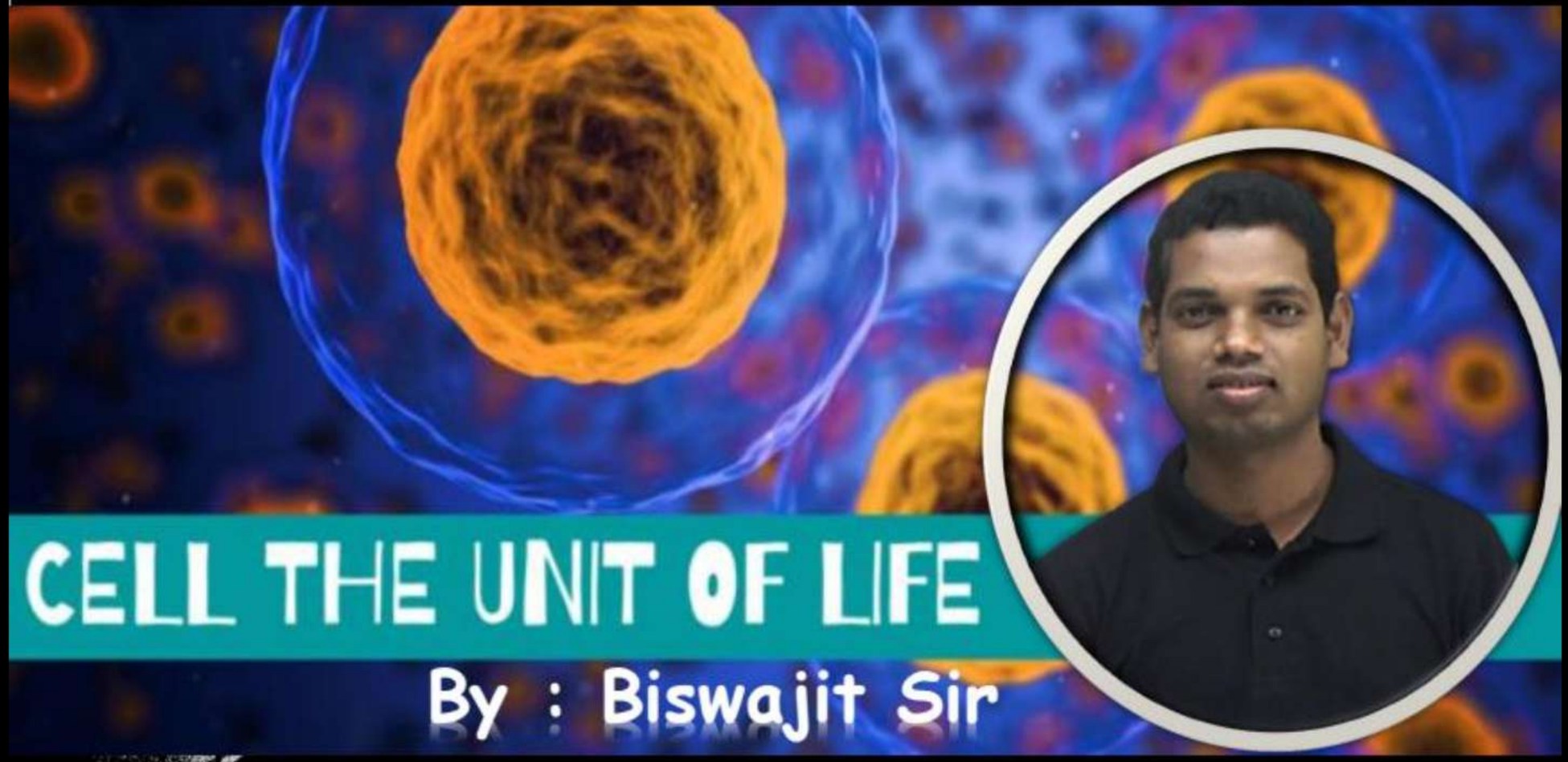
ARJUNA NEET BATCH



Download The Lecture Notes From PW App

SOME NEET QUESTIONS OUT OF NCERT

Q. The shorter and longer arms of a submetacentric chromosome are referred to as (2019)

a. s-arm and l-arm respectively
b. p-arm and q-arm respectively
c. q-arm and p-arm respectively
d. m-arm and n-arm respectively

Q. Select the incorrect match: (2018)

a. Lampbrush chromosomes – Diplotene bivalents
b. Allosomes – Sex chromosomes
c. Submetacentric chromosomes – L-shaped chromosomes
d. Polytene chromosomes – Oocytes of amphibians

