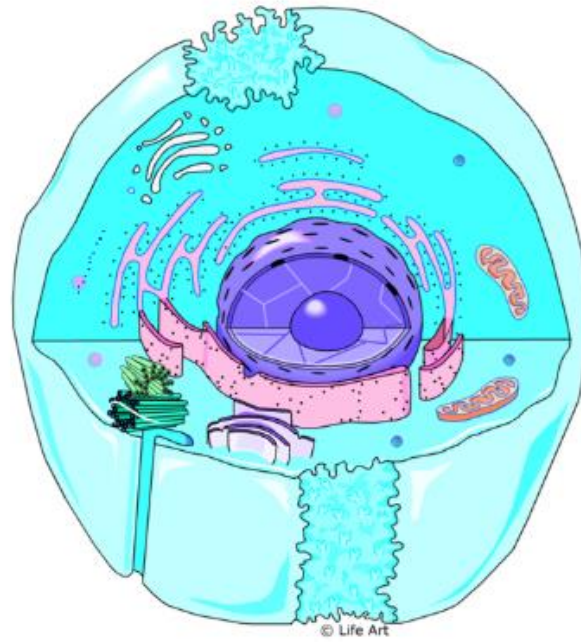


# Identifying Eukaryotic Animal Cell Organelles



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This is a drawing of a generic eukaryotic animal cell.

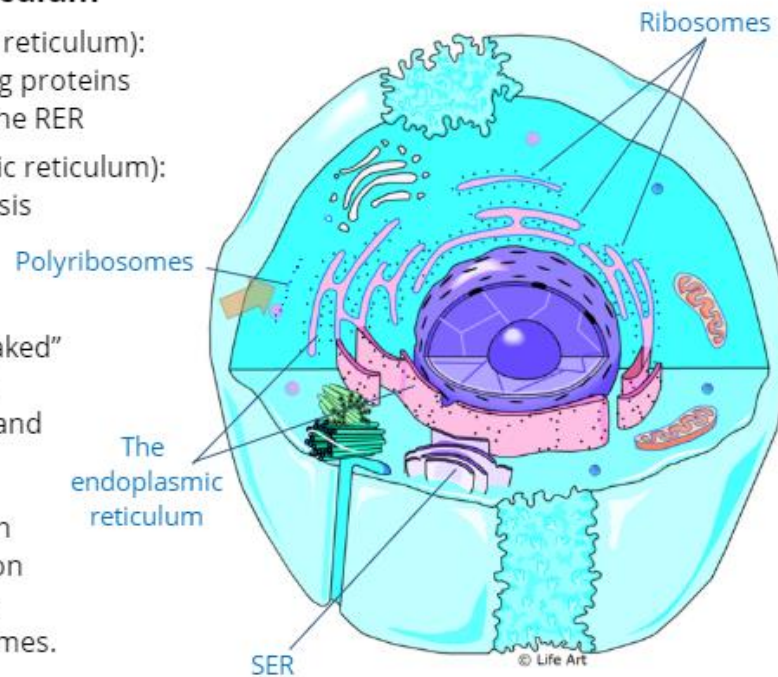


## The endoplasmic reticulum

- RER (rough endoplasmic reticulum): important in transporting proteins made by ribosomes on the RER
- SER (smooth endoplasmic reticulum): important in lipid synthesis

