

Prokaryotic

↳ 1-10 μm

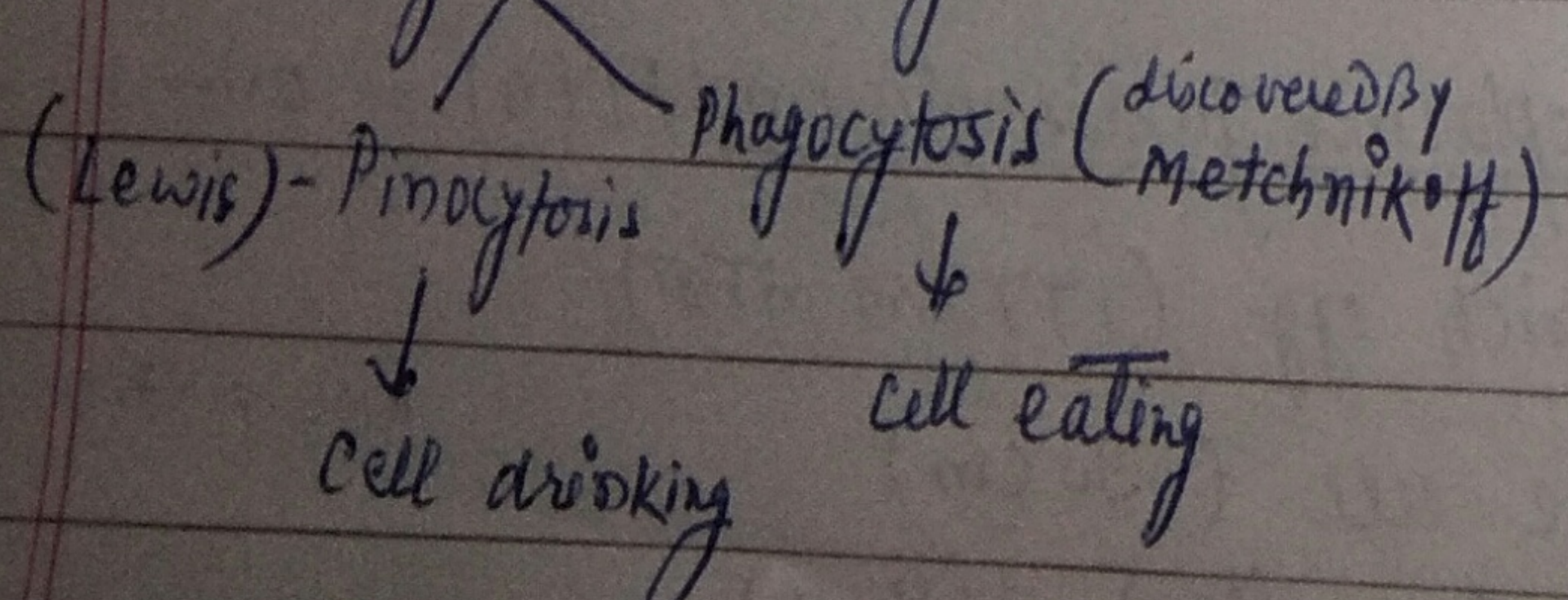
- (1) Incipient Nucleus
↳ No Nuclear Memb
No Nucleolus.
- (2) well developed cell organelles
absent.

Eukaryotic

↳ 10-100 μm

- Developed Nucleus
↳ Nuclear Memb +
- Present

- (3) Ribosome 70S Type Both 70S & 80S Type
- (4) DNA d.s. circular d.s. linear
- (5) DNA without Histone Histone (H₁, H₂, H₃, H₄, H₁)
↳ Basic
- (6) DNA only in cytoplasm. DNA in Nucleus, Mito & chl.p.
- (7) Replication, Transcription & Translation
all in the cytoplasm Replication & Transcripⁿ in Nucleus
Translation in cytoplasm.
- (8) Gene is Polycistronic Monocistronic
↳ code many P.P.
- (9) No processing of m-RNA Need processing.
- (10) Endocytosis & Exocytosis absent
Present in Many Protozoans
& Animal cells