SOME NEET QUESTIONS OUT OF NCERT

Q. Which of the following events does not occur in rough endoplasmic reticulum? (2018)

a. Protein folding

b. Protein glycosylation

c. Cleavage of signal peptide

d. Phospholipid synthesis

Q. Mitochondria and chloroplast are

A. Semi-autonomous organelles

B. Formed by division of pre-existing organelles and they contain DNA but lack protein synthesizing machinery

Which one of the following options is correct? (2016 - I)

a. Both (A) and (B) are correct

b. (B) is true but (A) is false

c. (A) is true but (B) is false

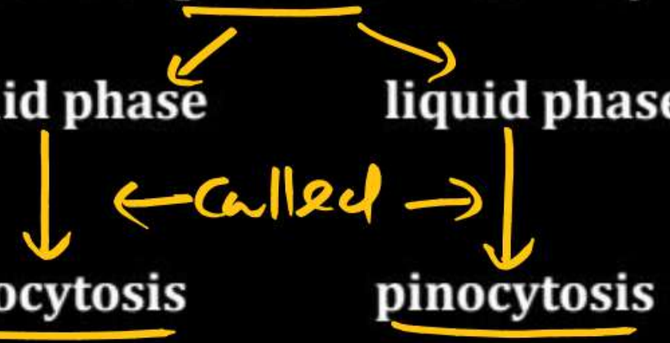
d. Both (A) and (B) are false

Bulk transport

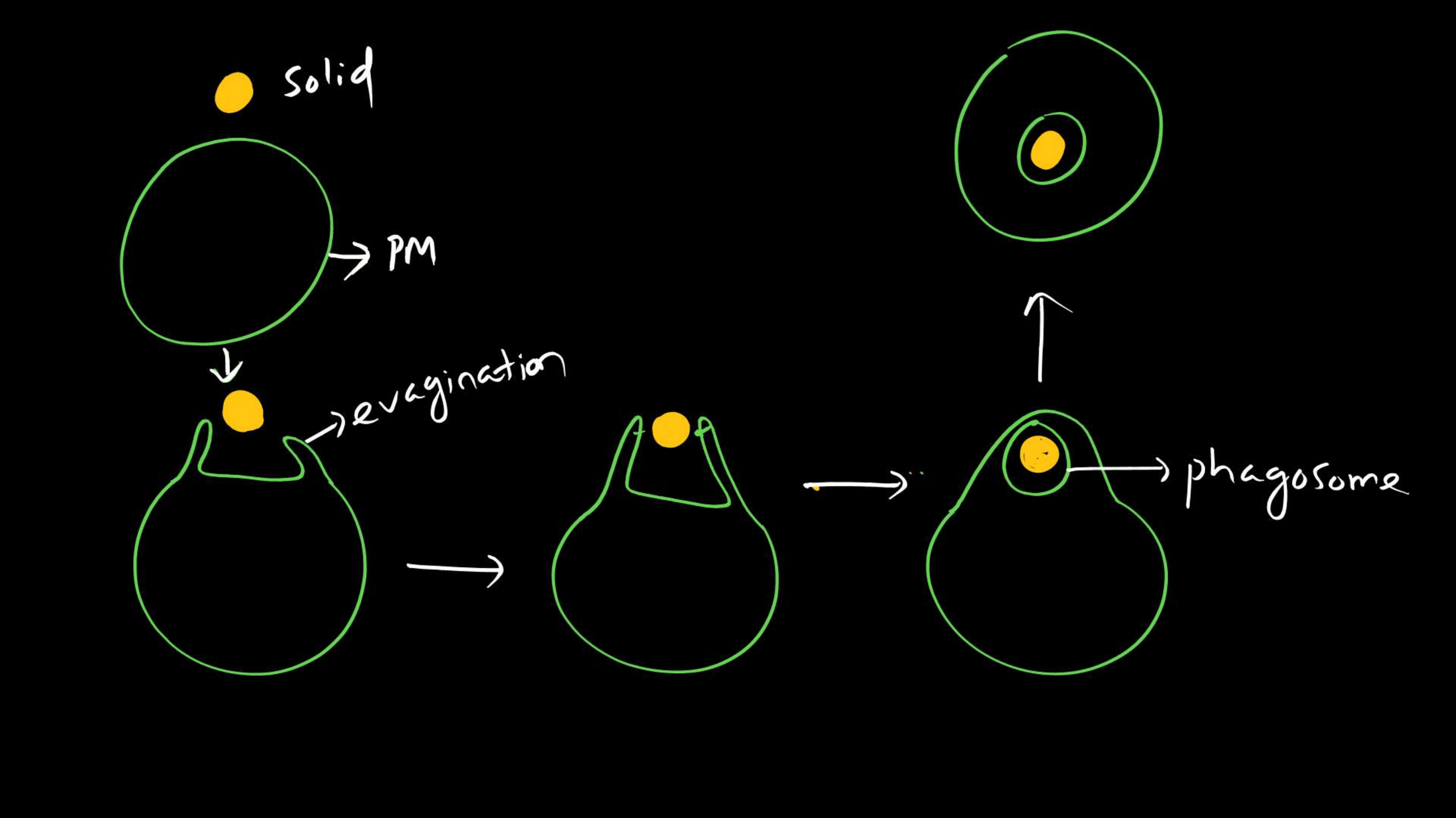
- Transport of particles in bulk (large)amount

