

Amphipathic lipids + water

in case of fatty acid salt

(one FA chain)

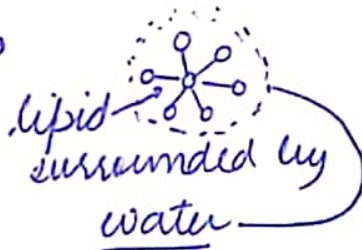
Micelle

(diameter < 20 nm)

hydrophobic fatty acid chain hidden inside micelle.

Bilayer

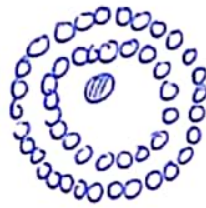
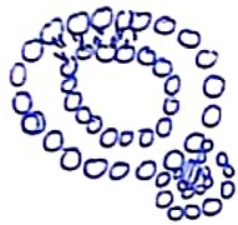
2 lipid monolayer



Liposome

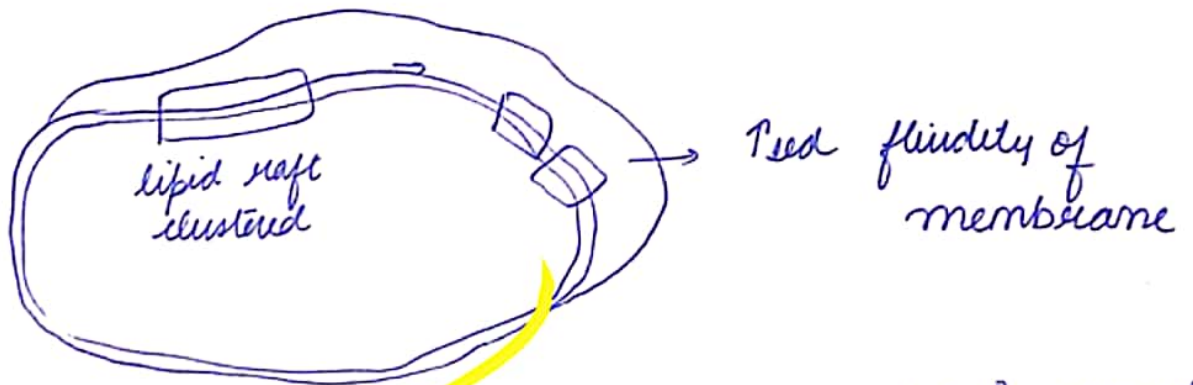
Closed, self sealing, solvent filled vesicles bounded by only a single bilayer.

Liposome - basic unit - phospholipid



to enter into the cell → ① Diffusion (fat soluble)  
② Transporter protein (water soluble/large)

- Lipid rafts → part of cell membrane  
→ specific functions  
→ compact / clustered



Float freely , also present in Golgi apparatus & lysosomes

→ Lipid raft → 3 to 5 fold amount of cholesterol than surrounding bilayer.

Also enriched in sphingolipids (sphingomyelin) elevated by 50% compared to PM & phosphatidylcholine in ↓ amount.

↔

→ more saturated fatty acids → rigidity  
↓  
compact str.  
+ cholesterol  
→ flexibility.

→ more dynamic

- more saturated fatty acids → rigidity  
↓  
compact str
- + cholesterol
- more dynamic → flexibility.
- resistant to detergent
- high melting temperature → saturated
- ~~Anti~~ various proteins present.

Lipids → some are organized into aggregates → lipid rafts → micro-domain

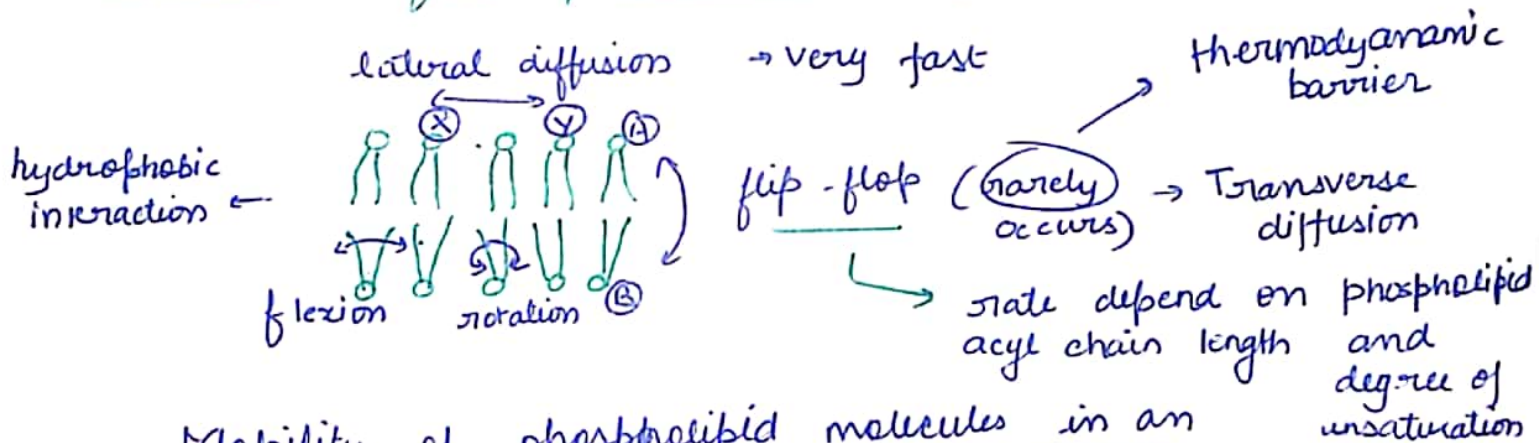
because caveolin proteins are found.

known as Caveolae in mammalian cells

also contain proteins



# Motion of lipid molecules :-



## Mobility of phospholipid molecules in an artificial lipid bilayer