



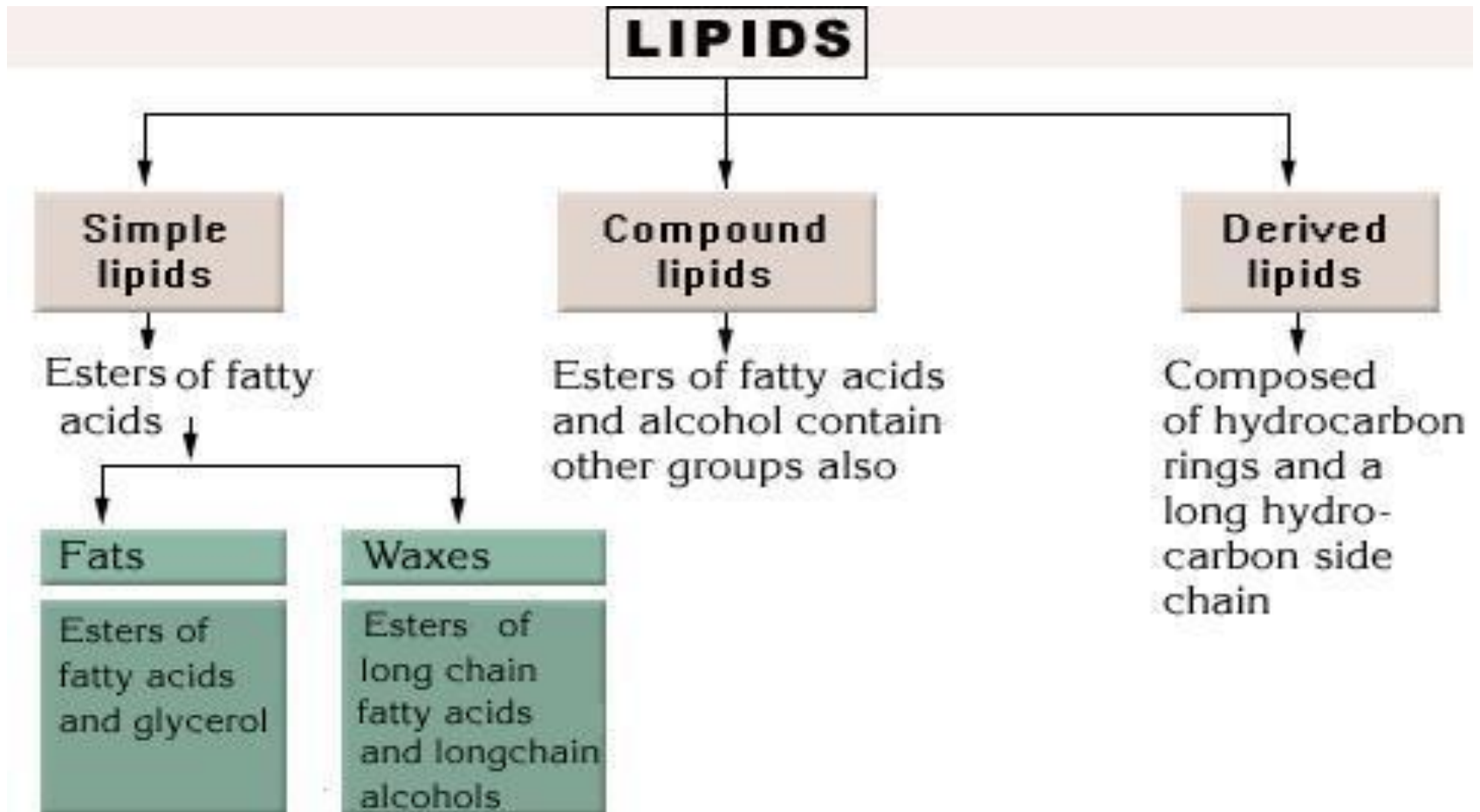
NARAYANA
COLLEGE OF NURSING