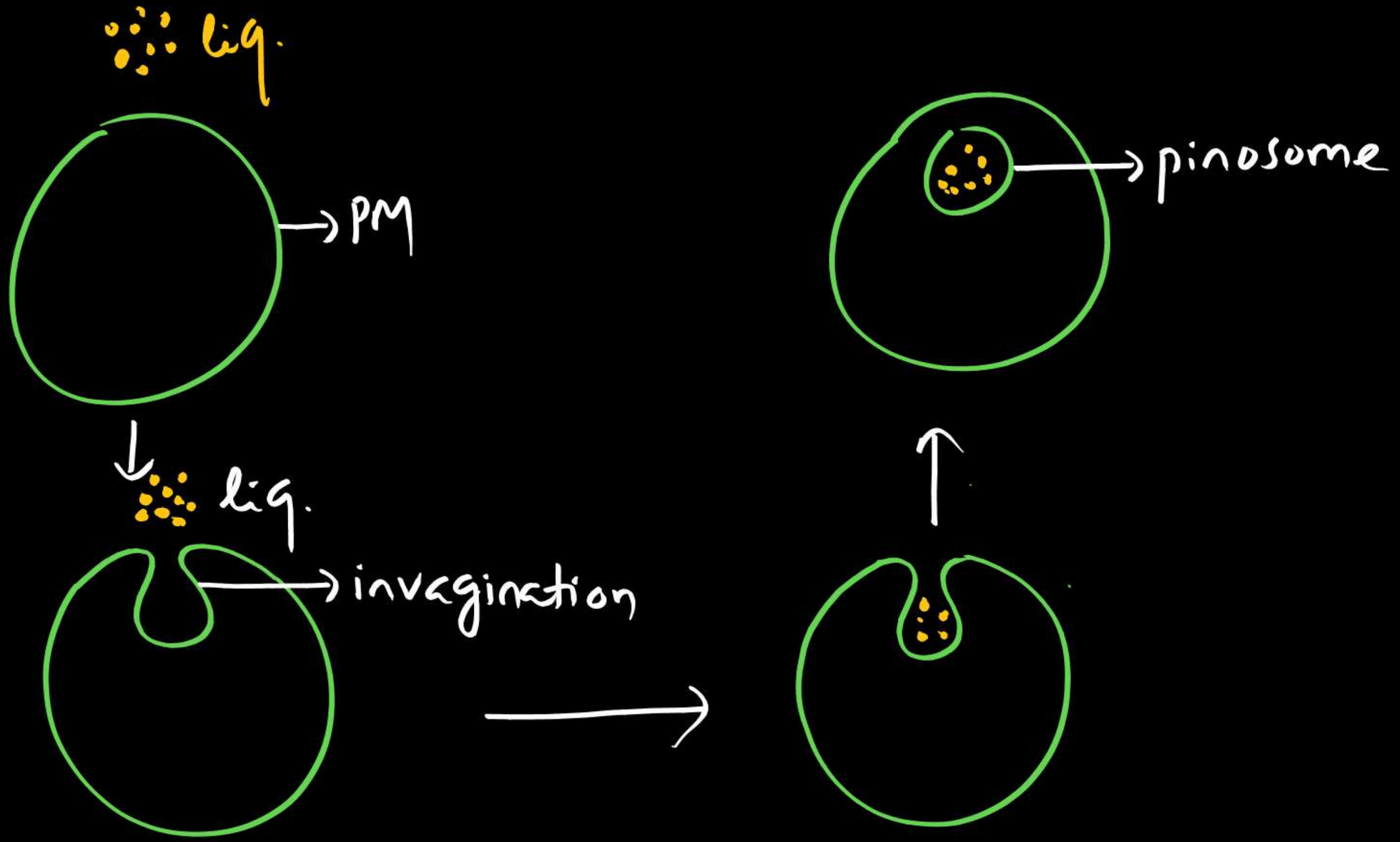
A. Endocytosis

- Uptake of particles in bulk by a cell



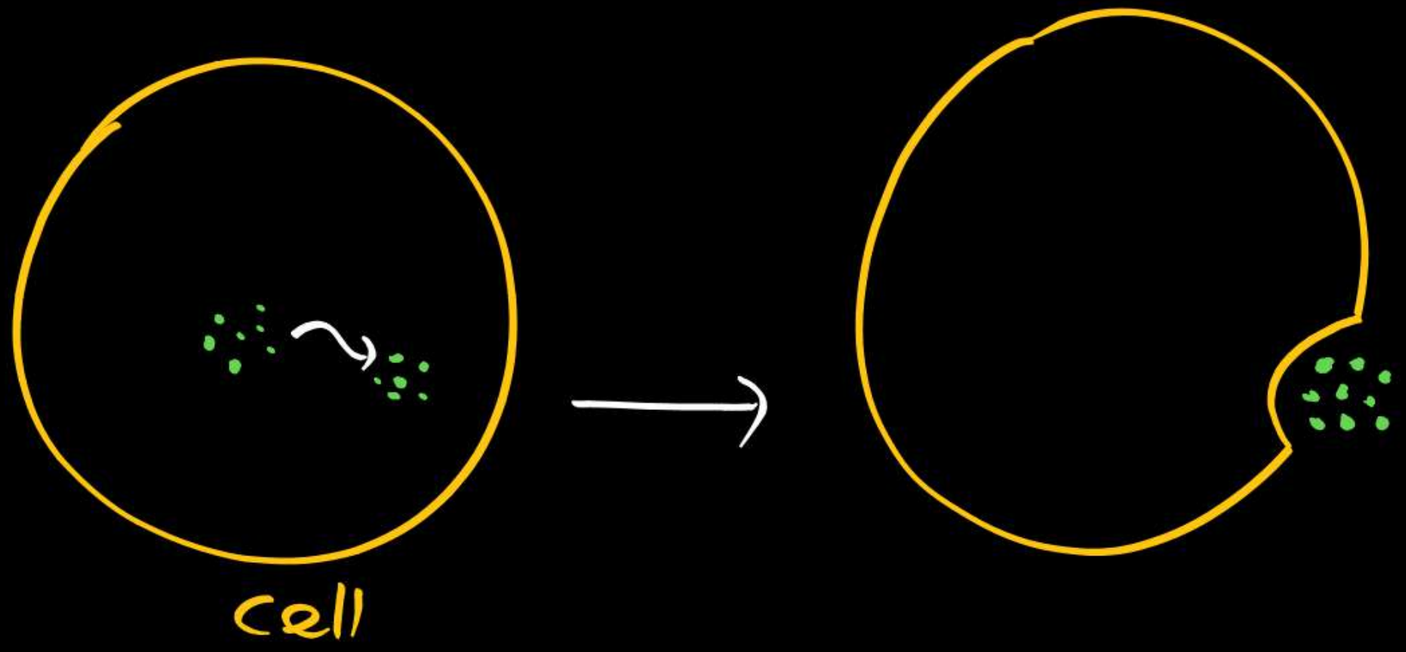
• By phagosome	• by pinosome
• Cell eating	• cell drinking
• PM shows Evagination	• PM shows invagination