- (11) - cell cycle short (20-60) min Long 12-24 hr.
- (12) - Membrane fold to form Mesosome No Mesosome
- (13) - Cell memb bear Respiratory enzyme Absent
- (14) - Sexual repro Absent / Less developed Present
- (15) - Bacteria, cyanobacteria Algae, Protist, Fungi, Plant
Mycoplasma

Animal cell

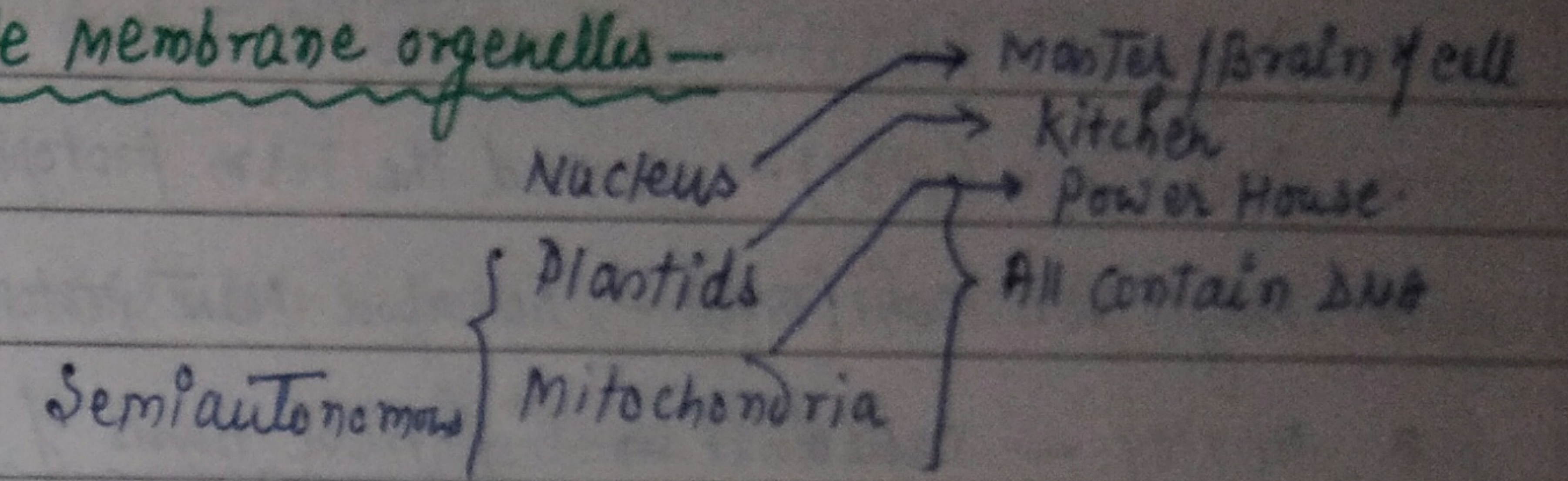
- (1) - Surrounded by P.Memb only
- (2) - Many small, scattered vacuole
- (3) - Nucleus generally in centre
- (4) - Many mitochondria generally
- (5) - Centrosome present
- (6) - Plastids are absent
- (7) - Shape variable & can move
- (8) - Cell division is Amphiastral
- (9) - Cytokinesis by furrowing
- (10) - In Hypotonic solns cell swell & burst
- (11) - Storage carbohydrate Glycogen
- (12) - do not synthesize all amino acid, Fatty acid, Co-enzyme & vit

Plant cell

- (1) - By cell wall in Addition to P.M.
- (2) - single large central vacuole one side in cytoplasm
- (3) - fewer.
- (4) - Absent
- (5) - Present
- (6) - fix & nonmovable
- (7) - Anastral
- (8) - cell plate method
- (9) - do not burst.
- (10) - Starch
- (11) - Synthesis occurs.

Protoplast = cytoplasm + nucleus.
└ contains cell organelles.

Double membrane organelles -



Single membran organelles -

- Golgi body - (Traffic police)
- lysosome - (suicidal bag)
- E.R / vacuole / Peroxisome / Glyoxisome / spherosome

Membrane less str -

- Ribosome - (Protein Factory) = Polyrribosome (Ergasom)
- Centrosome
- Nucleolus - Ribosome factory
- Cytoskeletal str.

GERL → Golgi body, E.R, Lysosome

Size → Nucleus > chl > mito
Nucleus > mito