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Cell cycle

1. G1 Phase: regular living state of cells
    - Cell is growing and developing
2. S Phase: *Synthesis*
    - Time when DNA is replicating
3. G2 Phase: preparation for mitosis
4. Mitosis & Cytokinesis

Experiments

- **Hershey/Chase experiment** = use $^{3}2P$-marked phosphates within DNA and $^{3}5S$-marked amino acids to create some bacteriophages
    - Phages marked with modified phosphates show radioactivity only in infected bacteria
    - Phages marked with modified amino acids show radioactivity only in solution surrounding infected bacteria
- **Meselson/Stahl** = which model of DNA replication was accurate?
    - Models
        1. Conservative = parent double-helix stays intact, while newly constructed double helix is composed entirely of "new" nucleic acid monomers
        2. Semi-conservative = each half of the parent double-helix is split and a new half is constructed from "new" nucliec acid monomers
        3. Dispersive = parent double-helix is cut up; daughter DNA double-helices are composed of segments of both parent material and "new" nucleic acid monomers