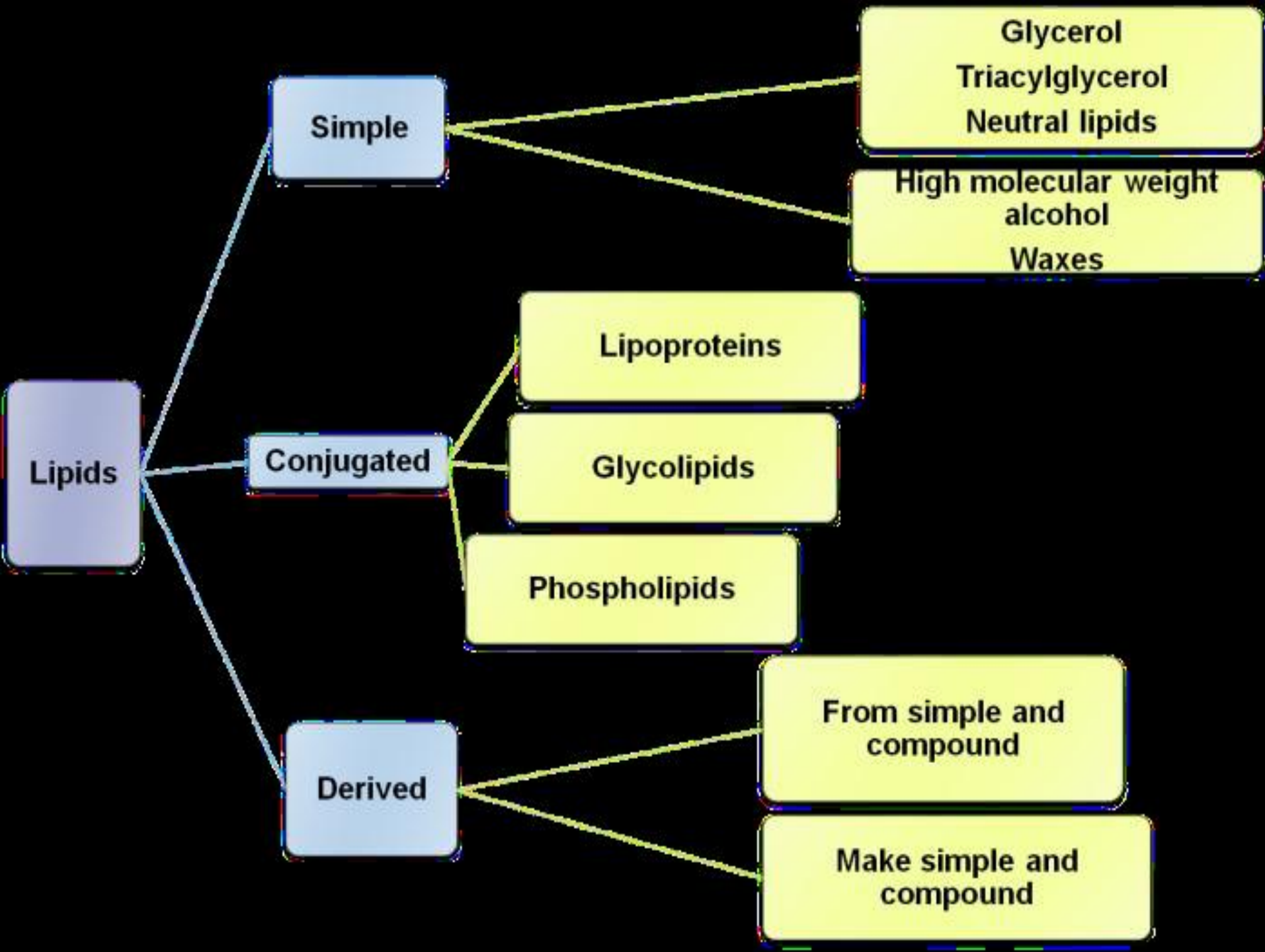
LIPIDS

BY

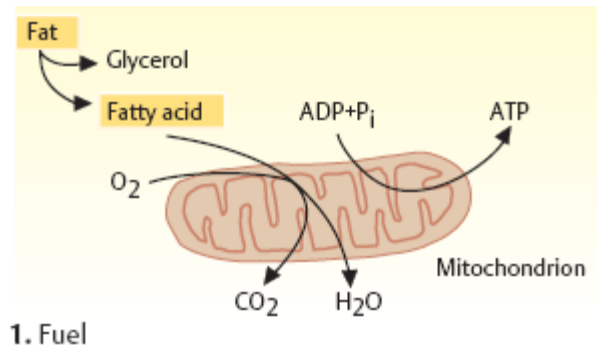
