

Fig 1. Représentation schématique d'une membrane.

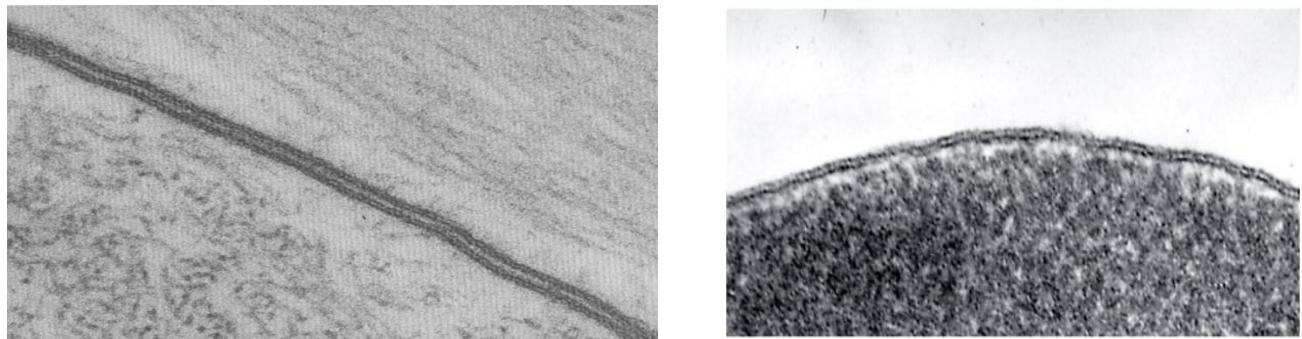


Fig 2. La membrane sous le microscope électronique.

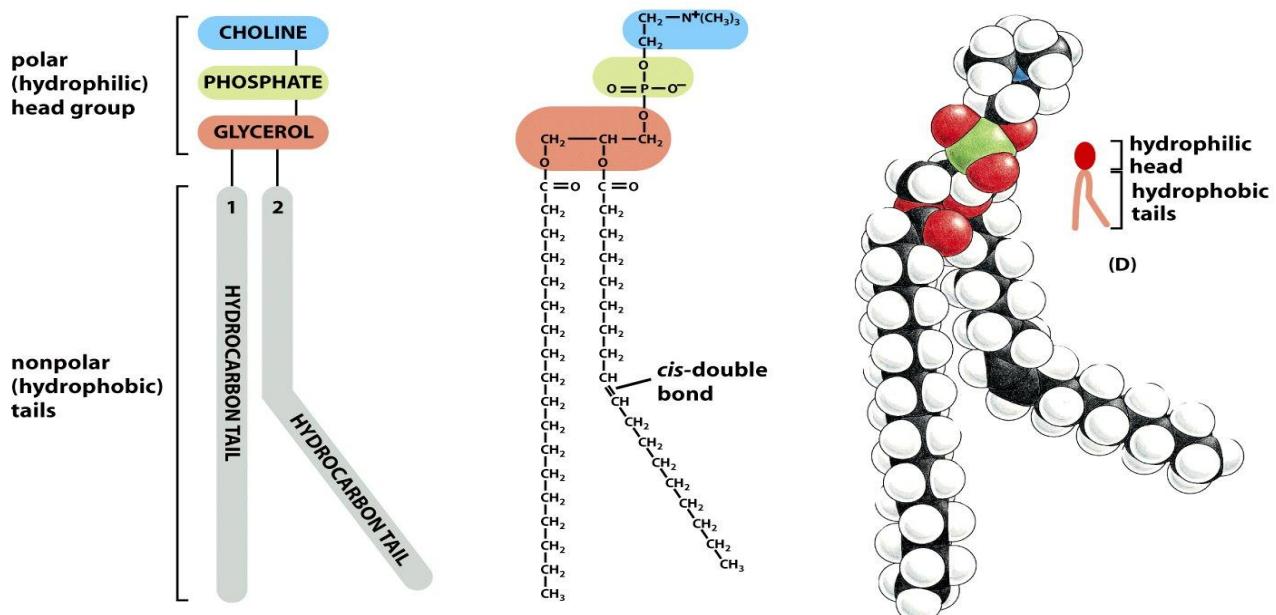
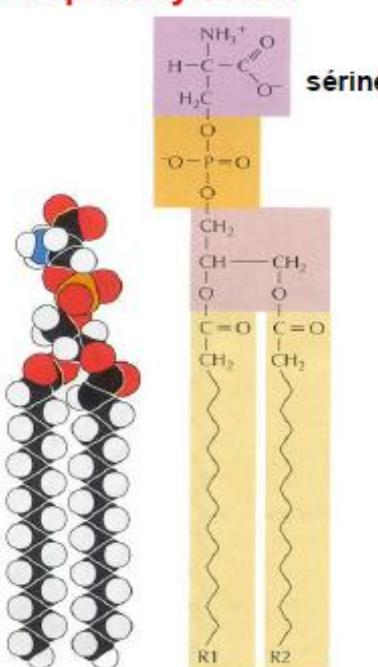


