

Chromatin and Chromosomes

- **Histones**—disc-shaped cluster of eight proteins
 - DNA molecule winds around the cluster
 - Repeats pattern 800,000 times
 - Appears to be divided into segments: nucleosomes
- **Nucleosome** consists of:
 - **Core particle**—histones with DNA around them
 - **Linker DNA**—short segment of DNA connecting core particles
 - One-third shorter than DNA alone
- **Chromatin–protein complex** thrown into complex, irregular loops and coils
 - 1,000 times shorter than original molecule