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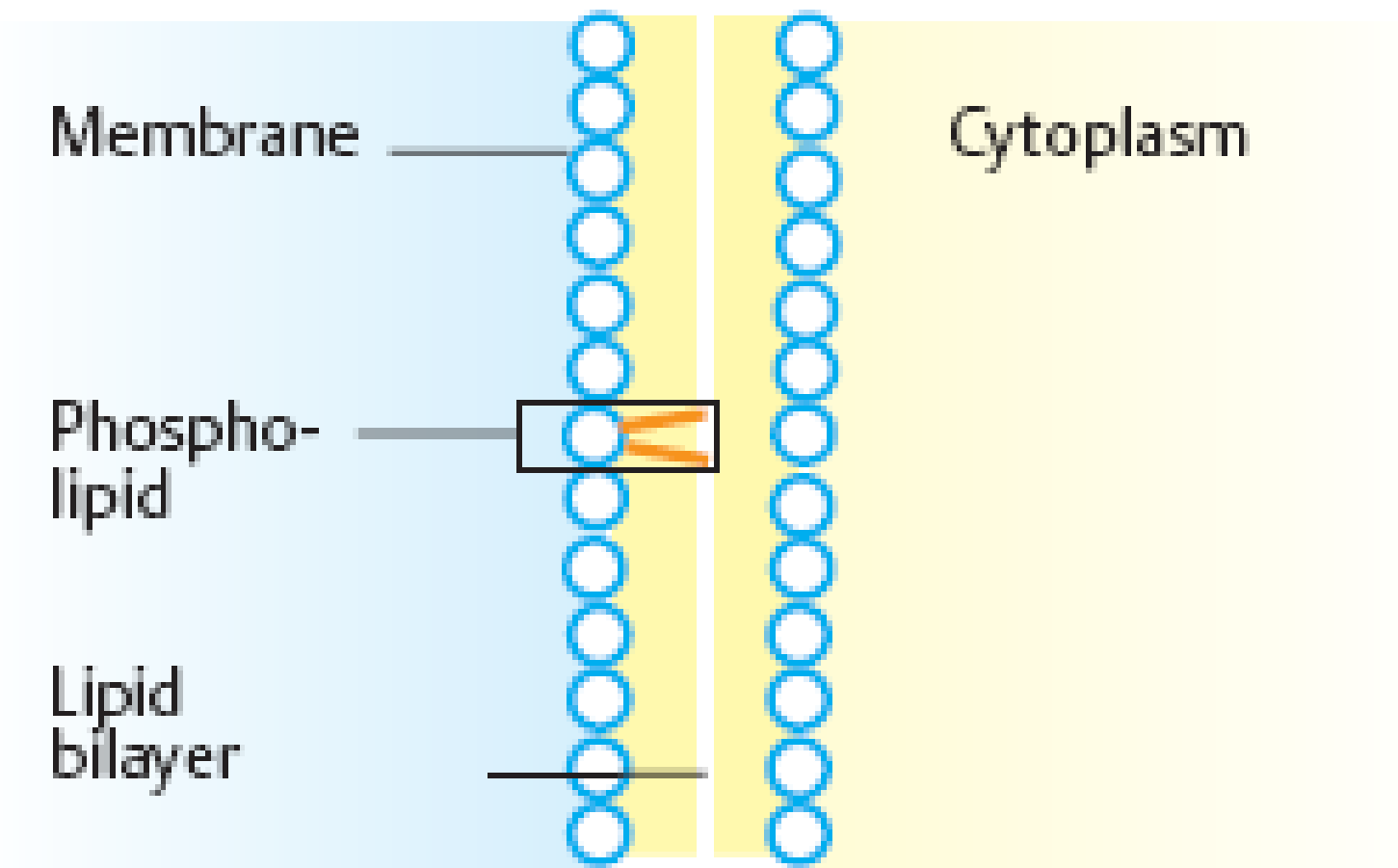
CLASSIFICATION