solid
PM
evagination
phagosome


liq.
PM
liq.
invagination
pinosome

B. Exocytosis

- release of particles in bulk by a cell
- Also called ephagy/ cell vomiting



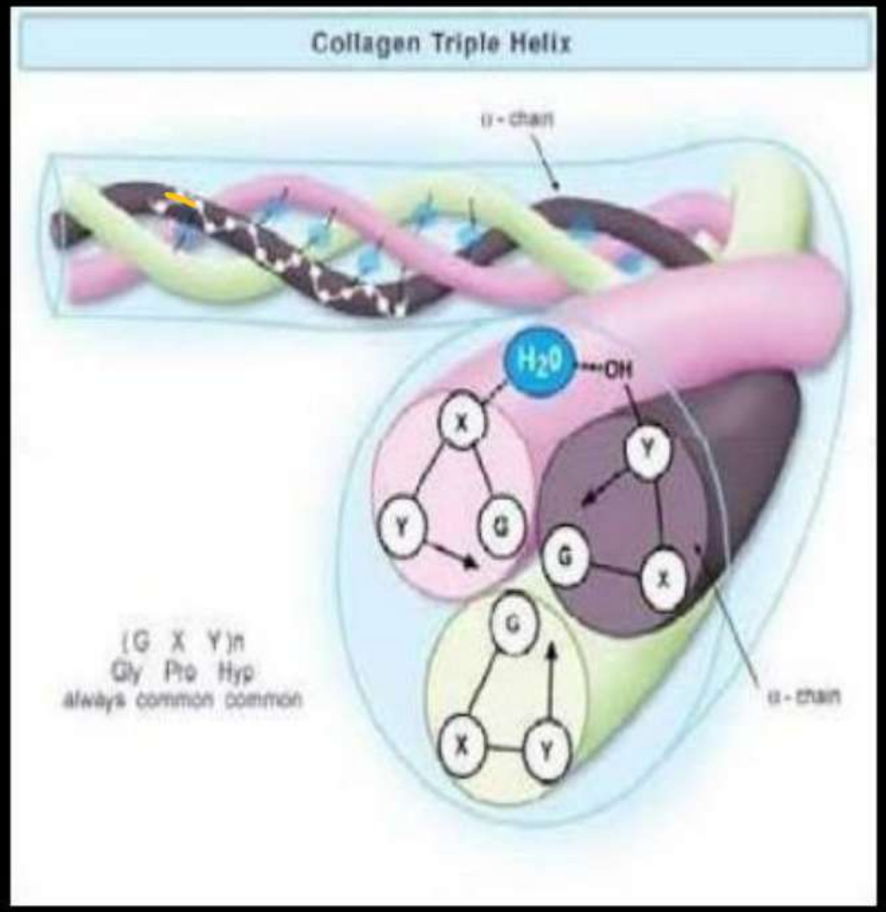
G N Ramachandran

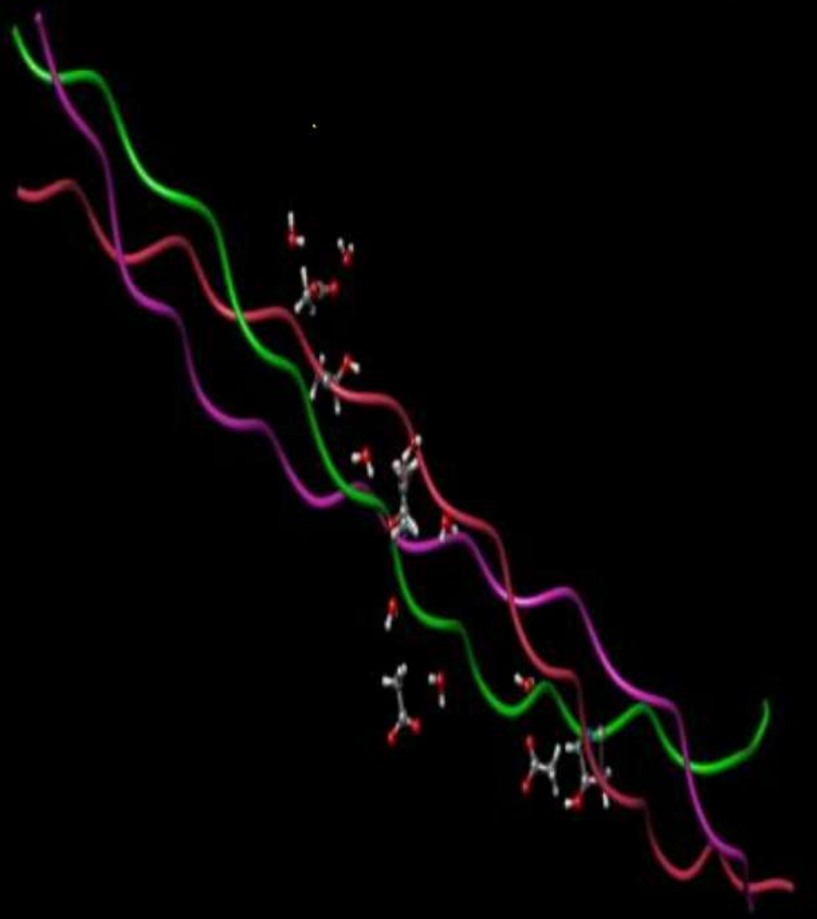
- Out standing figure in the field of protein structure
- Founder of Madras school of conformational analysis of biopolymers
- Discovered triple helical structure of collagen and published in Nature in 1954

