

CYTOLOGY REVIEW

Text chapters 2, 3

Cells: basic building blocks of body tissues

text chapters 2,3

Components important for studying histology:

- plasma membrane - boundary
- cytoplasm - bulk of cell, contains organelles, inclusions
- cytoskeleton - support, cell-cell anchors, movement
- nucleus/nucleolus - genetic material, cell replication

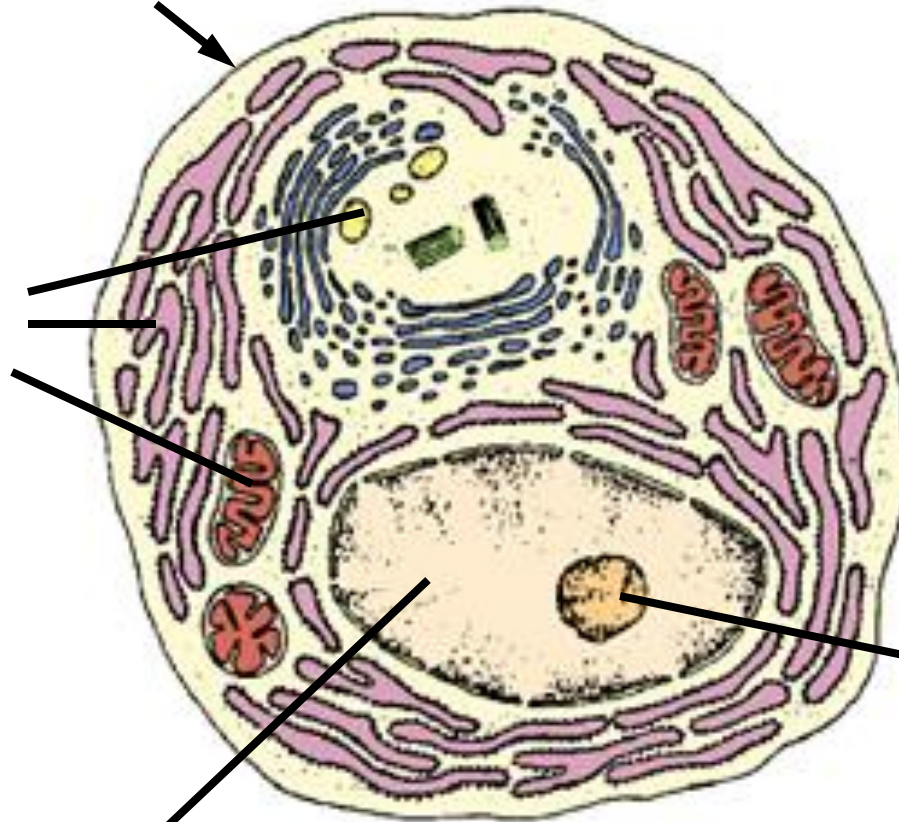
CELL COMPONENTS

plasma membrane

organelles in cytoplasm

nucleus

nucleolus



Plasma cell

Cell-cell attachments

structures in plasma membrane

- continuous with cytoskeleton
- anchor cells to neighbors

Seals: tight junctions between cells

Strength: cells anchored together

- adherent zones
- spot attachments: desmosomes
- attachment to substrate: hemidesmosomes

ORGANELLES: membrane-bound in cytoplasm

- mitochondria: energy source - $ADP + P = ATP$

- endoplasmic reticulum/Golgi apparatus

 - synthesize cellular products:

