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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
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