ADVANCED BIOLOGY: THE CELL CYCLE

(USE CHAPTER 12 AS A RESOURCE)

Cell Division

Cell Cycle

MOST CELL DIVISION RESULTS IN GENETICALLY IDENTICAL DAUGHTER CELLS

1. Cellular Organization of the Genetic Material
2. Genome
3. Chromosomes
4. Chromatin
5. Somatic Cells
6. Gametes
7. Distribution of Chromosomes During Eukaryotic Cell Division
8. Sister chromatids
9. Centromere
10. Mitosis
11. Cytokinesis

THE MITOTIC PHASE ALTERNATES WITH INTERPHASE IN THE CELL CYCLE



1. Phases of the Cell Cycle
2. M Phase



1. Interphase
2. G1 Phase
3. S Phase
4. G2 Phase
5. The Mitotic Spindle: A Closer Look
6. Mitotic Spindle
7. Centrosome
8. Aster
9. Kinetochore
10. Metaphase Plate
11. Movement of chromosomes toward poles
12. Nonkinetochore microtubules
13. Cytokinesis: A Closer Look



1. Binary Fission in Bacteria:
2. Binary Fission



1. Bacterial Chromosomes
2. The Evolution of Mitosis

THE EUKARYOTIC CELL CYCLE IS REGULATED BY A MOLECULAR CONTROL SYSTEM

1. Evidence for Cytoplasmic Signals
2. Checkpoints for the Cell Cycle Control System
3. Cell Cycle Control System
4. Checkpoint
5. G0 Phase
6. Growth factors
7. Density Dependent Inhibition
8. Anchorage Dependence
9. Loss of Cell Cycle Controls in Cancer Cells