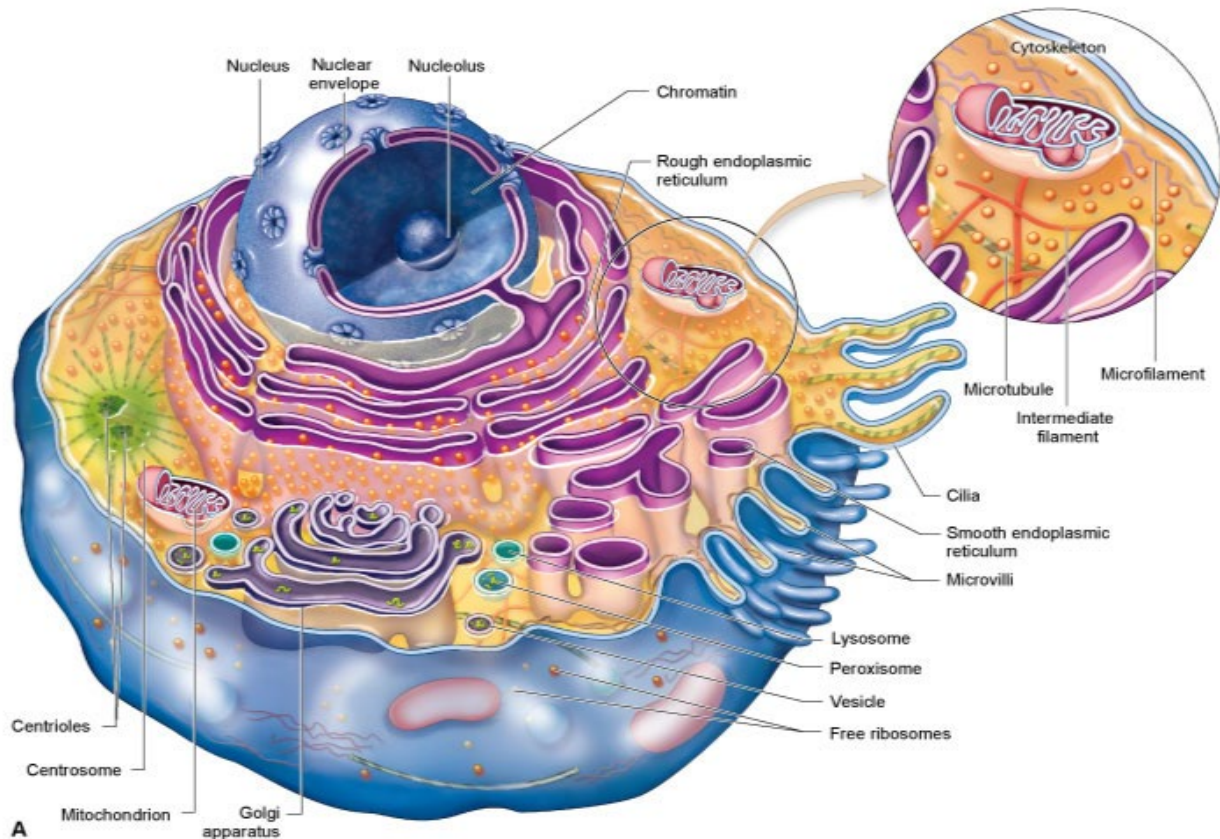


## Cell Anatomy

### Cell Anatomy Diagram

The image below is a general ('composite') cell and the various organelles (meaning 'tiny organs') that make it up. Use this image as a reference as you study cellular anatomy.



### Cellular Organelle Functions

Each of the organelles found in a cell has a specific function(s). Use the table on the next page as a reference for the various organelles and their functions. Add any additional organelles and functions to the table based on the depth you go into in your course(s).

Organelle	Function
Centrioles	A small, cylindrical cell organelle, seen near the nucleus in the cytoplasm of most eukaryotic cells, that divides in perpendicular fashion during mitosis, the new pair of centrioles moving ahead of the spindle to opposite poles of the cell as the cell divides.
Plasma membrane	The semipermeable membrane enclosing the cytoplasm of a cell.
Mitochondria	An organelle in the cytoplasm of cells that functions in energy production.
Cytoplasm	The water-soluble fluid of the cell, constituting the fluid portion that remains after removal of the organelles and other intracellular structures.
Smooth endoplasmic reticulum	A network of tubular membranes within the cytoplasm of the cell with a smooth surface.
Rough endoplasmic reticulum	A network of tubular membranes within the cytoplasm of the cell studded with ribosomes.
Golgi apparatus	An organelle, consisting of layers of flattened sacs, that takes up and processes secretory and synthetic products from the endoplasmic reticulum and then either releases the finished products into various parts of the cell cytoplasm or secretes them to the outside of the cell.
Ribosomes	Tiny, somewhat mitten-shaped organelle occurring in great numbers in the cell cytoplasm either freely or attached to the outer surfaces of endoplasmic reticulum and functioning as the site of protein manufacture.
Cytoplasm proteins	Compounds composed of the 20 amino acids and linked in a genetically controlled linear sequence into one or more long polypeptide chains and found within the cytosol.
Nuclear membrane	The double membrane surrounding the nucleus within a cell.
Nucleolus	A conspicuous, rounded body within the nucleus of a cell.
Nucleus	A specialized, usually spherical mass found in most living eukaryotic cells, directing their growth, metabolism, and reproduction, and functioning in the transmission of genetic characters.

## References

Patton, K., Thibodeau, G., and Douglas, M. (2011). *Essentials of Anatomy and Physiology*. Elsevier. ISBN: 978-032305-382-2

Definitions source: <https://www.dictionary.com/>