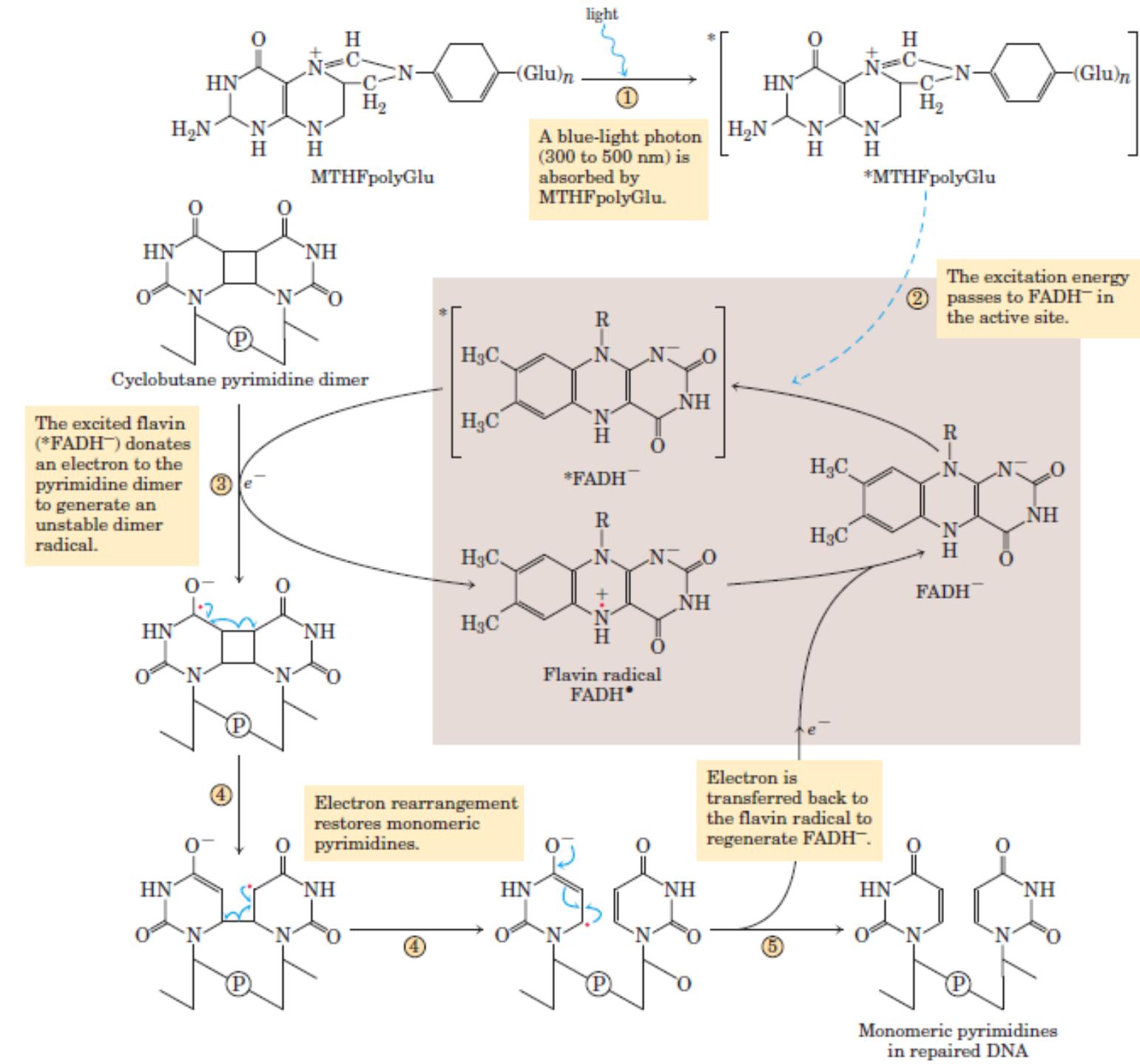


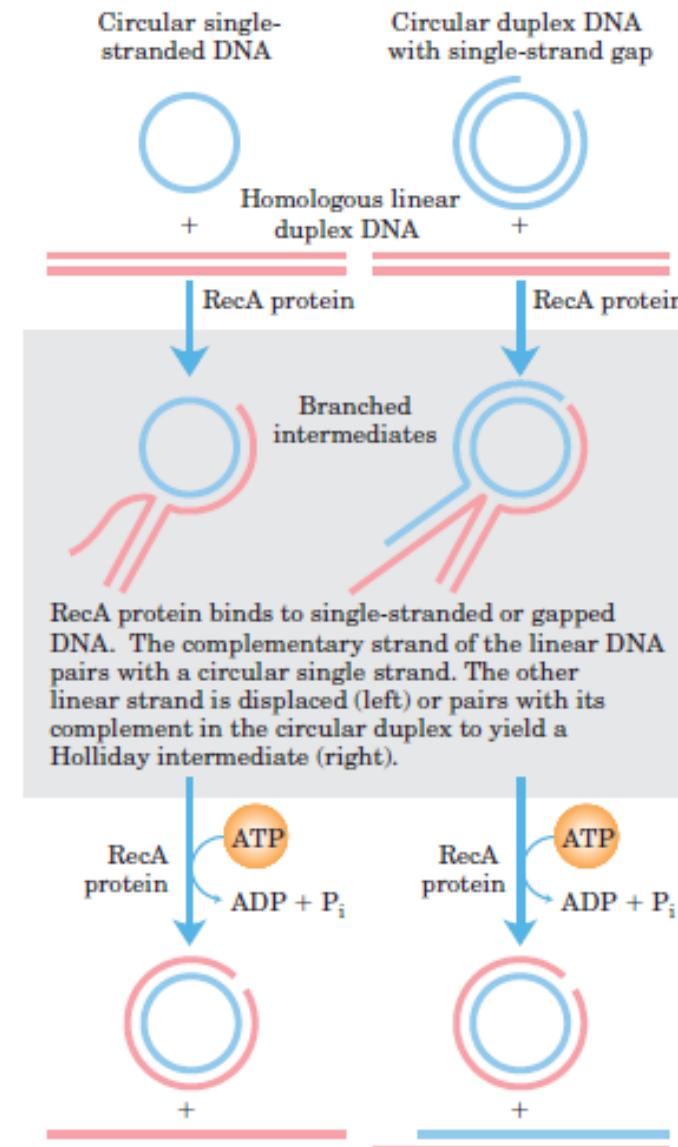