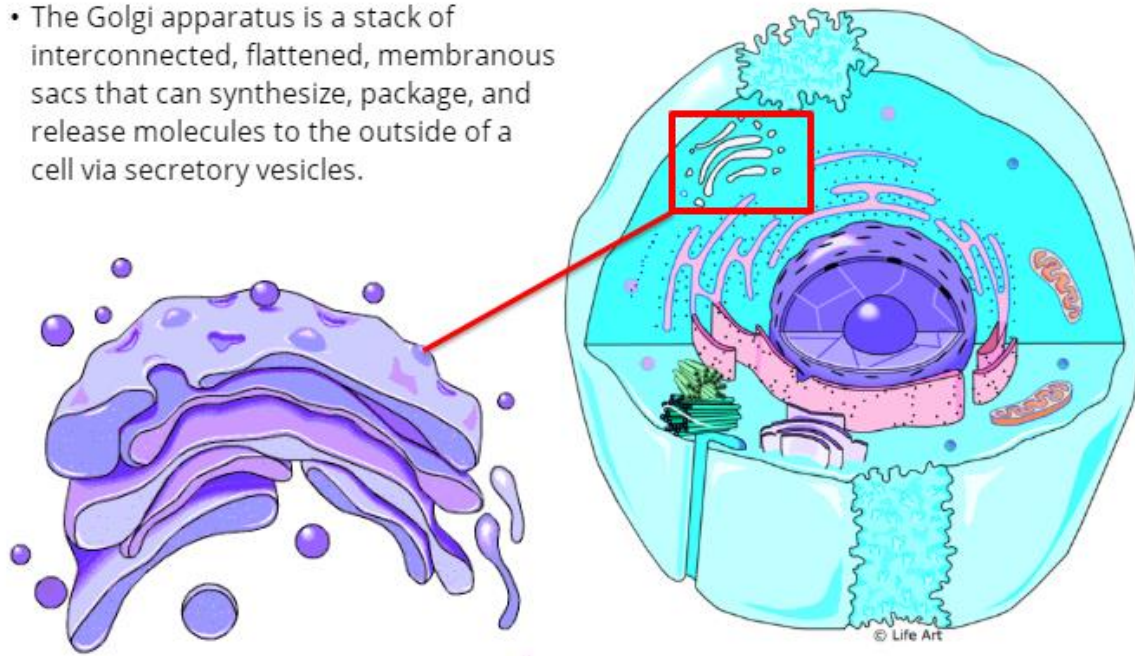
## Ribosomes

- Ribosomes are small, “naked” (non-membrane bound) particles made of r-RNA and proteins.
- They are the cell’s protein factories and are found on RER and scattered in the cytoplasm as polyribosomes.



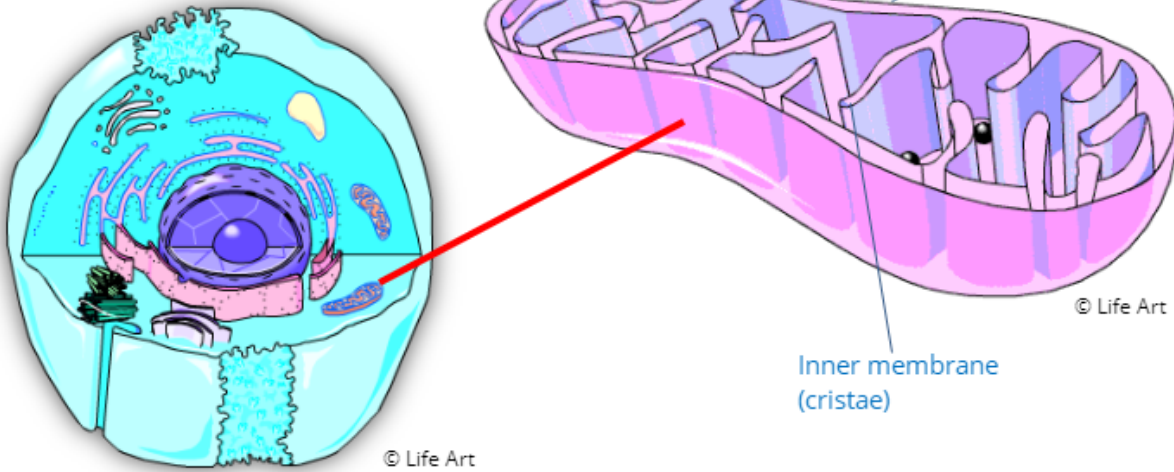
## The Golgi Apparatus

- The Golgi apparatus is a stack of interconnected, flattened, membranous sacs that can synthesize, package, and release molecules to the outside of a cell via secretory vesicles.



