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| **Organelle** | **Image** | **Function** |
| Cytoplasm | See the source image | * Gel-like substance holding the other organelles in place * Made mostly of water * Clear in color * Contains enzymes, salts, organelles, and various organic molecules |
| Cell Membrane |  | * Semi-permeable membrane * Surrounding cytoplasm of cell * Controls what comes in and out of cell * “Border patrol” of the cell |
| Cell Wall | See the source image | * Found only in plant cells * Rigid * Provides structure |
| Chloroplast | See the source image | * Found only in plant cells * Conducts photosynthesis * Filled with chlorophyll |
| Mitochondria | See the source image | * Cellular respiration * ATP synthesis * Breaks down glucose * “Powerhouse” of cell |
| Ribosome |  | * Protein synthesis * Links amino acids together in peptide chains (translation) * Made of RNA * Found in cytoplasm and on RER |
| Vacuole | See the source image | * Contains waste products * Contains water in plant cells * Maintains turgidity in plant cells * Isolates harmful materials |
| Nucleus | See the source image | * Controls functions of cell * Regulates gene expression * “Brain” of the cell * Where DNA is found |
| Rough Endoplasmic Reticulum (RER) |  | * Export of proteins * Found near the nucleus * Ribosomes on outside * Folds proteins into their 3-D shape * “Highway” of the cell |
| Smooth Endoplasmic Reticulum (SER) |  | * Phospholipid and cholesterol synthesis * Smooth and slippery * No ribosomes |
| Golgi Apparatus (Golgi Body) |  | * Collects and exports of proteins received from RER * Packages proteins into vesicles * Sent out of cell (exocytosis) or used in cell * “Post office” of the cell * Looks like stacked pancakes |
| Lysosome | See the source image | * Engulfs and breaks down biomolecules * Contains digestive enzymes * Removes bacteria and food particles from cell * “Garbage disposal” of the cell |
| Centrosome |  | * Directs microtubule movement * Pulls chromosomes to opposite sides of the cell during mitosis |