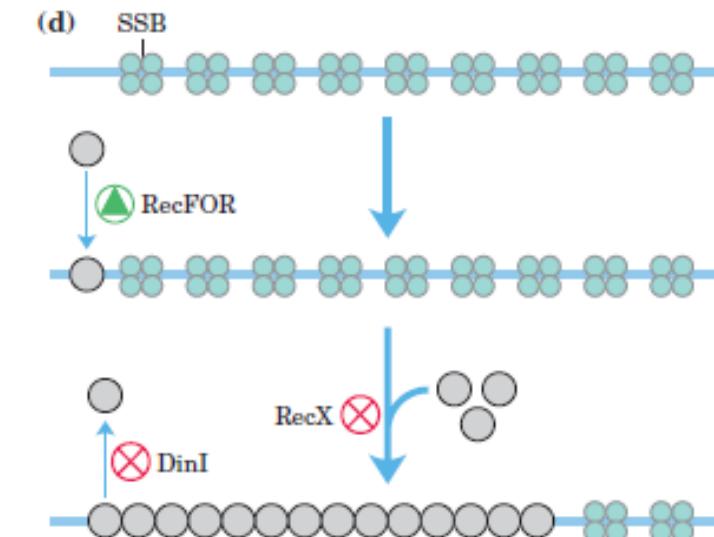
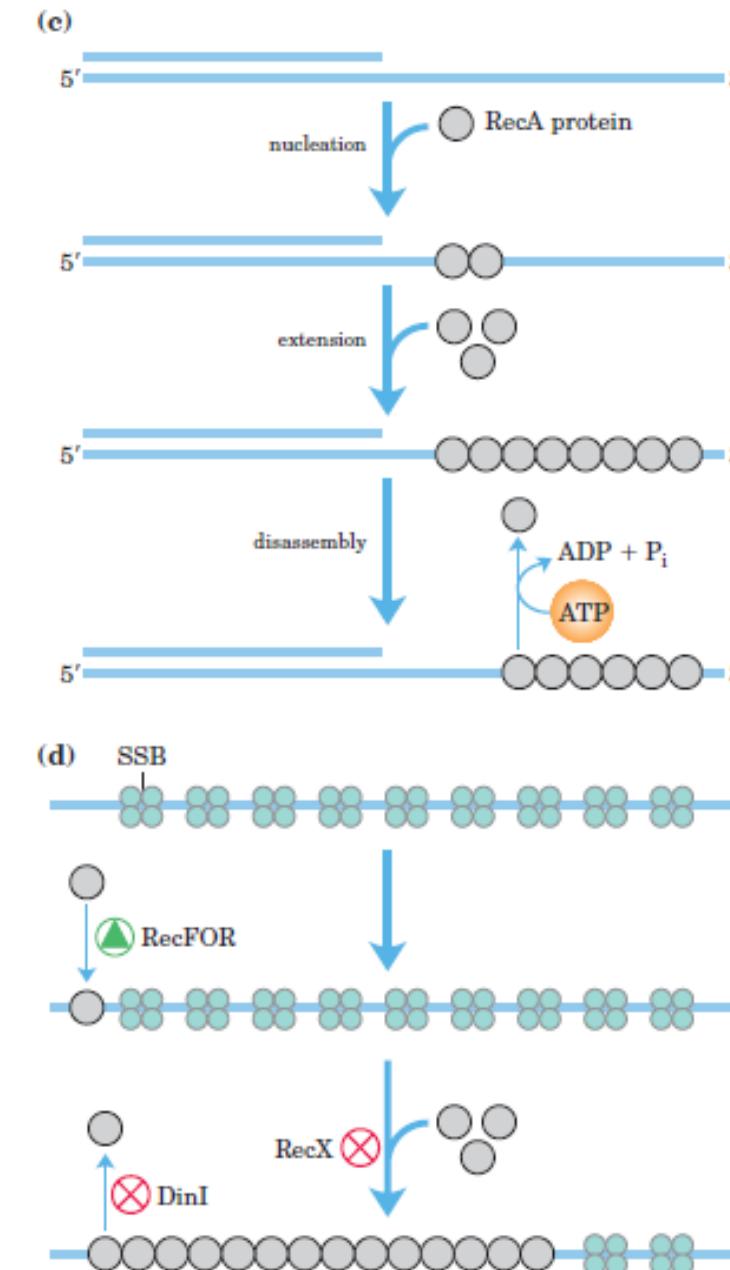




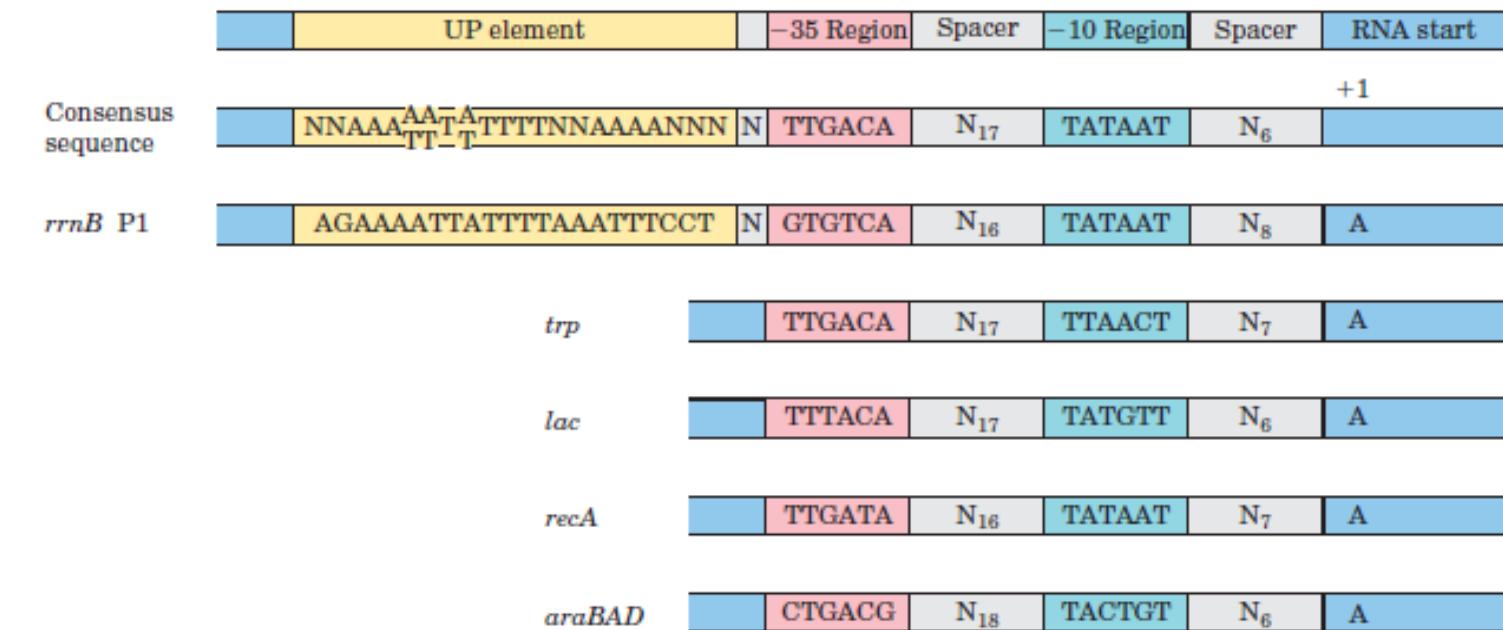