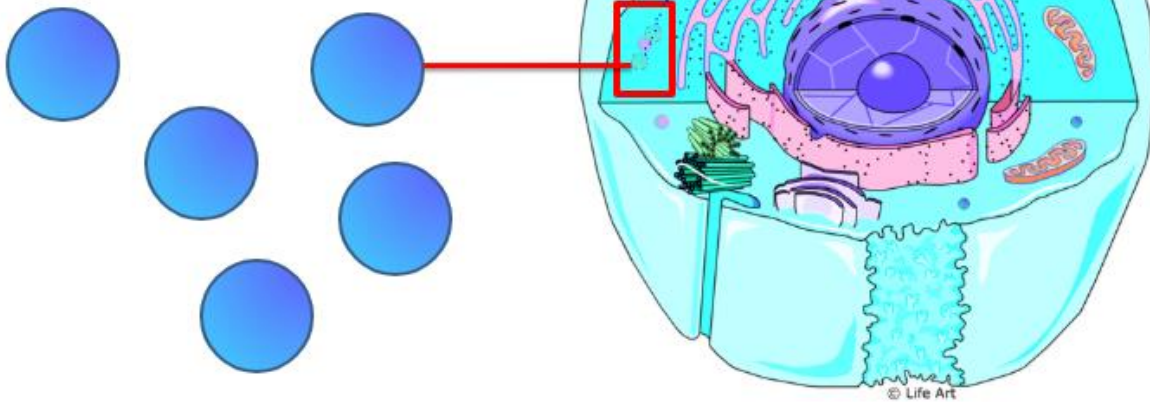
## Mitochondria

- These organelles have two layers of membranes. Energy from glucose and other nutrients is transferred to ATP through a series of chemical reactions in the presence of oxygen.



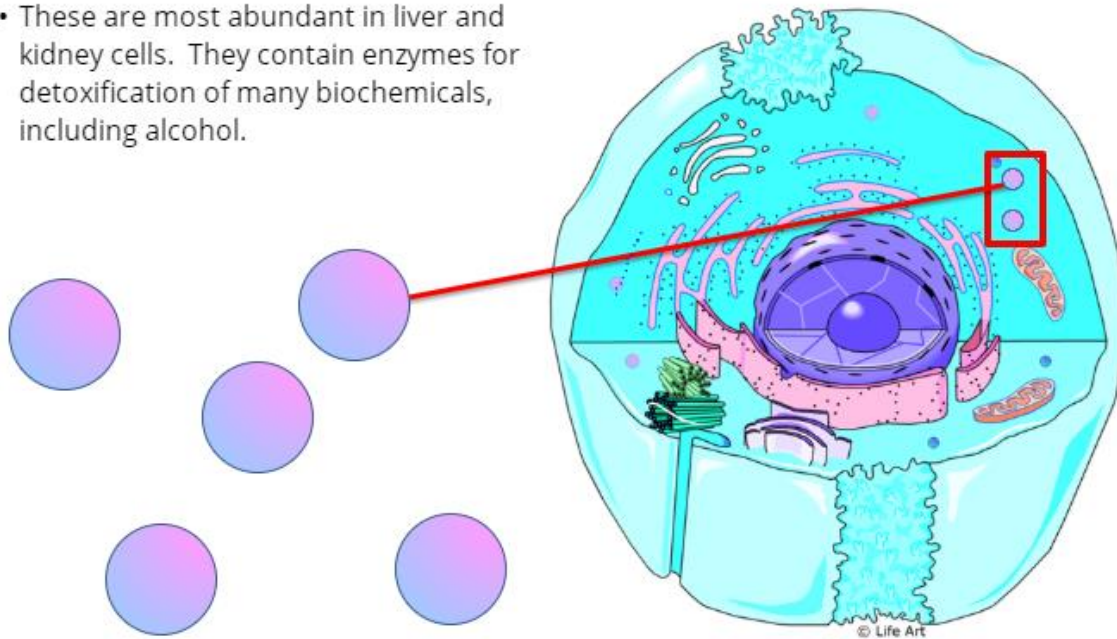
## Lysosomes

- These vesicles contain hydrolytic enzymes that decompose or hydrolyze biomolecules. They are made by the Golgi complex and their nicknames are "suicide bags" and "garbage disposals."



