

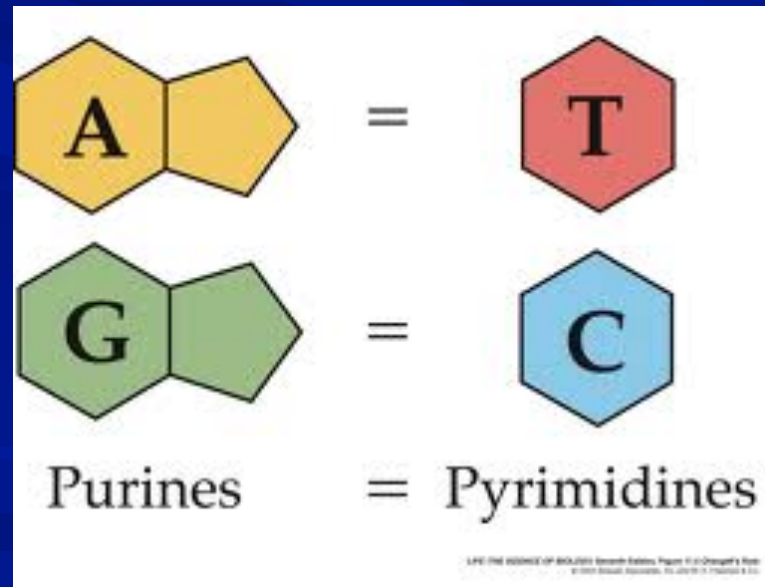
Ch. 12-1/12-2: DNA Structure & Replication

- Essential Questions:
 - What is the overall structure of DNA?
 - What happens during DNA replication?