- most abundant protein in animal world
- 2nd most abundant protein on earth

(NOTE: RUBISCO – most abundant protein/ enzyme on earth)

- Did his PhD from Cambridge where he met with Linus Pauling

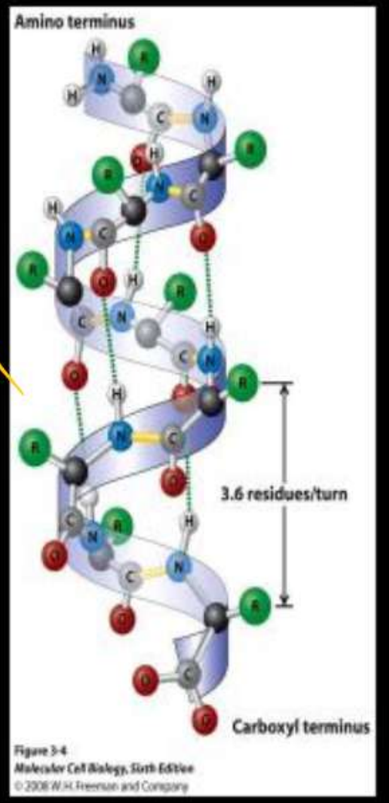




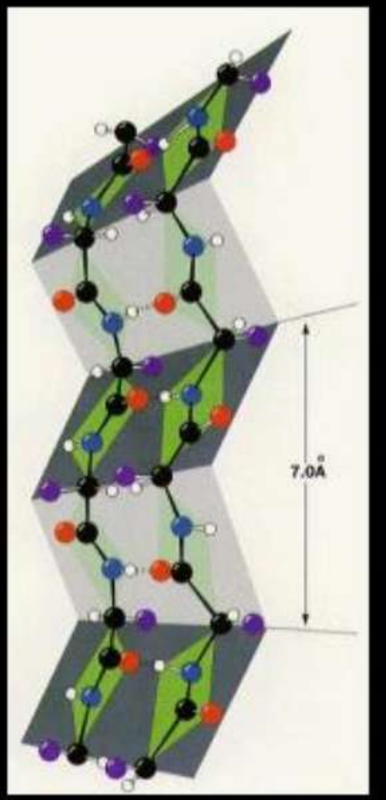
Linus Pauling

gave

α helix

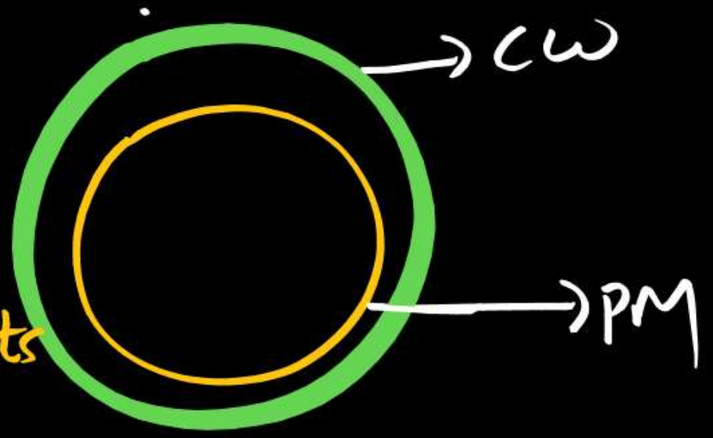


β sheet



Cell wall

- Non living, rigid (inextensible), permeable
  - ↓
  - cellulosic cell wall
- Present around PM (protoplast)



