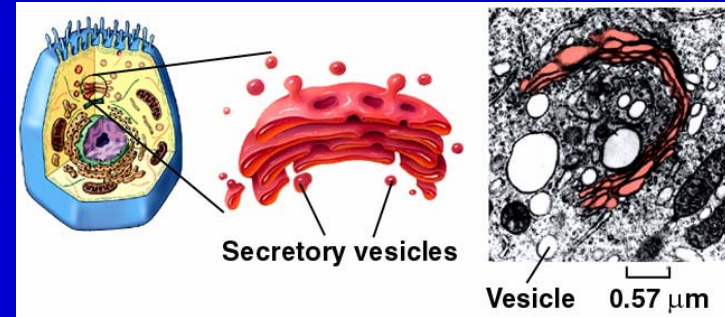


- Ribosomes** - protein synthetic machinery
- two subunits - large and small - each made of protein and ribosomal RNA (rRNA)
 - subunits associate when they are synthesizing proteins
 - protein synthesis occurs on ribosomes that are free-floating in the cytoplasm and on ribosomes attached to ER
 - rRNA is synthesized in the nucleolus

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Golgi Apparatus -

a collection of membranes associated with the ER composed of flatten sacs called concentrates and packages proteins synthesized on the ER



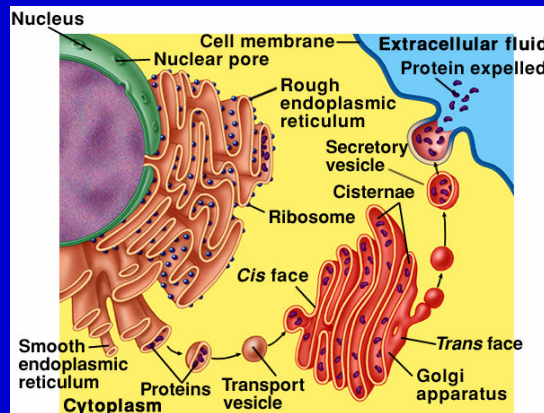
The Golgi is functionally associated with the ER.

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Proteins synthesized on the ER are concentrated internally and transport vesicles are budded off

Transport vesicles fuse with the Golgi, dump their contents into the Golgi

Golgi packages proteins in vesicles so that they may be excreted from the cell, or used within the cell.



Secretory vesicles - used for excretion - leave the Golgi and move to plasma membrane where they fuse and dump their contents outside - seen in many glands

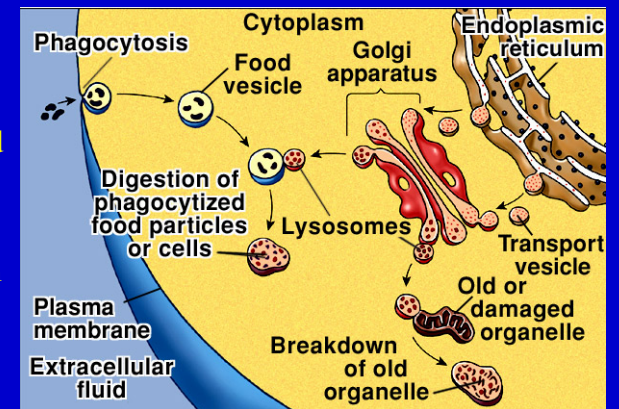
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The Golgi Apparatus also forms lysosomes

Lysosomes - vesicles filled with digestive enzymes - used for intracellular digestion

Particles can be taken into cell by phagocytosis and vesicle fused with lysosome

The components of organelles can be recycled after digestion by lysosomes



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