

**LEMBAR PENGESAHAN
BAHAN AJAR NON ISBN**

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PATHWAY OF SECRETION

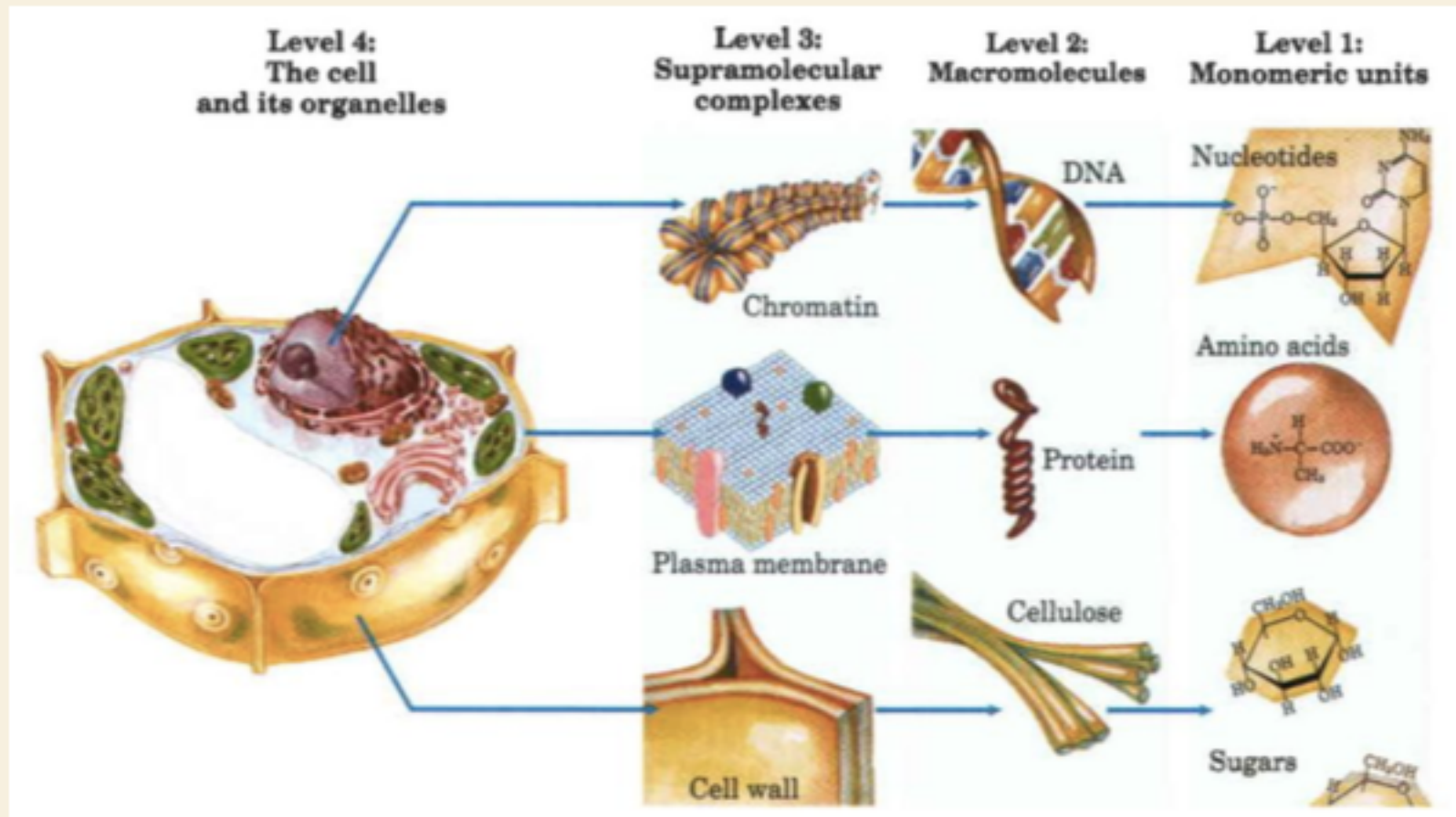
November 15th, 2019

Drg. Dian Yosi Arinawati, MDSc, PhD

DEFINITION OF SECRETION

- **Secretion is cellular process present in every organism that delivers soluble protein and cargoes to the extracellular space.**
- **Type of secretion in eukaryotic:**
 - I. Conventional protein secretion (CPS)**
 - II. Unconventional protein secretion (UPS)**

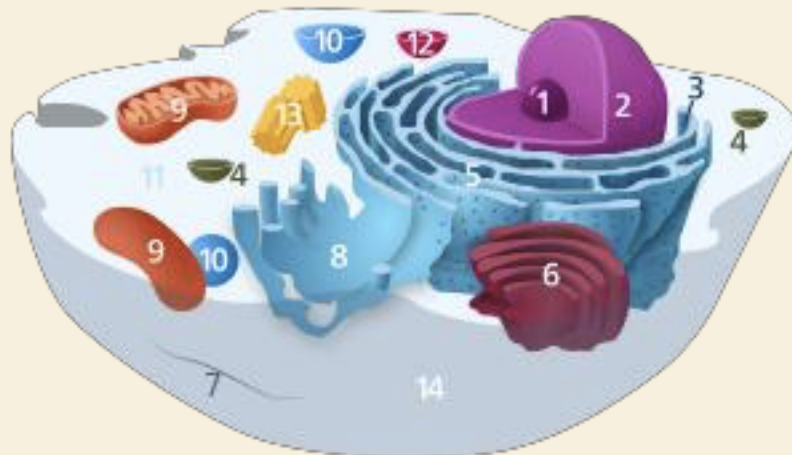
STRUCTURAL HIERARCHY IN THE MOLECULAR ORGANIZATION OF CELLS



I. Conventional protein secretion (CPS)

- **Definition:**

- CPS is trafficking route that **secretory protein** undertake when are **transported** from the **endoplasmic reticulum (ER)** to the **Golgi apparatus (GA)**, and subsequently to the **plasma membrane (PM)** via **secretory vesicles** or **secretory granules**.



Components of a typical animal cell

1. Nucleolus
2. Nucleus
3. Ribosome (little dots)
4. Vesicle
5. Rough endoplasmic reticulum (RER)
6. Golgi apparatus/Golgi body/Golgi complex
7. Cytoskeleton
8. Smooth endoplasmic reticulum (SER)
9. Mitochondrion
10. Vacuole
11. Cytosol
12. Lysosome
13. Centrosome
14. Cell membrane