 - proteins

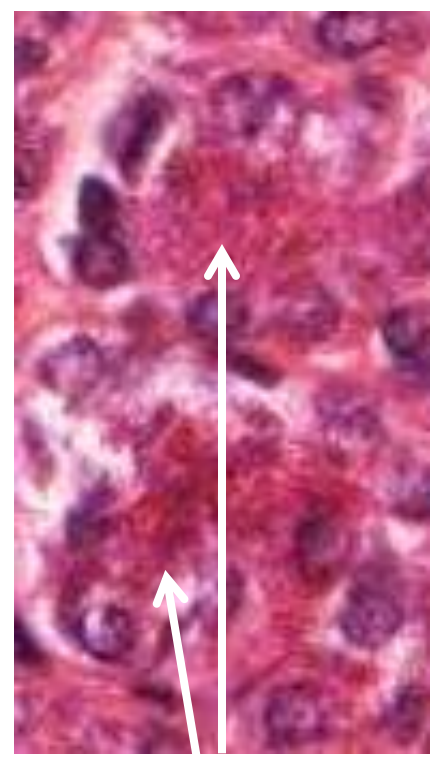
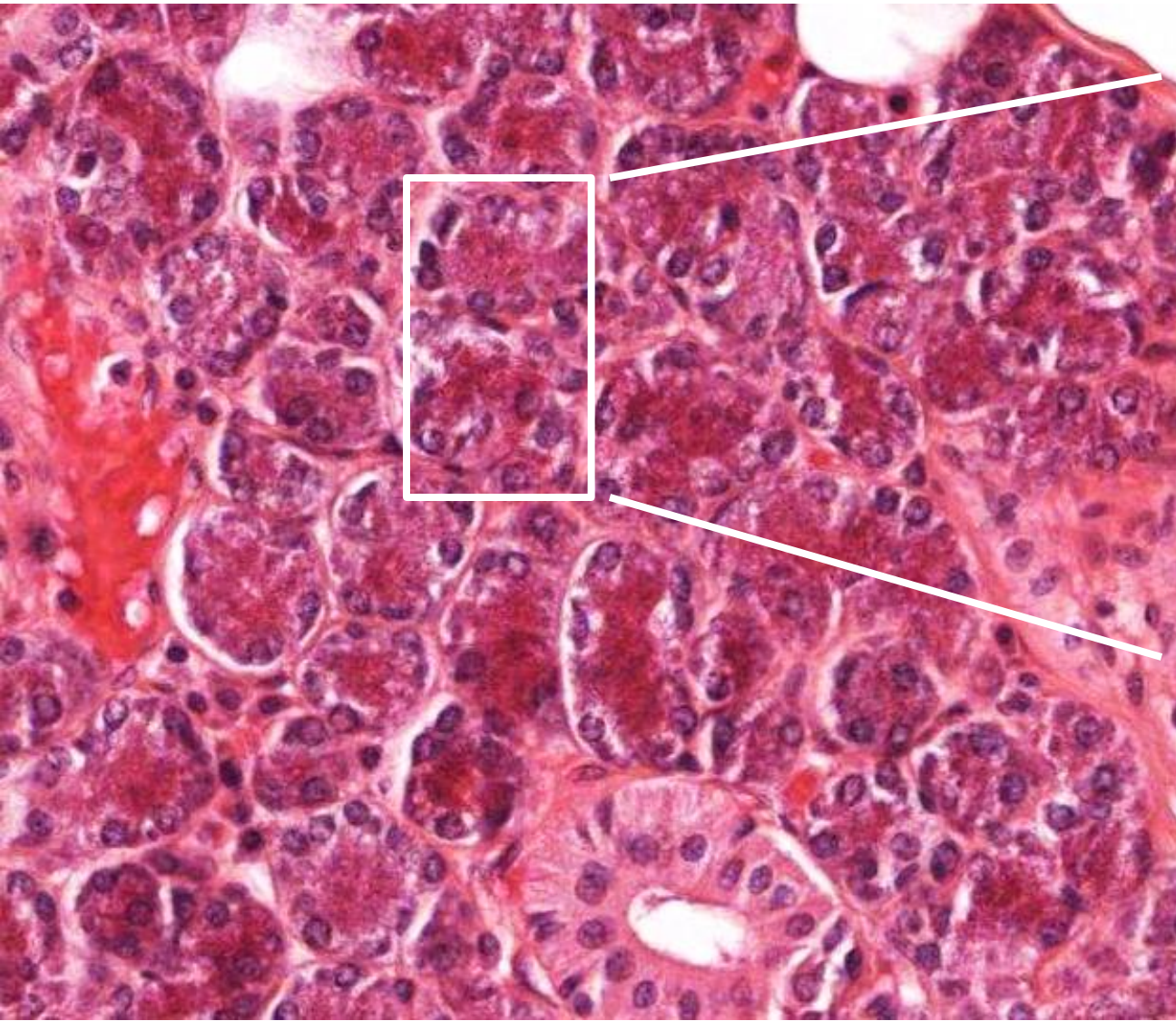
 - lipids

 - carbohydrates

- vesicles:

 - output: secretory products

 - uptake: endocytosis



vesicles
contain
enzymes

PAROTID GLAND slide 66

INCLUSIONS: in cytoplasm, not membrane-bound

fat droplets

glycogen granules

pigments:

 melanin

 lipofuscin