

Endoplasmic Reticulum

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ENDOPLASMIC RETICULUM

- ❖ Endoplasmic reticulum is the network membrane.
- ❖ It is found in cisternae, vesicles and tubules.
- ❖ It is concerned with the biosynthesis of proteins and lipids.
- ❖ It is a cell organelle.
- ❖ The term endoplasmic reticulum was introduced by porter.

➤ Endoplasmic is absent from eggs, embryonic cells, RBC bacteria.

➤ The cells are well developed for protein synthesis.

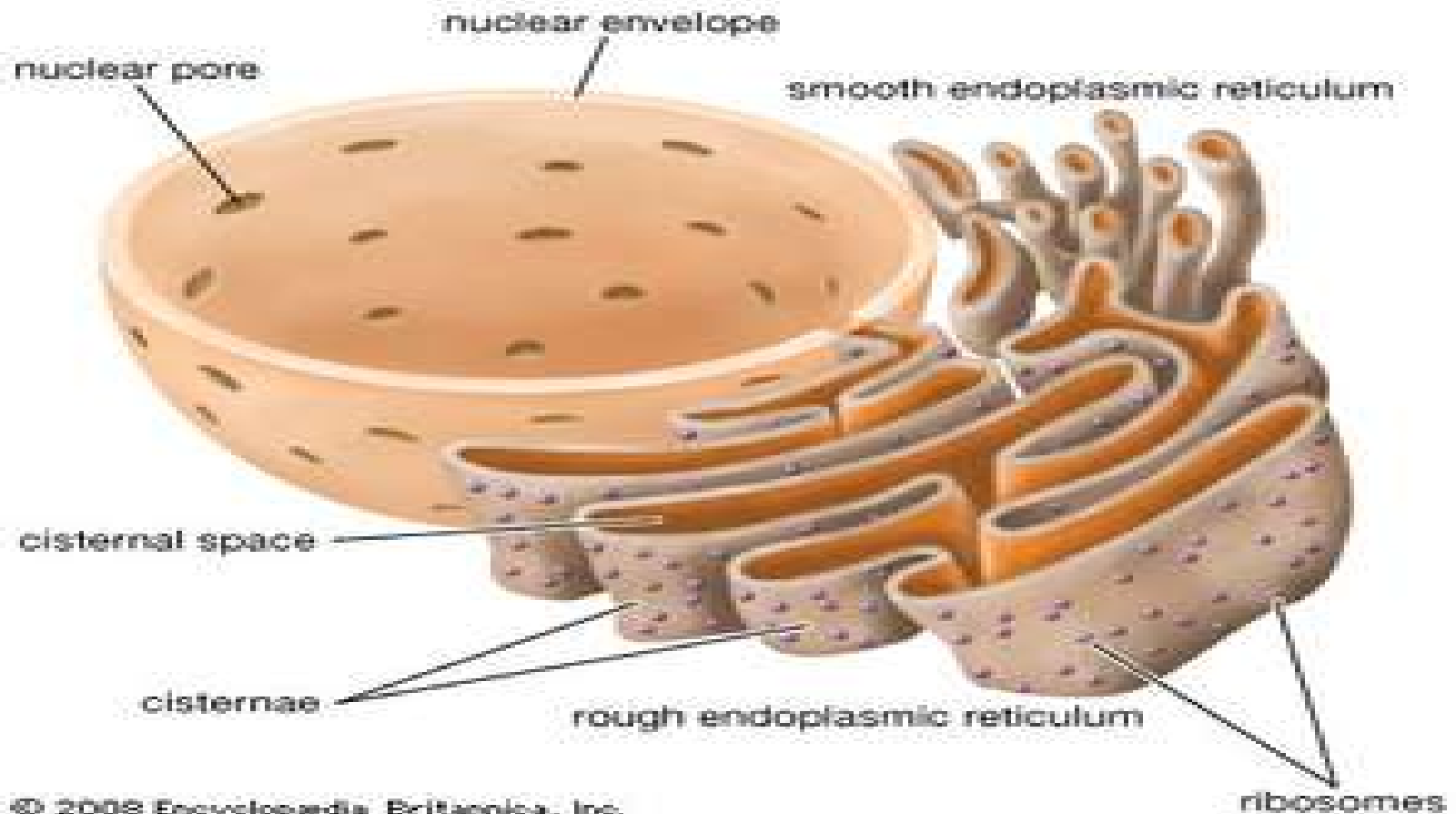
➤ Endoplasmic reticulum is made up of phospholipids and proteins.

STRUCTURE OF ENDOPLASMIC RETICULUM

- Endoplasmic reticulum consists of three components.
 - Cisternae,
 - Vesicles and
 - Tubules.

