



Basics in biology: cell

SCIENCE

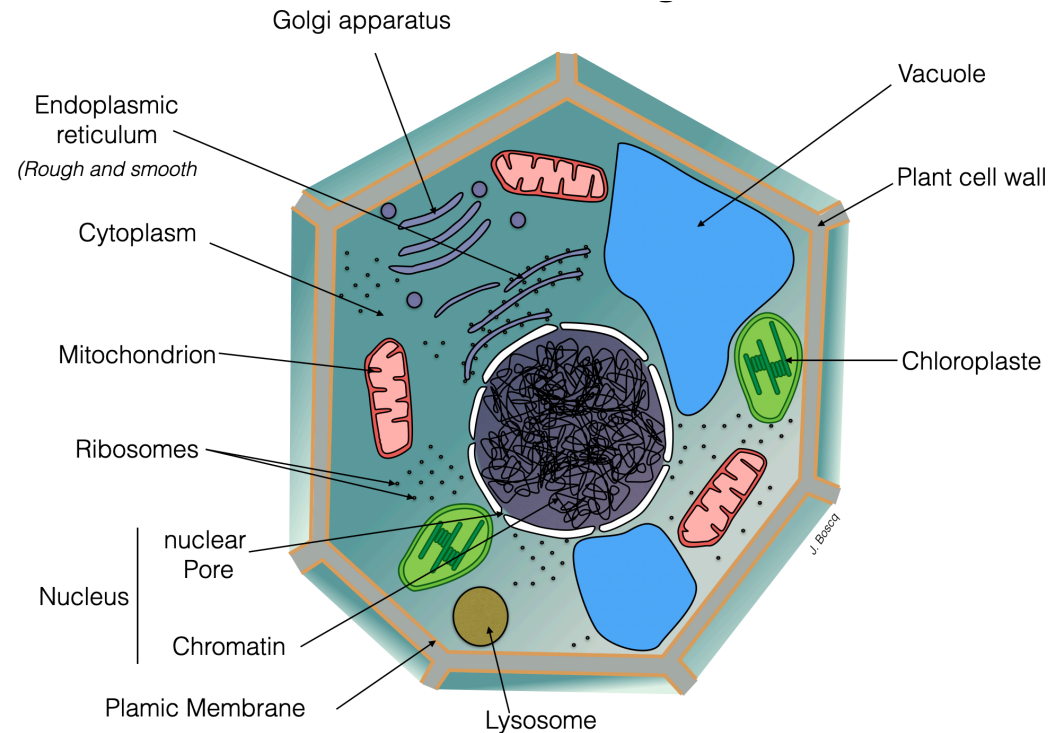
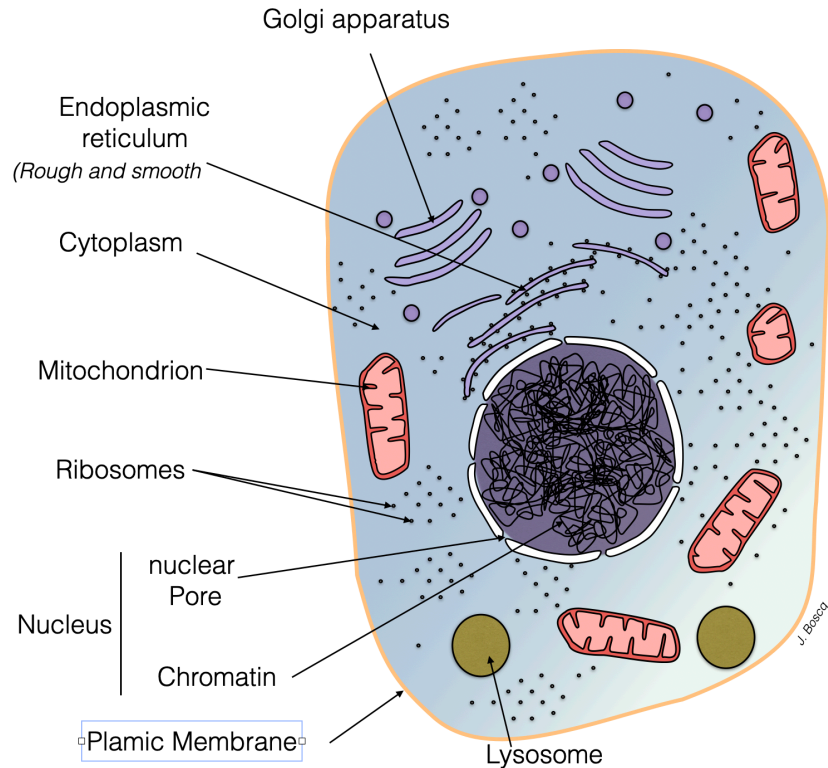
	Cell organelles	Structure	Function
<p>Chromatin Nucleolus Nuclear pore Nuclear membrane</p> <p>Nucleus</p>	<p>Nucleus</p> <p>6^e</p>	<p>The nucleus is a spherical-shaped organelle that is present in every eukaryotic cell. The structure of the nucleus includes nuclear membrane, nuclear pore, nucleoplasm, and nucleolus.</p>	<p>The nucleus is often called the control centre of eukaryotic cells. But the truth is that the nucleus is more the strongbox which protect the genetic material of the cell. This special material which is usually called chromatin is the blueprint for all our proteins.</p>
<p>ATP synthase particles Intermembrane space Matrix Ribosome Cristae Granules Inner membrane Outer membrane Deoxyribonucleic acid (DNA)</p>	<p>Mitochondrion</p> <p>2^{nde}</p>	<p>Mitochondria (a mitochondrion) are membrane-bound organelles, but they're membrane-bound with two different membranes.</p>	<p>Those membranes function in the purpose of mitochondria, which is essentially to produce energy.</p>
<p>Inner membrane Thylakoid Outer membrane Stroma</p>	<p>Chloroplast</p> <p>2^{nde}</p>	<p>Chloroplast has a double envelope membrane, including the outer envelope and the inner envelope. A complex membrane system, thylakoids, exists inside the chloroplast.</p>	<p>It is the site of the reactions of photosynthesis.</p>