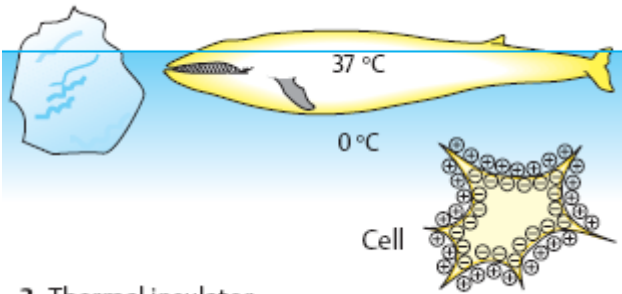


FUNCTIONS OF LIPIDS:

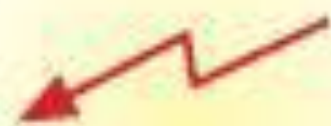




2. Building block



3. Thermal insulator



Signaling



Anchor

CoQ

Cofactor



Visual pigment

4. Special tasks

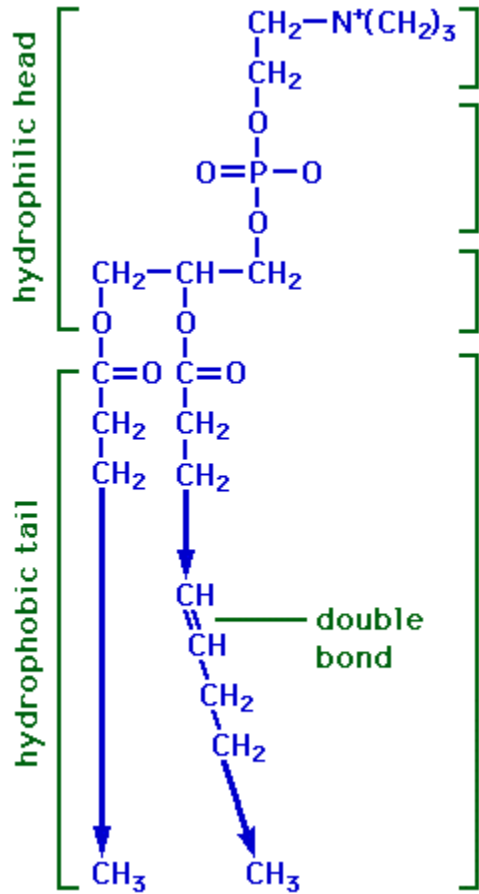
FUNCTIONS OF SIMPLE LIPIDS

- Neutral lipids
- Stored in adipose tissue
 - Give body contours
 - Insulators
 - Store energy

COMPOUND LIPIDS: FUNCTIONS

Lipid with some other non-lipid group

- Phosphatidyl Inositol Triphosphate
 - Phosphatidyl Ethanolamine
 - Phosphatidyl Serine
 - Phosphatidyl Choline
 - Phosphatidyl glycerol

