Source: KBhBIO101EukaryoticOrganells

1 | Organizing Organelles Based on Membranes

By organizing KBhBIO101EukaryoticOrganells based on whether or not they have membranes, it helps us gauge the evolutionary history of cells.

1.1 | Membranous Organelles

These have membranes! They have their own plasma, regulates their own macromolecule consumption, hormones, etc. Based on KBhBIO101Endosymbiotic endosymbiotic theory, double-memranous organelles may perhaps be the organelles that were originally independent prokaryotic cells that evolve to coexist with Eukarotes; by the same token, single-membraneous organelles may be fragements of prokaryotic cells.

1.1.1 | Double Membranes

- Mitochrondria => store ATP and extract energy from ATP
- Chloroplasts => Does photosynthesis

1.1.2 | Double Membranes, Evolved Later

- Endoplasmic reticulum => forms the network of transferring proteins and other elements
- Golgi body/Gioli apparatus => packs, sorts, and modifies proteins and other elements throughout the cell

1.1.3 | Single Membranes

- Vesticles
- Lysomoes => breaking stuff down and garbage dumps
- Vacuoles => storing water, nutrients, waste

1.2 | Non-Membranous Organells

These organelles does not process their own plasma, and they are mostly part of the cytoskeleton of a cell.

- Ribosomes => protein synthesizer in the cell
- Centrosome => forms flangella, cilla, and handles cells divisions
- Plastids => creates colours displayed in the chromoplasts