<p style="text-align: center;">Plant Cell Vacuole</p>	<p style="text-align: center;">Vacuole</p> <p style="text-align: center;">2^{nde}</p>	<p>a vacuole is a membrane-bound cell organelle.</p>	<p>A vacuole stores water, biochemicals, helps in plant growth, and plays an important structural role for the plant.</p>
<p style="text-align: center;">(a) TEM showing ribosomes (b) Diagram of a ribosome</p>	<p style="text-align: center;">Ribosome</p> <p style="text-align: center;">1^{ère}</p>	<p>It is an intercellular structure made of both RNA and protein,</p>	<p>It is the site of protein synthesis in the cell</p>
<p style="text-align: center;">Endoplasmic Reticulum (ER)</p> <p style="text-align: center;">Figure: Endoplasmic Reticulum (ER), Image Copyright © Sagar Aryal, www.microbenotes.com</p>	<p style="text-align: center;">Endoplasmic Reticulum</p> <p style="text-align: center;">1^{ère}</p> <p style="text-align: center;">Term</p>	<p>The endoplasmic reticulum (ER) is a large, dynamic structure that serves many roles in the cell. It is a network of membranes with ribosome (Rough ER) or without (Smooth ER).</p>	<p>The most common role of the ER is to produce proteins for export, and to label them as such. But it can also serve to regulate intracellular calcium or detoxify the cell...</p>

<p>Golgi apparatus</p> <p>© Encyclopædia Britannica, Inc.</p>	<p>Golgi apparatus</p> <p>Term</p> <p>Sup</p>	<p>The Golgi apparatus is an organelle consisting of a stack of elongated membranes forming elongated compartments and vesicles, all grouped together in the cytoplasm.</p>	<p>The Golgi key functions are in trafficking, processing, and sorting of newly synthesized membrane and secretory proteins and lipids.</p>
<p>Lysosome</p>	<p>Lysosome</p> <p>1ère</p>	<p>Lysosomes are membrane-enclosed organelles that contain an array of enzymes</p>	<p>They can break down all types of biological polymers—proteins, nucleic acids, carbohydrates, and lipids. The lysosome is specialized in the digestion of assimilated molecules and the recycling of nutrients.</p>



Animal cell VS Plant cell



Plant and animal cells have several differences and similarities. For example, animal cells do not have a cell wall or chloroplasts but plant cells do. Animal cells are mostly round and irregular in shape while plant cells have fixed, rectangular shapes.

Plant and animal cells are both **eukaryotic cells**, so they have several features in common, such as the presence of a cell membrane, and cell organelles, like the nucleus, mitochondria and endoplasmic reticulum.