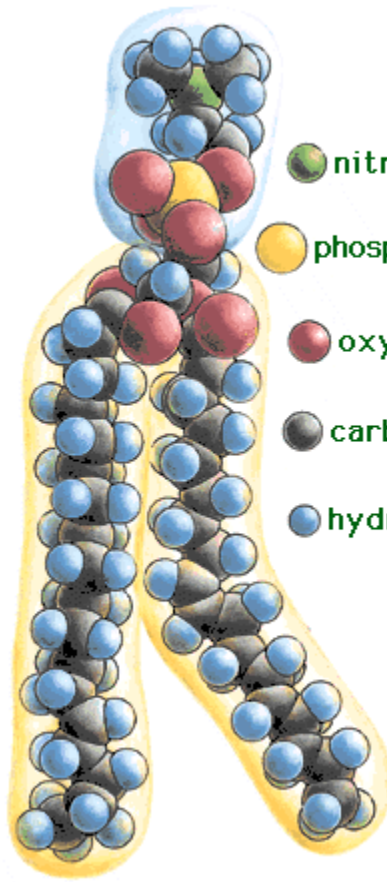


choline

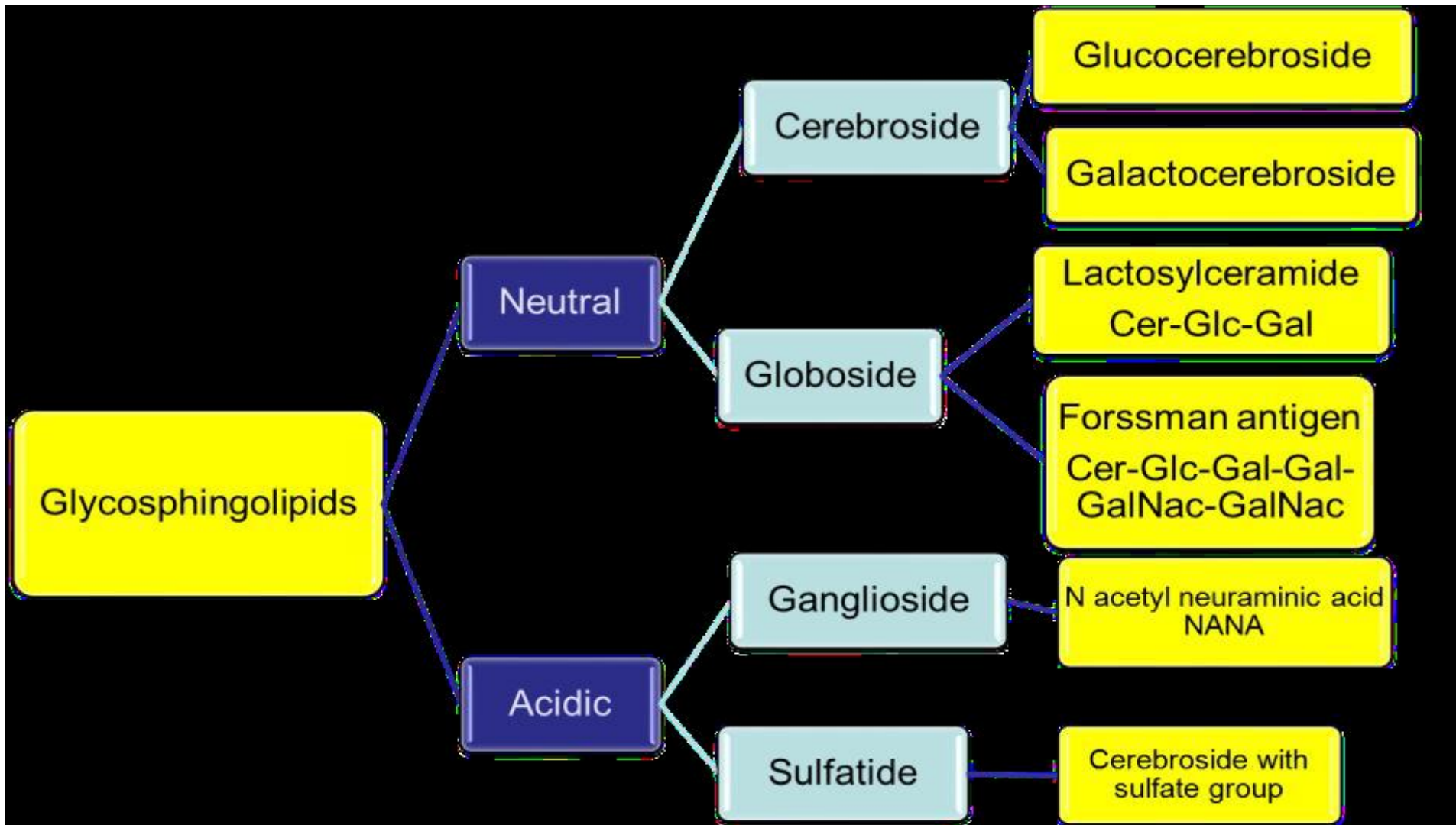
phosphate

glycerol

fatty acids

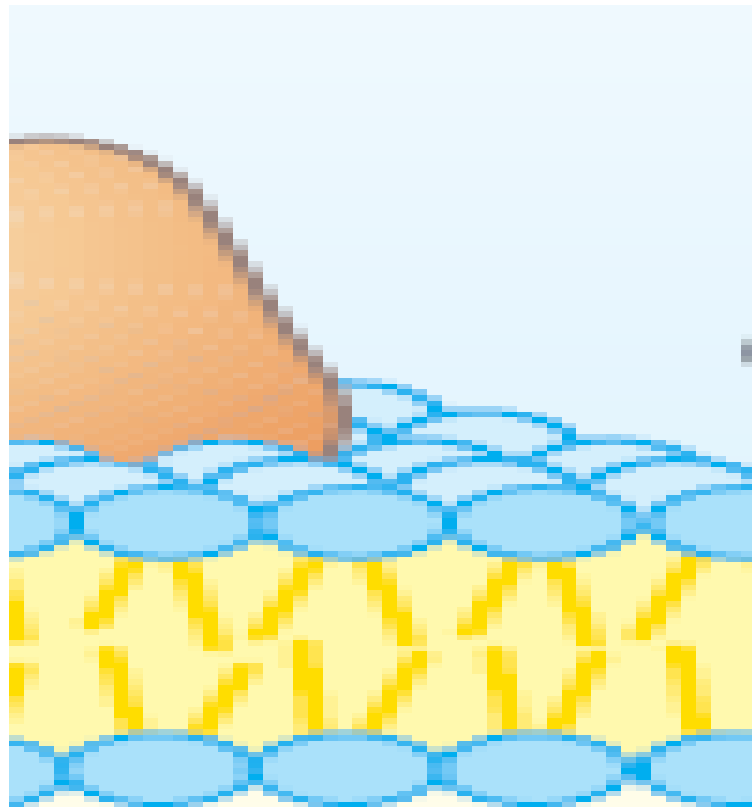


CLASSIFICATION OF GLYCOLIPIDS



NEUTRAL GLYCOSPHINGOLIPIDS

- Cerebroside (ceramide monosaccharide)
 - Most common glycolipid of membranes
 - Post natal development of brain,
peripheral nerves, myelin sheath
- Globoside (ceramide oligosaccharide)
 - Lactosylceramide
 - Forssman Antigen (Blood Groups)



Glycolipid

5nm

Cytoplasmic side

ACIDIC GLYCOSPHINGOLIPIDS

Negatively charged

- Acidic sugars (Sialic Sugar or NANA)
 - Classified as
 - **Ganglioside**
 - Ganglion cells, nerve endings
 - One or more molecules of NANA
 - Nomenclature
 - G-ganglioside
 - M,D,T or Q- number of NANA
 - Integer numbers for additional saccharide units
 - Lipid Storage diseases
- **Sulfatide (Sulfoglycosphingolipid)**
 - Sulfated galactosyl residues
 - Nerve tissue and kidney.