Occurrence:
- ↳ plants, fungi, PK, algae, Some protists

gmp Note: *Mycoplasma* is the only PK without cell wall

Composition of cell wall:

Plants → cellulose, hemicellulose, pectin, proteins → N-acetyl glucosamine
Fungi → chitin (fungal cellulose, polymer of NAG)
Algae → cellulose, galactans, mannans, minerals like $CaCO_3$
Some red algae

PK (bacteria) → peptidoglycan (murein)

polysaccharide ⟶ called glycan

$(\text{-glucose-})_n$ ⟶ glucan

$(\text{-galactose-})_n$ ⟶ galactan

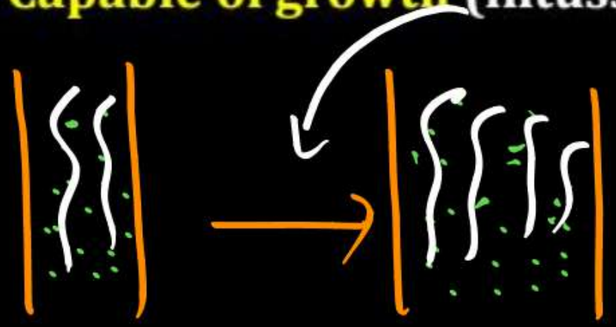
$(\text{-mannose-})_n$ ⟶ mannan

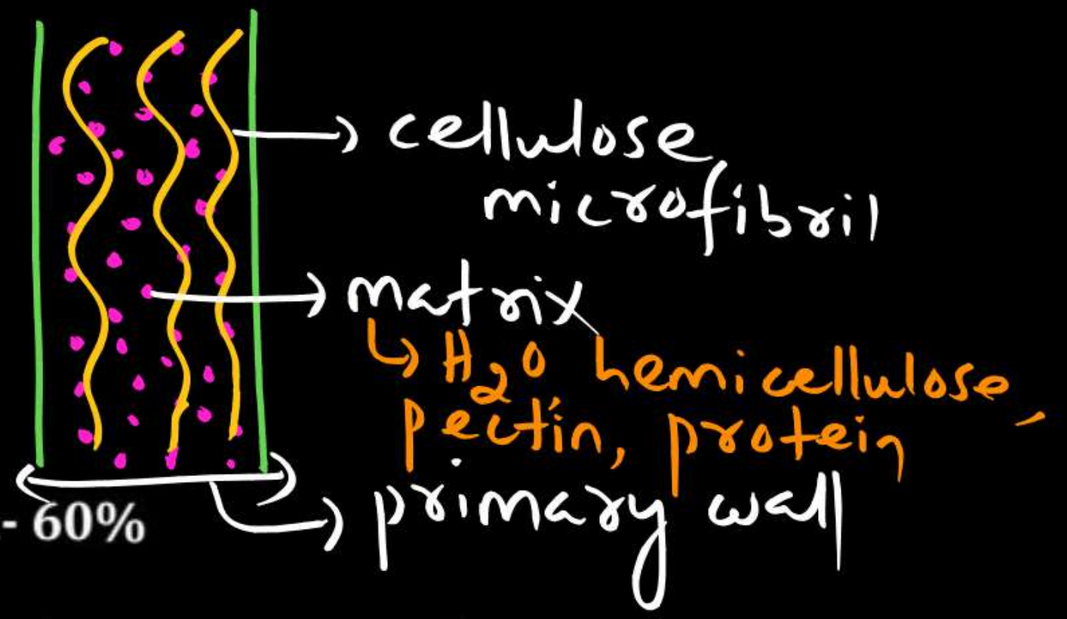
Structure of typical plant cell wall

Consists of

a. **Primary wall:**

- Only cell wall component in meristematic cell, young plant cells, parenchymatous cell
- 1st cell wall structure to be formed during cytokinesis
- Single layered
- Capable of growth (intussusception)



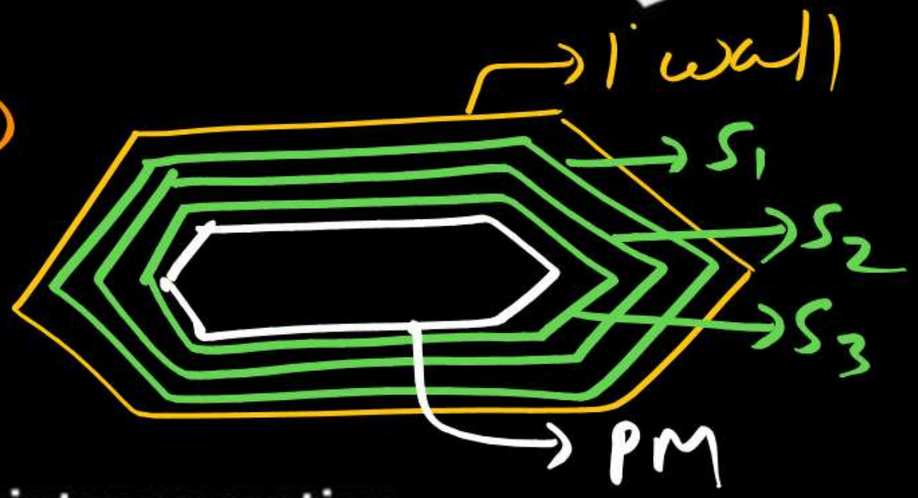


cellulose content: 20% hydration- 60%

- gradually diminishes as cell matures
- Cellulose microfibrils are loosely packed to form network

