CONCEPT: ENDOMEMBRANE SYSTEM: DIGESTIVE ORGANELLES

● Recall: some of the organelles of the endomembrane system are more specialized for *cellular* _____.

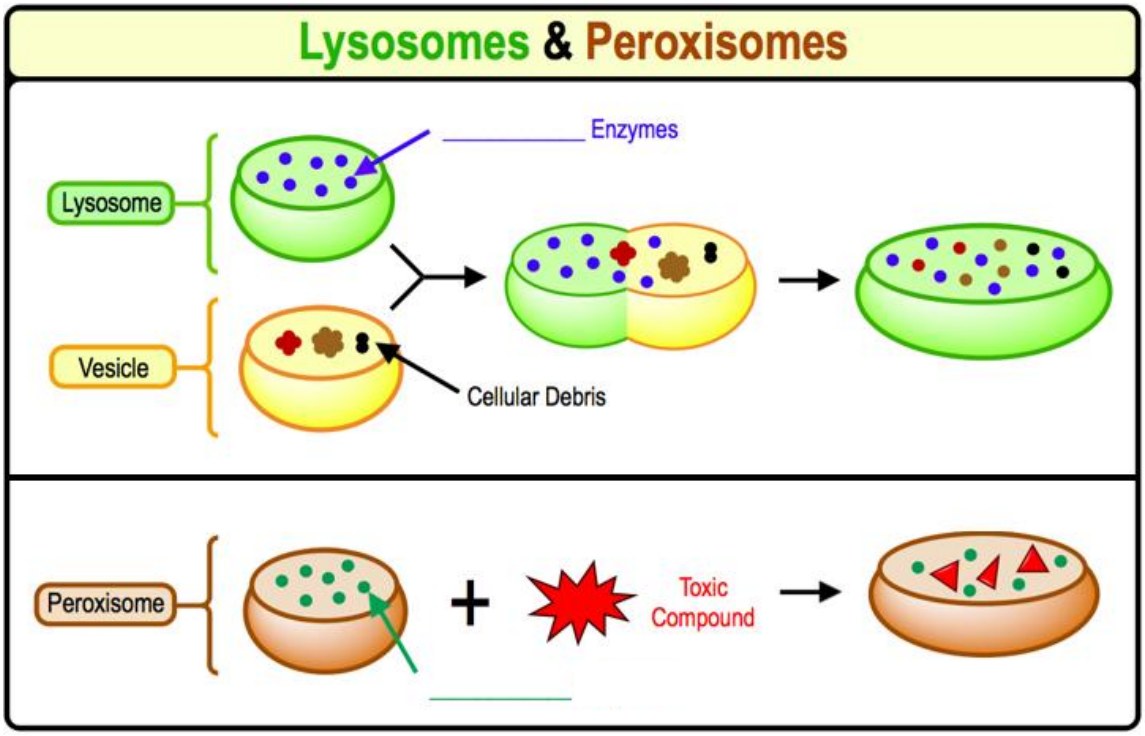
Lysosomes & Peroxisomes

● _____: acidic vesicles of *digestive* enzymes that *breakdown* & *recycle* food, debris, bacteria, etc.

□ Primarily found *only* in _____ *cells* & originate at the _____ *apparatus.*

● _____: vesicles of enzymes that breakdown _____ compounds (ex. H_2O_2) & *fatty acids*.

□ Found in _____ *eukaryotic cells* & originate at the _____ endoplasmic reticulum (rER).



PRACTICE: Hydrolytic enzymes must be segregated and packaged to prevent general destruction of cellular components. In animal cells, which of the following organelles contains these hydrolytic enzymes?

a) Rough ER. b) Central vacuole. c) Smooth ER. d) Lysosomes. e) Golgi apparatus.

PRACTICE: Which of the following organelles are involved in cellular digestion?

a) Golgi Apparatus & Vesicles.
b) Nucleus & Nucleolus.
c) Lysosomes & Peroxisomes.
d) Smooth & Rough Endoplasmic Reticulum.
e) Nucleus & Chloroplasts.

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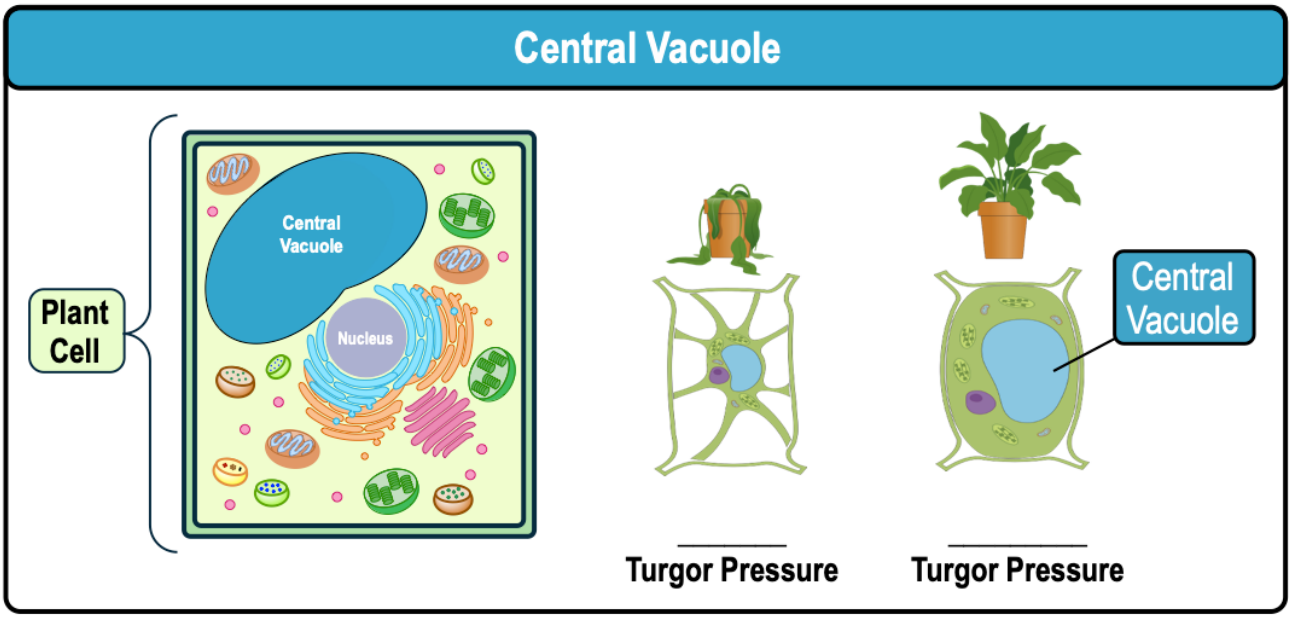
Central Vacuole

- **Central** _____: large membrane-enclosed vesicle in _____ cells that *degrade* & *recycle* molecules.
  - □ Other functions include filling up with *water* to exert _____ *pressure* against cell membrane.



PRACTICE: Which are recycling centers for the cell?

a) Ribosome and Golgi apparatus.
b) Endoplasmic reticulum and chloroplast.
c) Mitochondria and nucleus.
d) Central vacuole and lysosome.
e) All are correct.

PRACTICE: Which type of plant organelle often occupies the majority of the cell's volume?

a) Food vacuole.
b) Plant vacuole.
c) Central vacuole.
d) Contractile vacuoles.
e) Chloroplasts.