■ The structure of DNA

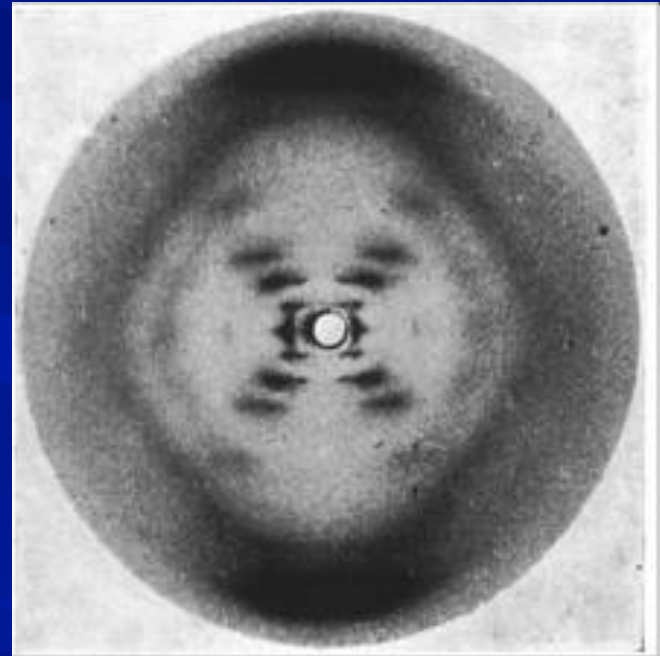
– Chargaff's rules

- Amount of Adenine = amt. of Thymine
- Amt. of Guanine = amt. of Cytosine



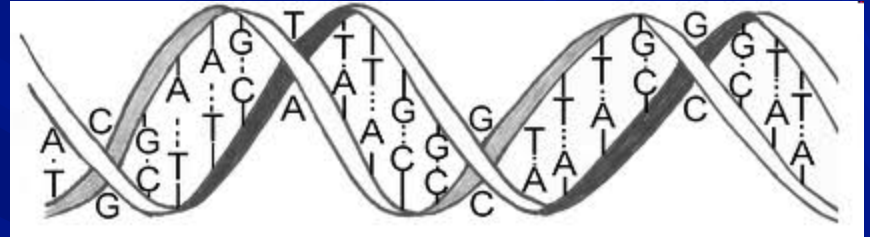
– X-Ray evidence

■ Rosalind Franklin – shows helix structure



– The Double Helix

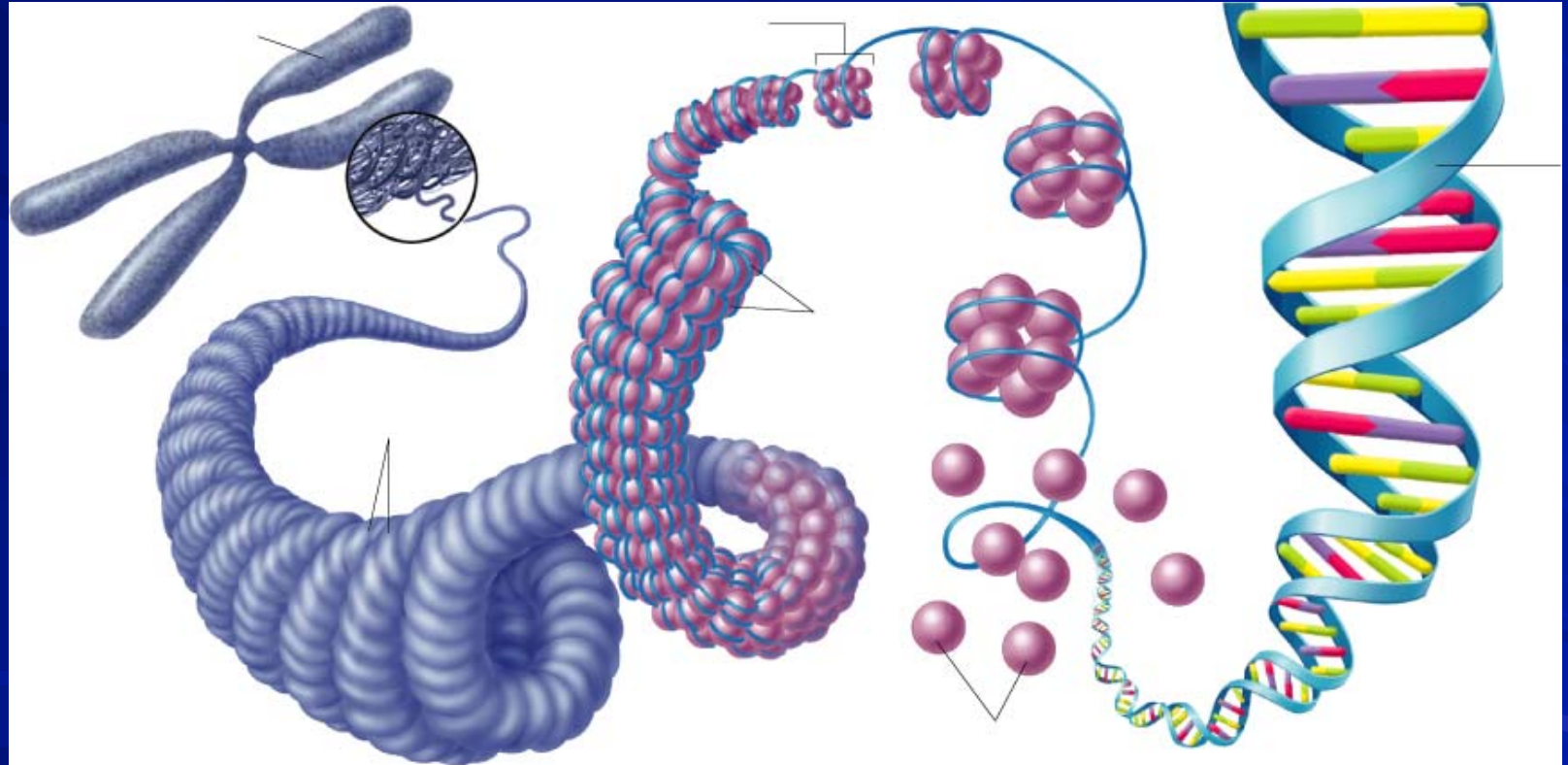
■ Watson & Crick



■ DNA & chromosomes

- Prokaryotes: 1 strand DNA = chromosome
- Eukaryotes: up to 1000x as much DNA as prokaryotes
 - DNA length – long!
 - Bacteria: DNA is 1000x longer than cell

■ Chromosome structure



■ DNA replication

- Structure of molecule explains how DNA is copied
- Each strand can be used to copy opposite strand because of base-pair rules – “complimentary”