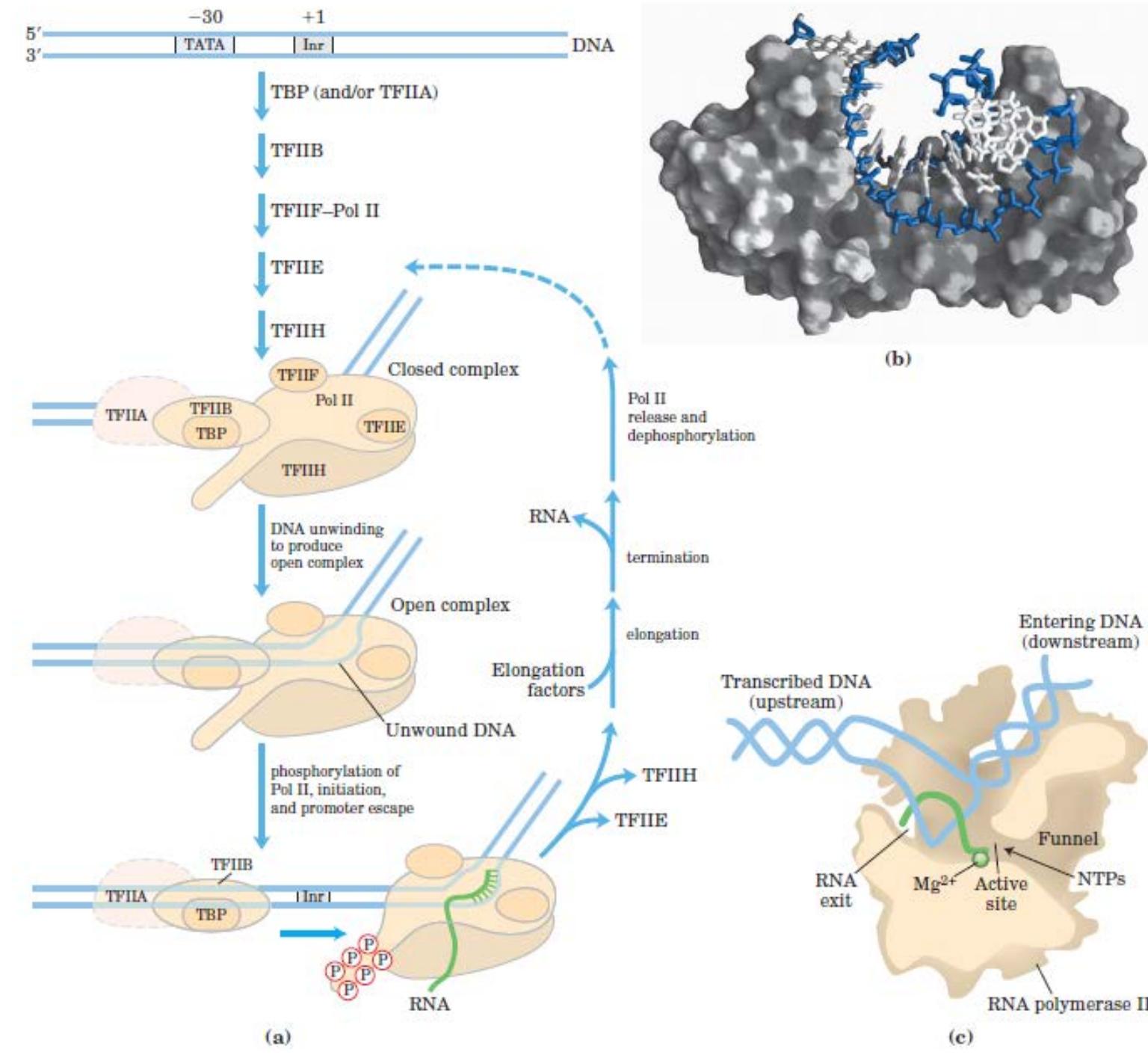


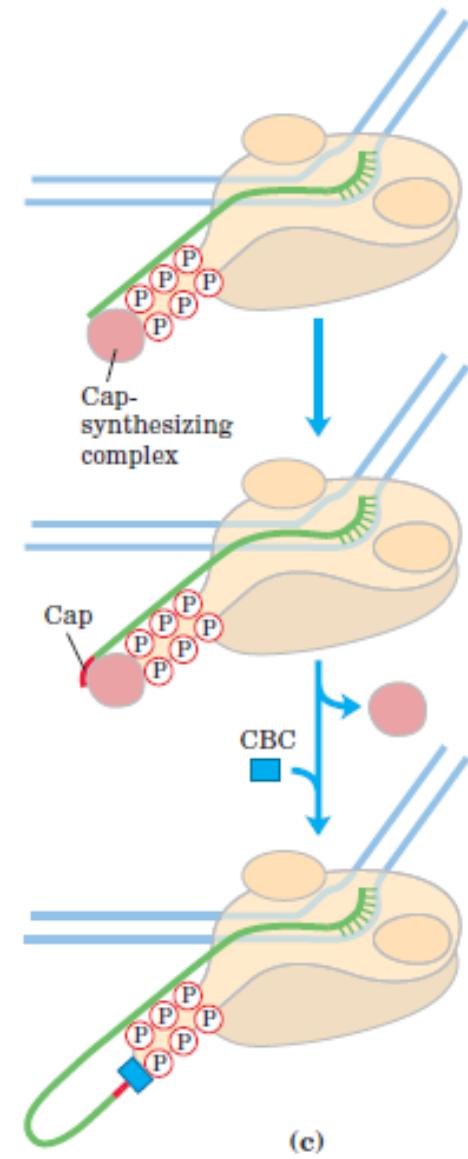