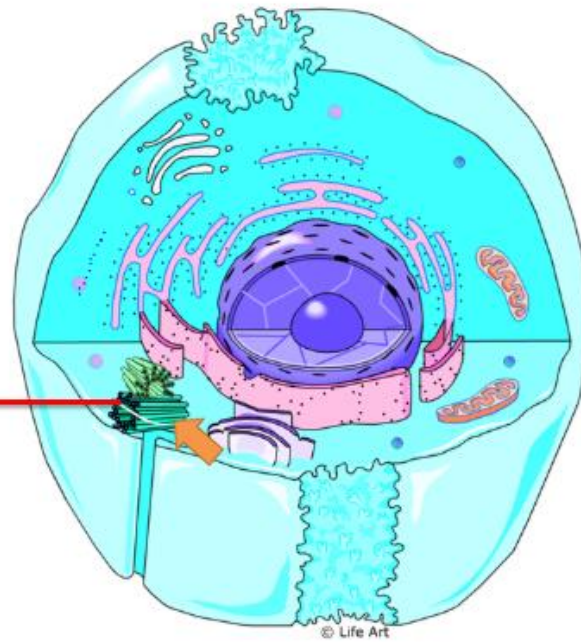
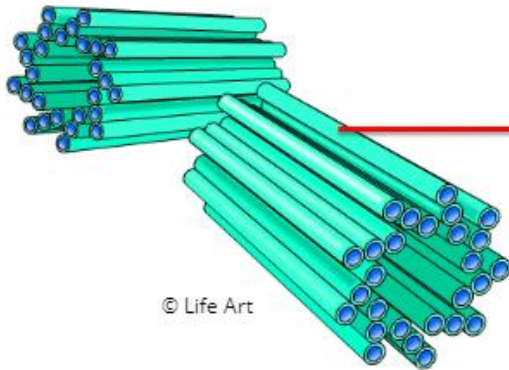
## Peroxisomes

- These are most abundant in liver and kidney cells. They contain enzymes for detoxification of many biochemicals, including alcohol.



## Centrosome

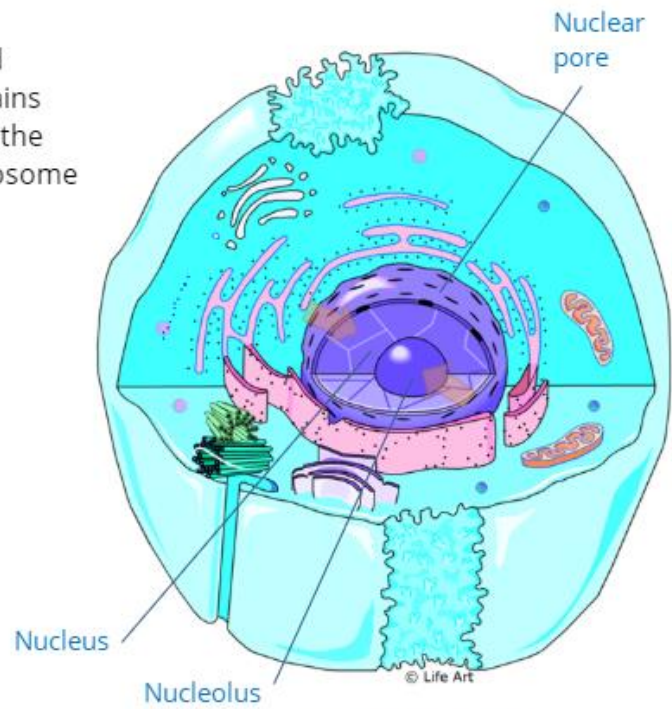
- The centrosome contains two hollow cylindrical centrioles, which are perpendicular to each other. They play a crucial role in mitotic division of eukaryotic animal cells.