b. Secondary wall:

- Present only in mature plant cells
- Multilayered ($S_1, S_2, S_3, S_4 \ldots\ldots$)
  - at least 3 layered



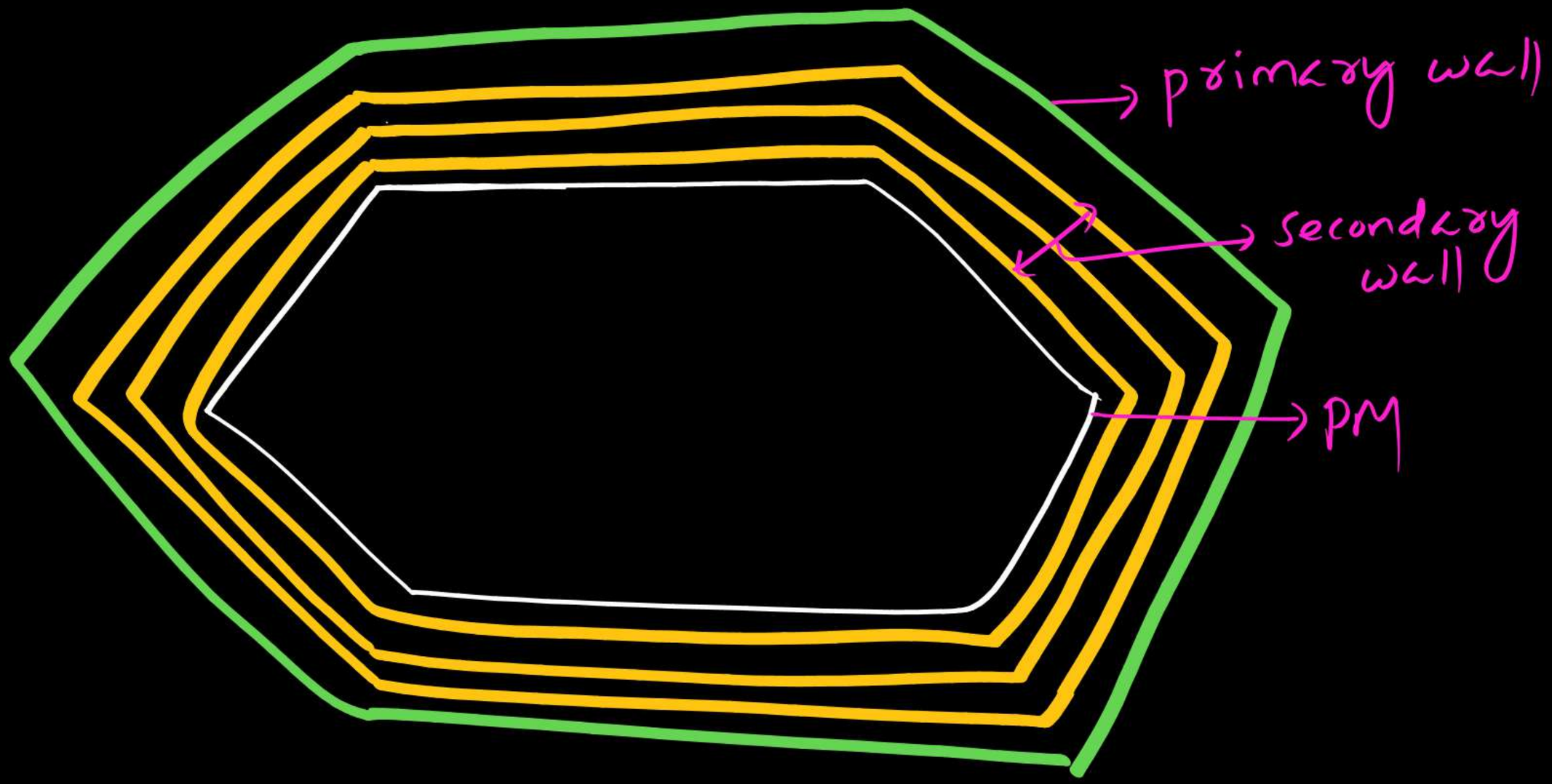
- Lies between PM and primary wall
- Outer to PM and inner to Primary wall