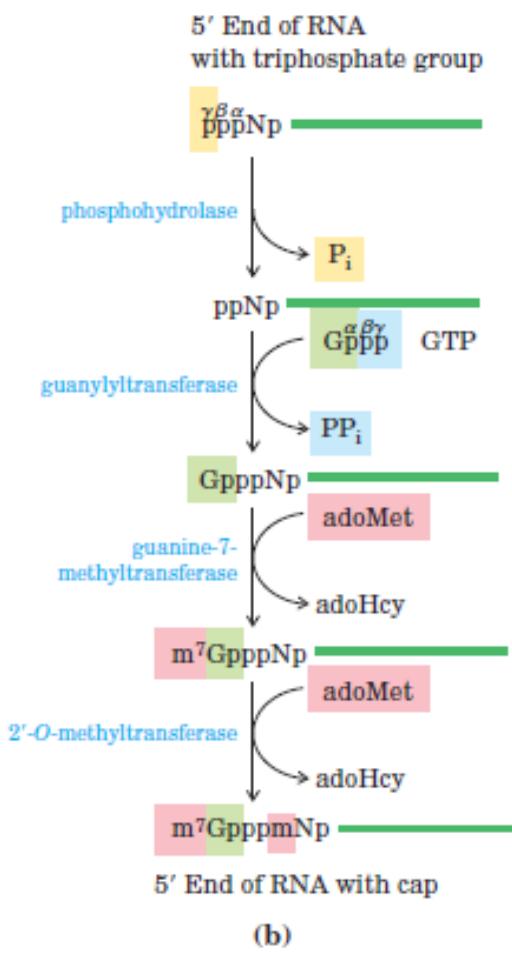
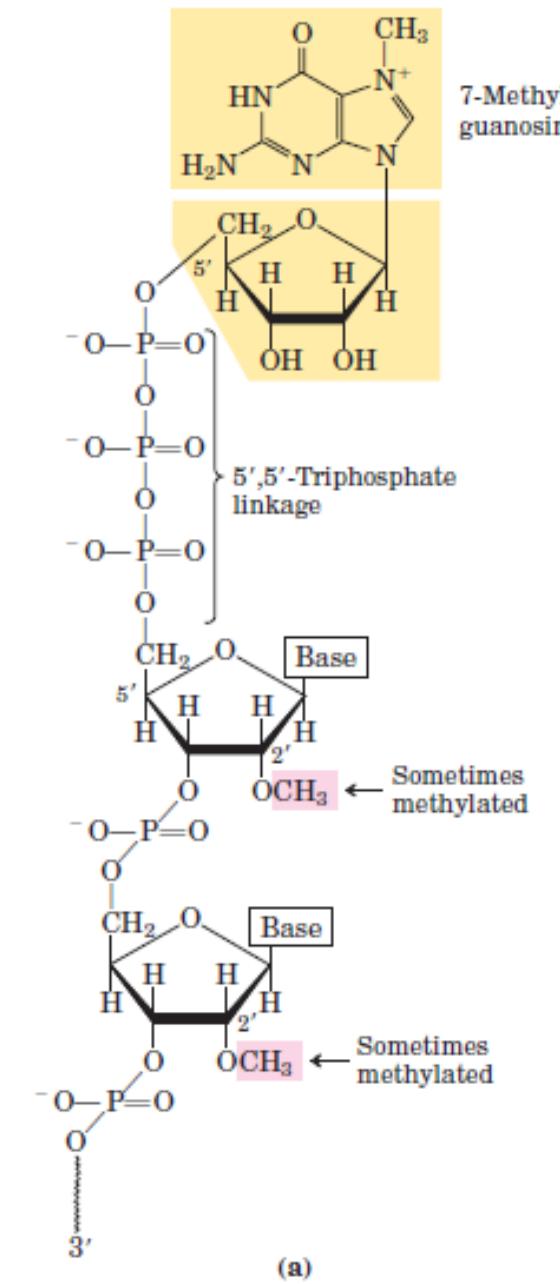


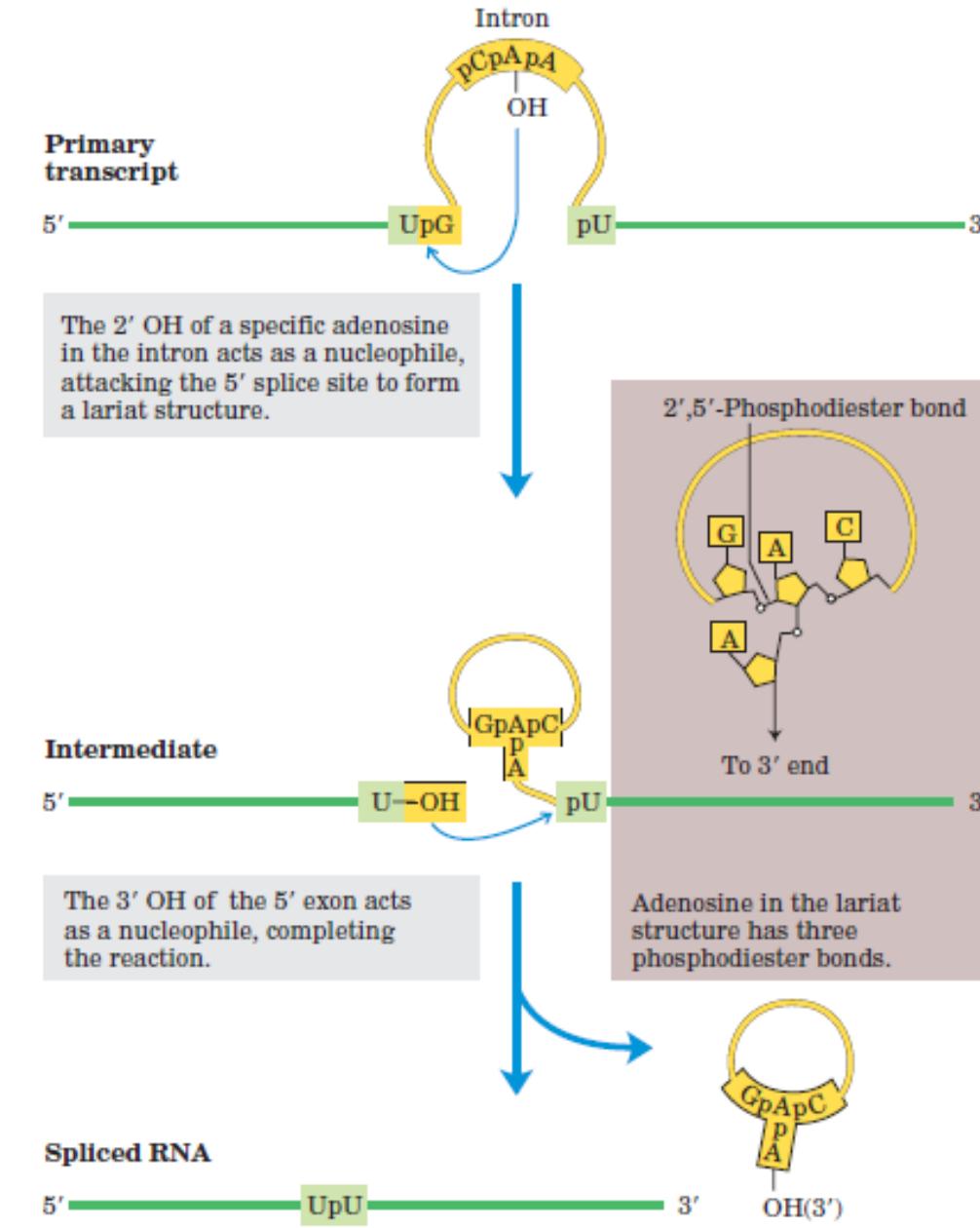


