

Source: [KBhBIO101Cells](#)

# 1 | Organelles in Eukaryotic Cells

## 1.1 | Chloroplast and Mitochondria

- **Chloroplast** — found in plants + does photosynthesis
- **Mitochondria** — found in animals + store ATP and extract energy from ATP

## 1.2 | Rough Endoplasmic Reticulum (ER) and Smooth ER

- **Rough ER** — covered by ribosomes and folds [KBhBIO101Proteins](#) proteins
- **Smooth ER** — not covered by ribosomes and makes [KBhBIO101Lipids](#) lipids

## 1.3 | Ribosomes and Golgi apparatus

- **Ribosomes** => synthesizes proteins
- **Golgi apparatus** => packs, modifying, and moving proteins

## 1.4 | Cell Wall and Plasma Membrane

- **Cell Wall** — found in plants => surround the cell: hard
- **Plasma membrane** — found in animals => surround the cell: soft [KBhBIO101Lipids](#) lipids

## 1.5 | Cytosol, Cytoplasm and Cytoskeleton

- **Cytosol** => liquid found inside cells; the “cytoplasm” floats within it
- **Cytoplasm** => all the stuff within the cell

## 1.6 | Nucleus and Nucleolus

- **Nucleus** => centre of the cell, stores DNA
- **Nucleolus** => largest part of the nucleus that makes ribosomes

## 1.7 | Lysosomes and Food Vacuoles

- **Lysosomes** => vesicles that contains enzymes that breaks down biomolecules
- **Food Vacuoles** => vesicles that stores food and other resources

## 1.8 | Cytoskeleton and Microtubules

- **Cytoskeleton** => complex network of proteins + fibres that organize the rest of the cell
- **Microtubules** => Polymers of tubulin protein that provides the main structure of eukaryotic cells

## 1.9 | Flagella and Cilia

- **Flagella** => a bacteria's tail — allow them to move and also act as an sensory organ. longer than a cilia, and moves in sinusoidal pattern.
- **Cilium** => a cell's "hair" — provides sensory and communications functions. Motil cilia could move about to "grab" things, and non-motile cilia can't move. more abundant than the flagella, and moves in circular pattern if they do move, and moves in circular pattern if they do move