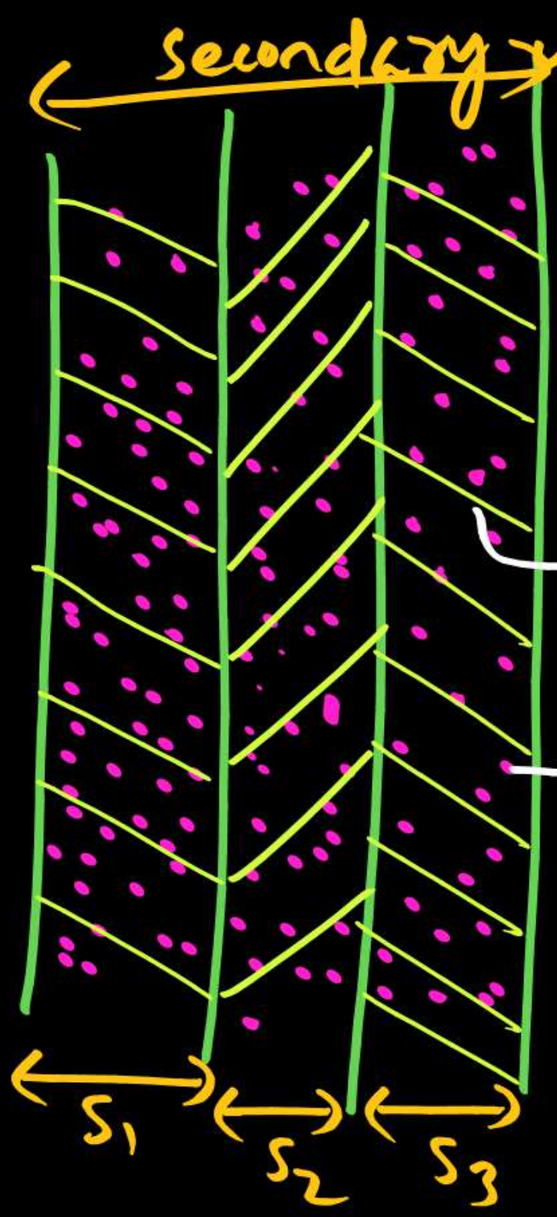
- Growth → apposition (accretion) and intussusception

- Cellulose content :20 – 40 %
- Hydration: 30 – 40%

- Cellulose microfibrils are parallel and their orientation is different in different layers

- Shows deposition of chemicals like cutin, suberin, lignin, etc


primary wall
secondary wall
PM



→ cellulose microfibril

→ matrix
↳ water, hemicellulose, protein, pectin

c. Tertiary wall

- Distinct innermost layer of secondary wall

↳ due to deposition of xylan

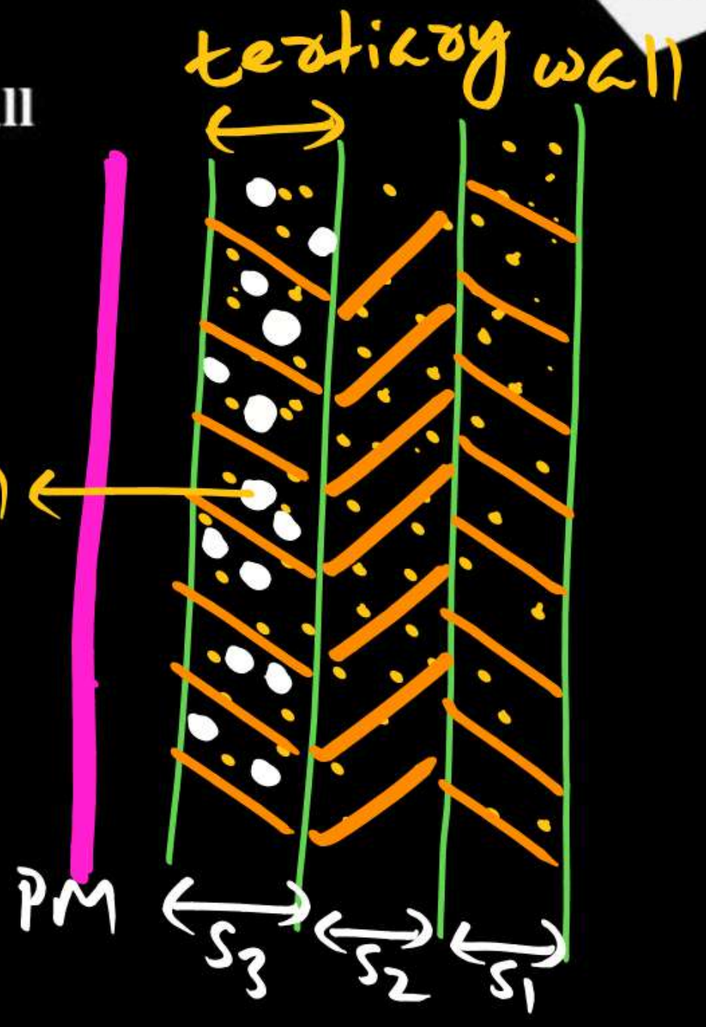
- Present in tension wood of gymnosperm

Note:

- Development of cell wall is centripetal
- Matrix of both cell wall

is made of

Water, hemicellulose, pectin, proteins



Thank You बच्चों

Download The Lecture Notes From PW App