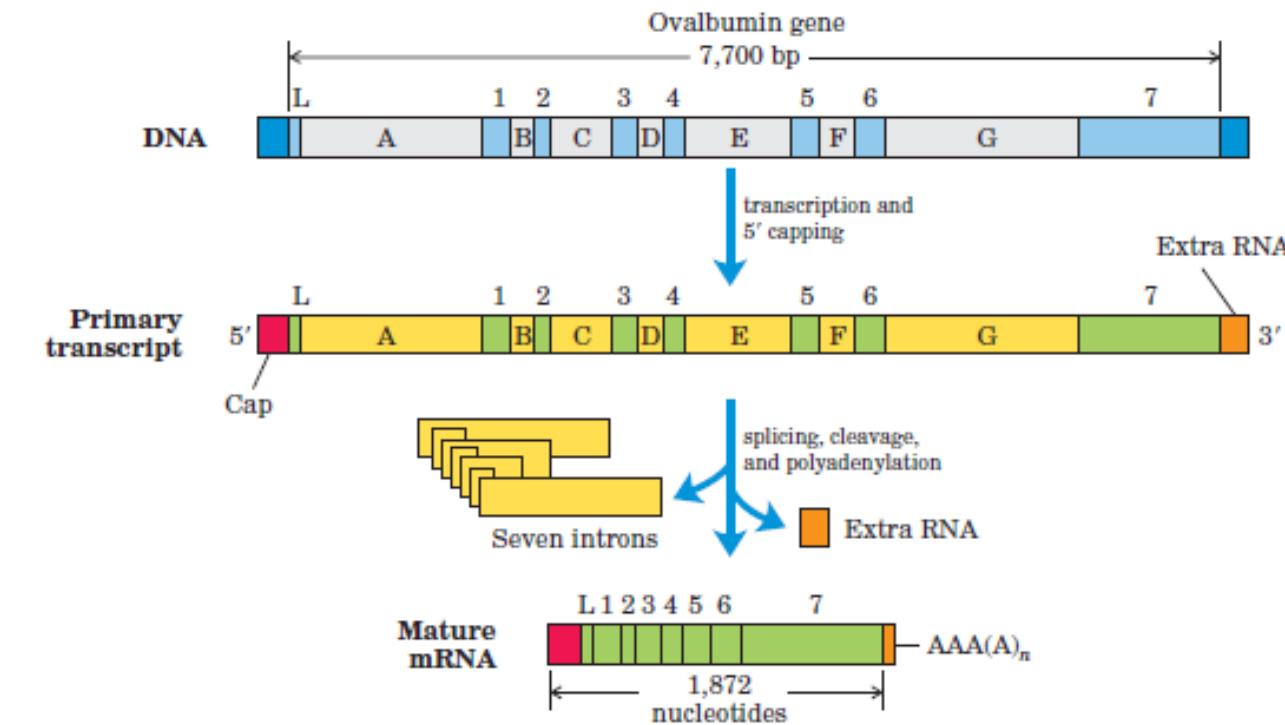
Continued branch migration yields a circular duplex with a nick and either a displaced linear strand (left) or a partially single-stranded linear duplex (right).

