

Gene Expression

- What is “gene expression”?
- The process by which the information in a gene is used to make a gene product (usually a protein).

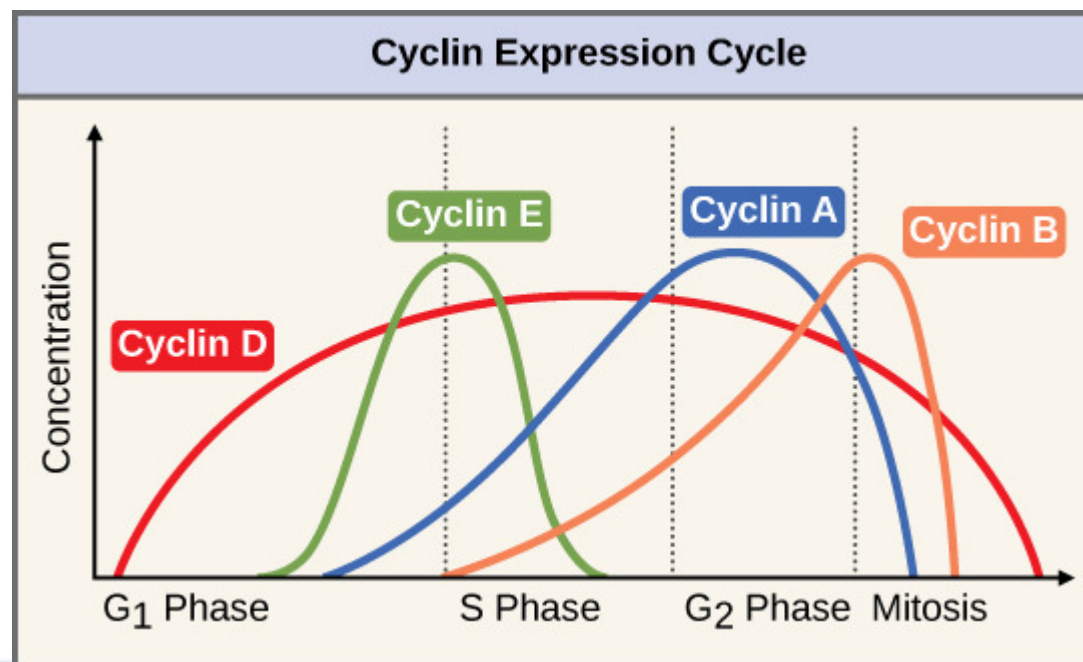
Gene Regulation

- What is “regulation”?
- a rule, principle, or condition that governs procedure or behavior



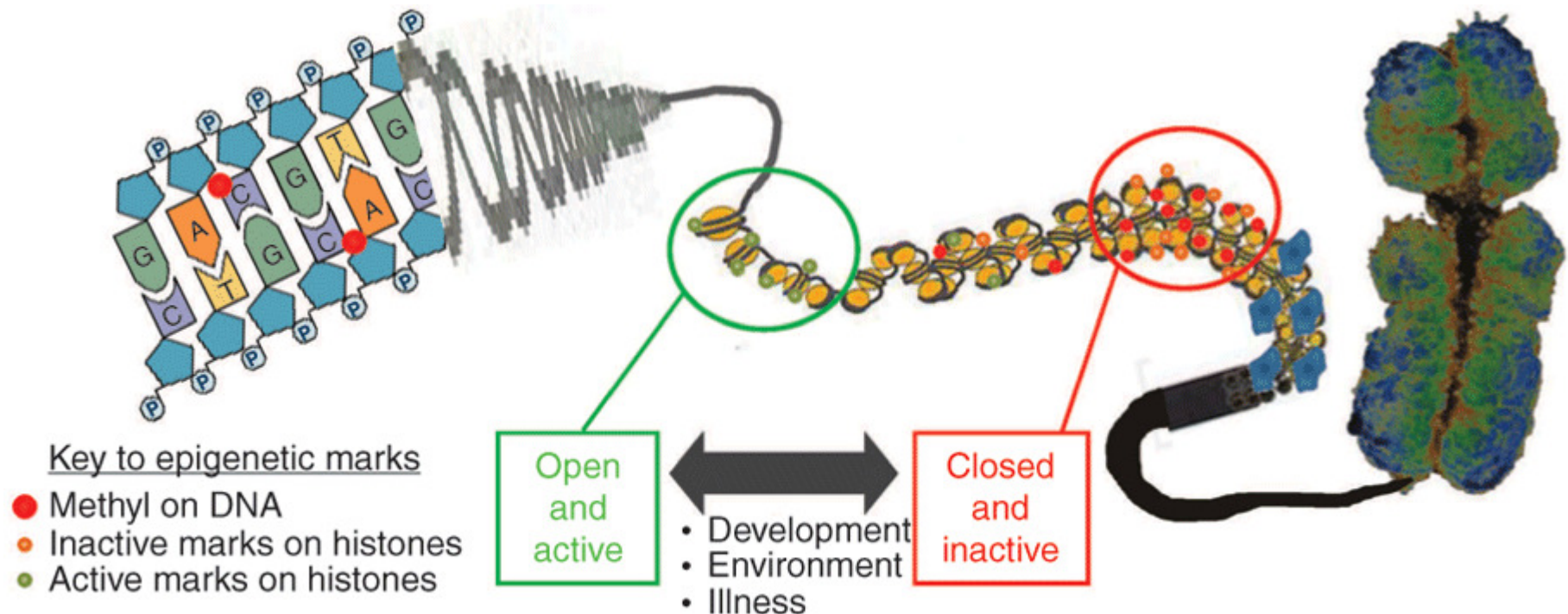
Transcription Factors

- A protein that binds to specific DNA sequences and up- or downregulates transcription.
- X chromosome inactivation
- Cyclin levels during the cell cycle



DNA Methylation

- A methyl group is added to a DNA base and (usually) downregulates expression.
- Does not change the gene, but is heritable.
- X chromosome inactivation



Gene Therapy

- Transplanting normal genes into cells to replace missing or defective ones in order to correct genetic disorders.
- Uses a virus as the vector.