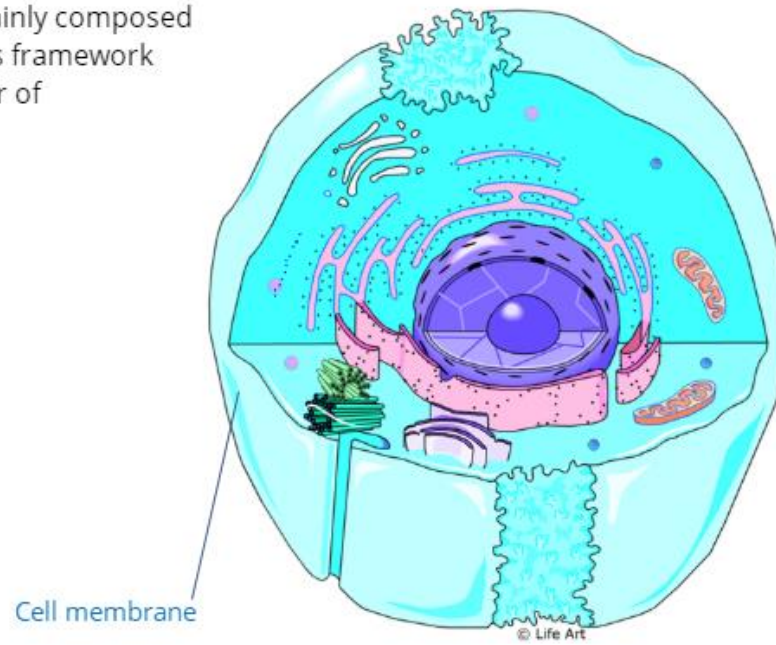
## Nucleus

- The nucleus is the double-layered control center of the cell. It contains chromatin (genetic material) and the nucleolus, which is the site of ribosome production.



## Cell Membrane

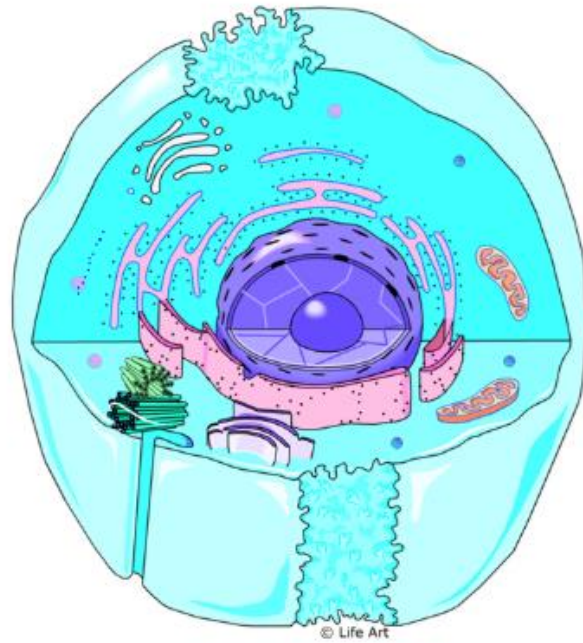
- The cell membrane is mainly composed of lipids and proteins. Its framework consists of a double layer of phospholipids.



## Summary

### Eukaryotic cells

- Plants, animals, fungi, and protista are composed of eukaryotic cells. In these cells, organelles create compartments where specific biochemical reactions can occur.



**Congratulations**

**You have completed this  
learning activity.**

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