Cellular Membranes

1. Membrane Composition and Structure

    A. Lipids constitute the bulk of a membrane
    B. Membrane components are revealed by freeze-fracturing
    C. Membrane proteins are asymmetrically distributed
    D. Membrane carbohydrates are recognition sites

2. Animal Cell Junctions

    A. Tight junctions seal tissues and prevent leaks
    B. Desmosomes rivet cells together
    C. Gap junctions are a means of communication

3. Passive Processes of Membrane Transport

    A. The physical nature of diffusion
    B. Simple diffusion is passive and unaided
    C. Membrane transport proteins are of several types
    D. Facilitated diffusion is passive but uses carrier proteins
    E. Osmosis is passive water movement through a membrane

4. Active Processes of Membrane Transport

    A. Active transport requires energy and carriers
    B. Macromolecules and particles enter the cell by endocytosis
    C. Receptor-mediated endocytosis is highly specific
    D. Exocytosis moves materials out of the cell

5. Membranes Are Not Simply Barriers

A. Some membranes process information
B. Some membranes transform energy
C. Cell adhesion molecules organize cells into tissues

6. Membranes Are Dynamic

A. Rem: Endomembrane system!