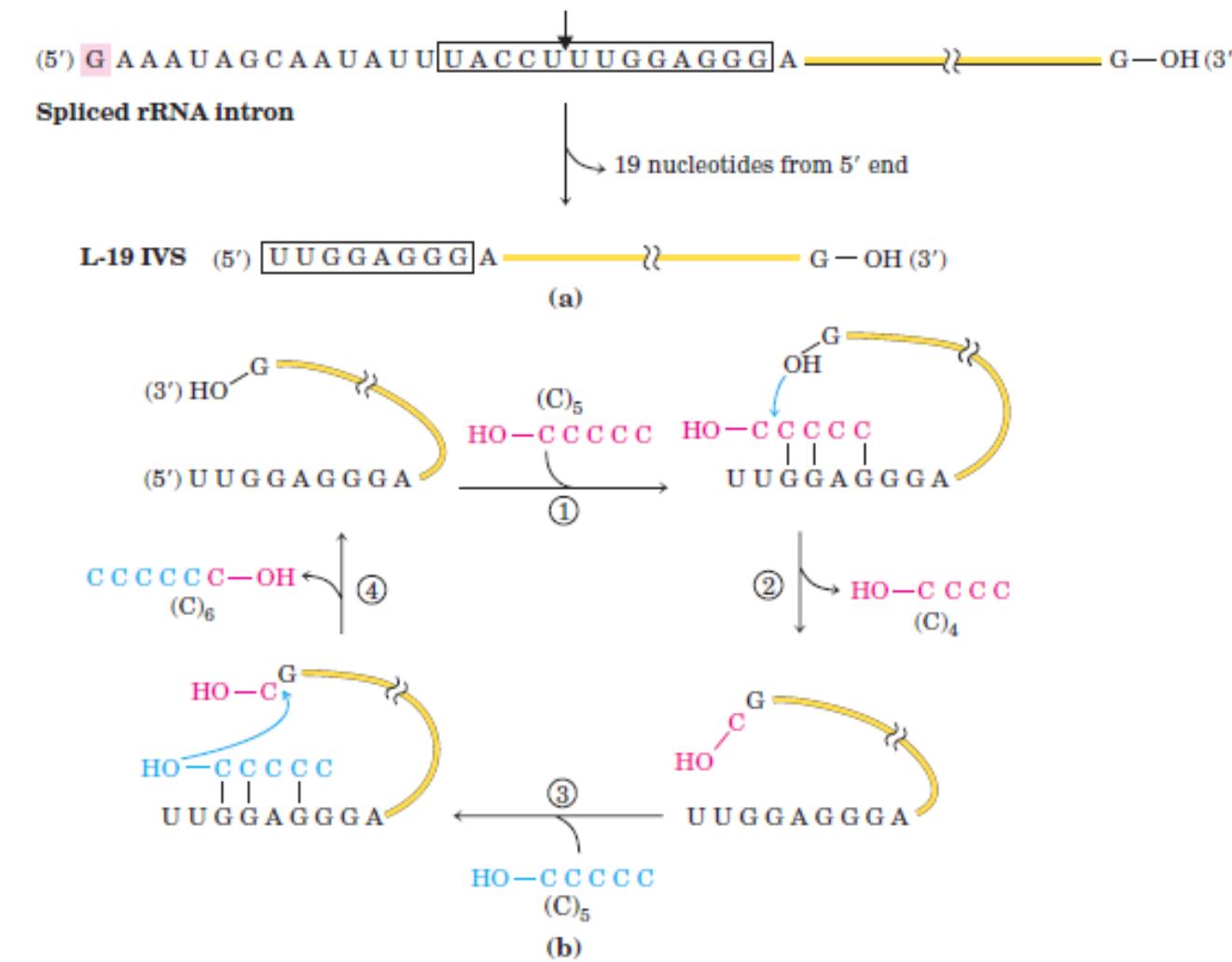


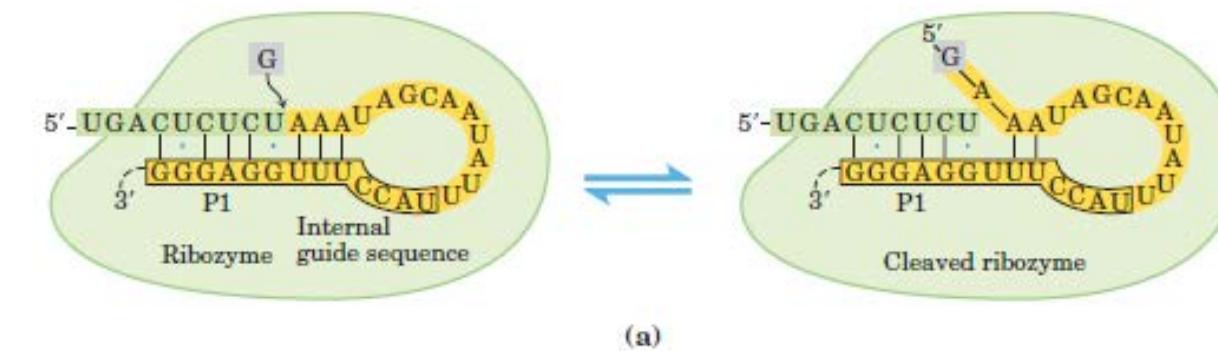




