the cytoplasm. Hence ER divides the intracellular space into luminal (inside) and extra luminal (cytoplasm).

If the ER has ribosomes, it is called rough, if not, it is smooth.

The RER segregates newly synthesised proteins away from the cytoplasm, inside the RER the proteins can be chemically modified to alter their function and destination.

Proteins enter the lumen, undergo changes (formation of disulfide bridges +folding into tertiary structure). Proteins become glycoproteins.

The SER chemically modifies small molecules (drugs and pesticides), site of hydrolysis of glycogen in animal cells and site of synthesis of lipids and steroids.

- Golgi apparatus: many flat sacs (cisternae) parallel to each other. Have two faces; cis and trans which are different but interconnected. Proteins enter from the cis, are modified and leave through the trans and are sent to their destination.

- Lysosomes: contain digestive enzymes, site where macromolecules (proteins, polysaccharides, nucleic acids and lipids) are hydrolysed into their monomers. Lysosomes are the sites of breakdown of food and foreign objects (phagocytosis). Undigested contents are released to the environment.

Preview from Notesale.co.uk
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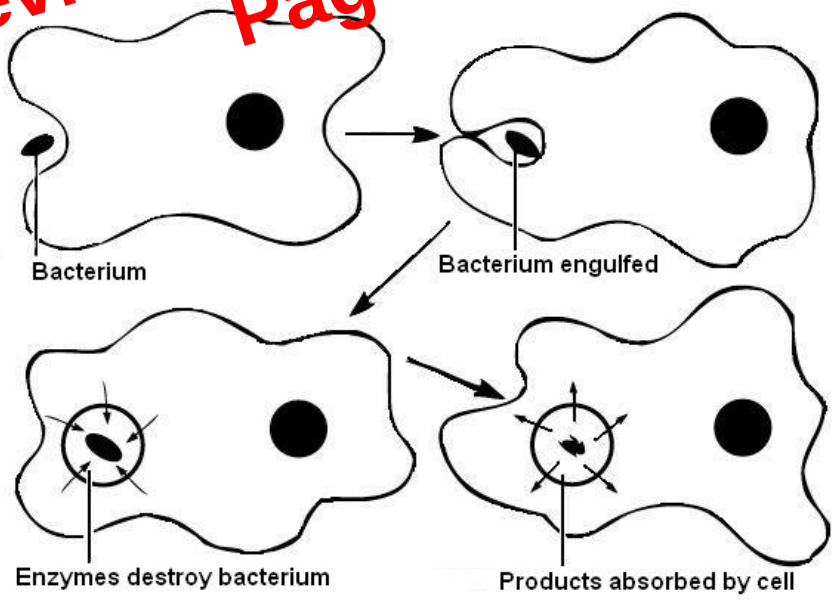


Autophagy: cell digests its own material. Organelle (old) is surrounded by a membrane and enzymes break down the damaged structure, reabsorbing the imp conmponents. Plant cells do not have lysosomes, they have a vacuole.