

**B.Sc Part 1**

**ZOOLOGY (subsidiary)**

**PAPER 1**

**GOLGI APPARATUS**

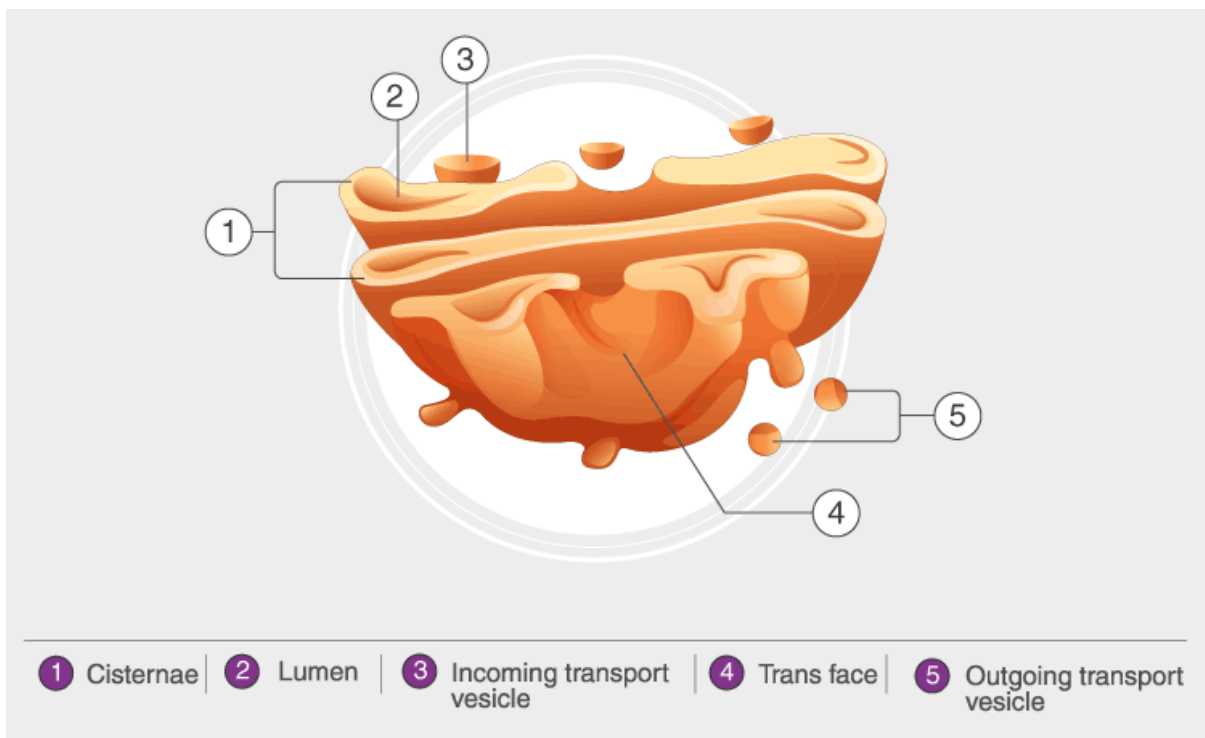
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# Golgi apparatus

The Golgi apparatus has multiple names such as Golgi complex or Golgi body. The name is given on the name of the scientist, who discovered the organelle, i.e. Camillo Golgi. It is found in all the eukaryotic cells, plants as well as animals. They are membrane-bound organelle present in the cytosol of the cell. Let us explore more about Golgi complex.



## Golgi apparatus

The Golgi body comprises 5 to 8 cup-shaped, series of compartments known as cisternae. Cisterna is a flattened, disk-shaped, stacked pouches that make up the Golgi apparatus. A Golgi stack mostly contains 4 to 8 cisternae. However, ~60 cisternae are found in some protists. A mammalian cell contains ~40 to 100 stacks of cisternae.

Animal cells generally contain around 10 to 20 Golgi stacks per cell, which are connected by tubular connections. Golgi complex is mostly found near the nucleus.

Creation, or evolution, whichever one, you hold a belief in has worked in wondrous ways to evolve or design the various living beings in this world in the most optimum ways. For example, take the Golgi complex; it has been designed in such a way, to ensure a sufficient number of Golgi bodies are present in the cell as per the requirement.

## Golgi Bodies Functions

Its main function is the packaging and secretion of proteins. It receives proteins from Endoplasmic Reticulum. It packages it into membrane-bound vesicles, which are then transported to various destinations, such as lysosomes, plasma membrane or secretion. They

also take part in the transport of lipids and the formation of lysosomes.

Post-translational modification and enzymatic processing occur near the membrane surface in Golgi bodies, e.g. phosphorylation, glycosylation, etc.

Golgi apparatus is the site for the synthesis of various glycolipids, sphingomyelin, etc.

In the plant cells, complex polysaccharides of the cell wall are synthesised in the Golgi apparatus.