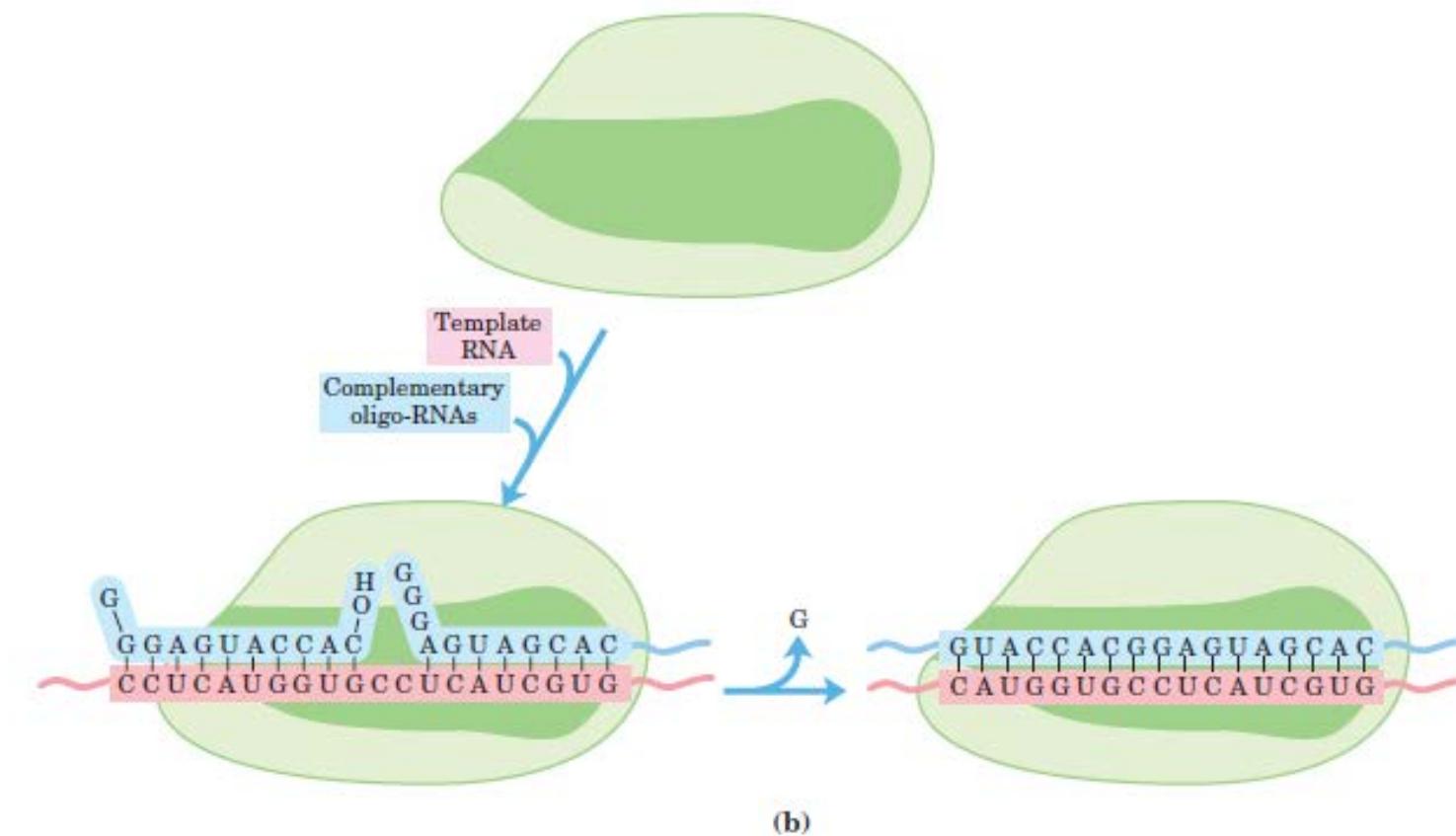








(a)



(b)