STRUCTURE OF ENDOPLASMIC RETICULUM

Endoplasmic reticulum



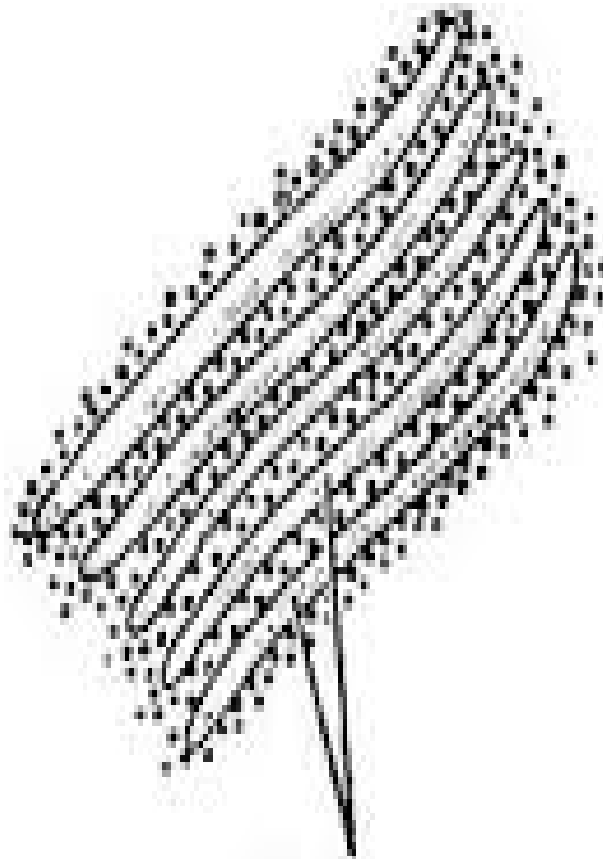
CISTERNAE

- ✓It is long flattened and unbranched sac- like structures.
- ✓They are arranged in parallel bundles.
- ✓Their diameter is 40-50 m. micron.
- ✓The ribosome are present in the surface.

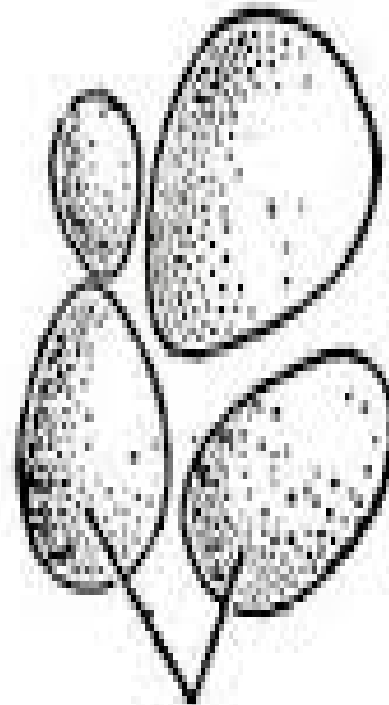
VESICLES

- ▶ It is rounded or ovoidal structure.
- ▶ The diameter of 25-500m.
Micron.
- ▶ It is found in pancreatic cells.
- ▶ It is present in cisternae and tubules.

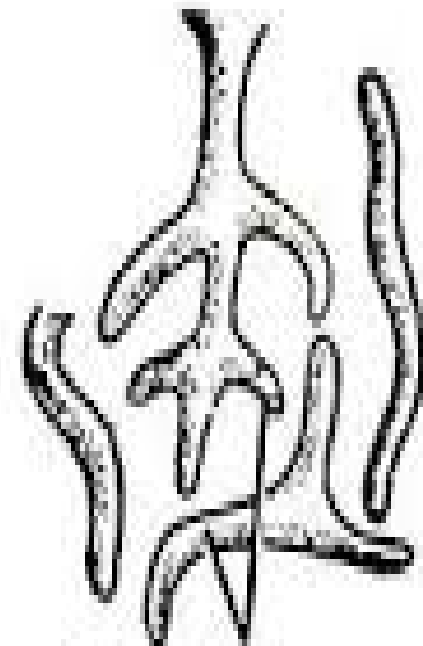
THREE COMPONENTS OF THE ENDOPLASMIC RETICULUM



Cisternae



Vesicle



Tubules

Figure 6.2: Various components of the endoplasmic reticulum.

TUBULES

- Tubules are smooth walled and highly branched tubular.
- They have diameter of 50-100m.micron.
- They arise from the cisternae.
- It is provide increase surface area for metabolic activity.

THANK YOU