Dear team members,

This assignment tasked us with writing three definitions of varying complexities. We started with a parenthetical definition followed by a sentence definition and concluded with an expanded definition. We were tasked with choosing a relatively complex term from our own field of study and write definitions for this word. The purpose of this assignment was to practice understanding what is needed when writing and making considerations of our audiences. For this assignment, I wrote to an audience that knows little to nothing about my chosen term. I have imagined a scenario where a biologist is explaining the lysosome to friends who have taken only basic high school biology.

Term: Lysosome.

Parenthetical Definition

Many undesirable molecules in cells find themselves transported to the lysosome (a small organelle that breaks down molecules).

Sentence Definition

Lysosomes are small organelles in cells that play a major role in removing unwanted molecules by degrading them. Chemicals called acid hydrolases are used as tools to break down these unwanted molecules in lysosomes.

Expanded Definition

Lysosomes are small organelles in cells that play a major role in removing unwanted molecules by degrading them. Chemicals called acid hydrolases are used as tools to break down these unwanted molecules in lysosomes.

The word lysosome has its origin in Greek and Latin, with its prefix *lyso-* meaning “to dissolve.” The suffix “-some” generally indicates a noun. Putting these two together a technical definition of the word “lysosome” can be determined to be “something that dissolves (something else).”

These organelles were discovered by Christian de Duve, who later went on to win the Nobel Prize for his discovery. The lysosome was discovered when de Duve showed that the level of acids increased when cells were exposed to harmful conditions such as decreased temperatures. At first, these organelles were not directly observed, only hypothesized based on experimental data. Later on, scientists used powerful microscopes called electron microscopes to directly observe lysosomes in a cell. Today, much is understood about lysosomes and their role in dissolving unwanted molecules in cells.

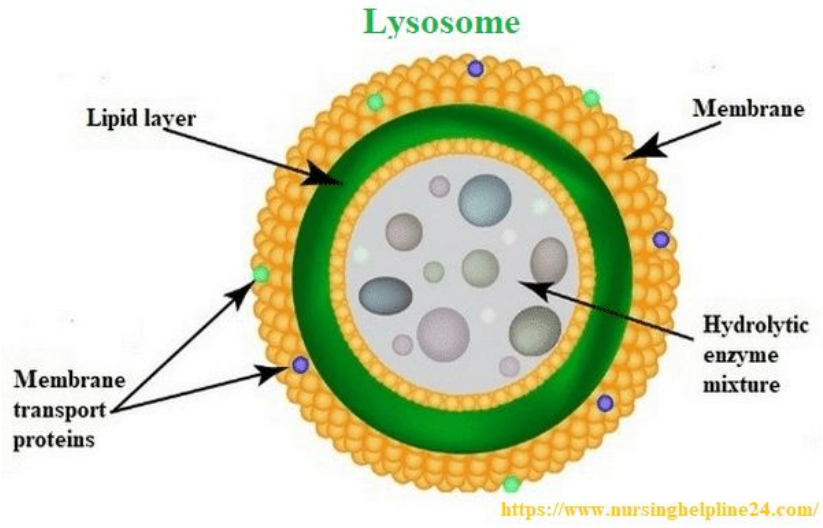

FIgure 1. A cartoon diagram obtained from www.nursinghelpline24.com of a lysosome including structural elements such as the lipid layer, membrane transport proteins, the membrane, and the hydrolytic enzyme mixture.

Lysosomes receive molecules to dissolve and chemicals to dissolve those molecules through complex processes. Molecules and chemicals are attached to special signalers that are recognized by microtubule networks in the cell. These networks act like roads that can transport molecules and chemicals around the cell. Depending on their special signaler, molecules and chemicals may have different destinations. Once molecules arrive at the lysosome, they are absorbed into the organelle and dissolved by the acid molecules within.

Works Consulted

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