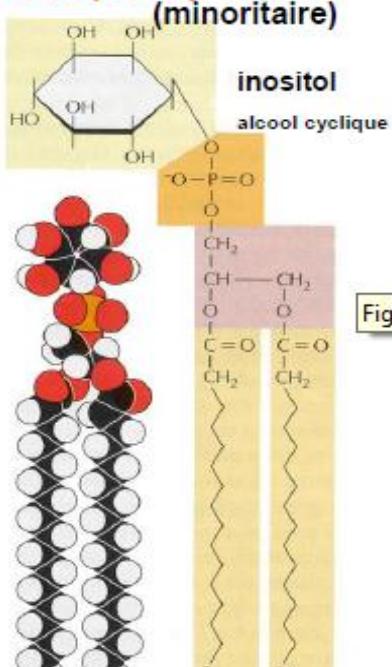
Fig 3 : structure des phospholipides.

Phosphatidylséroline



PS : négative

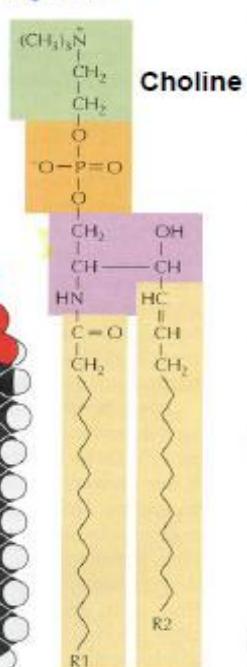
Phosphatidylinositol (minoritaire)



PI : négatif

Glycérophospholipides négatifs

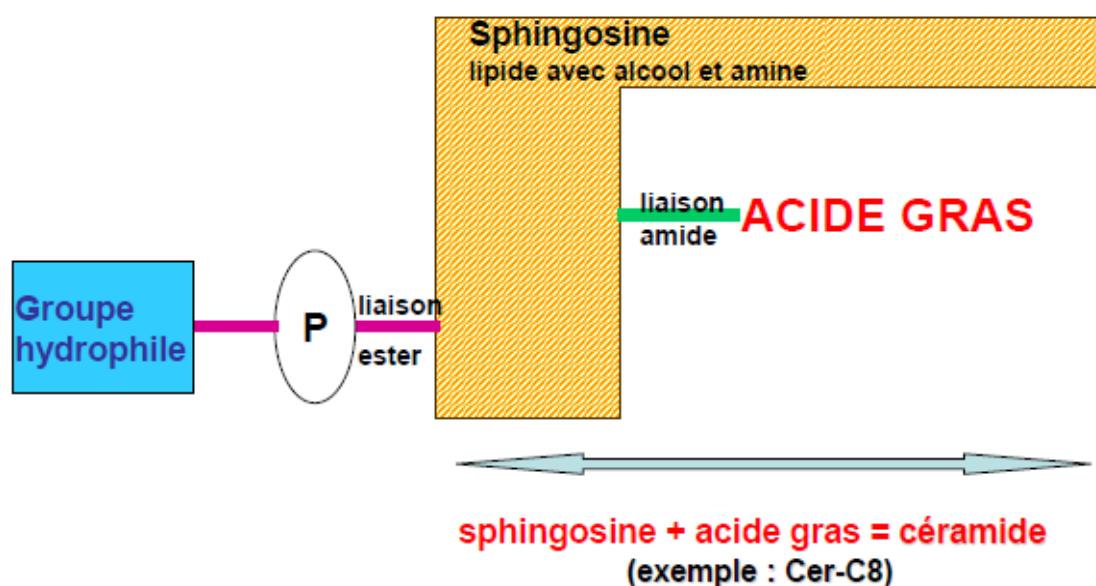
Sphingomyéline



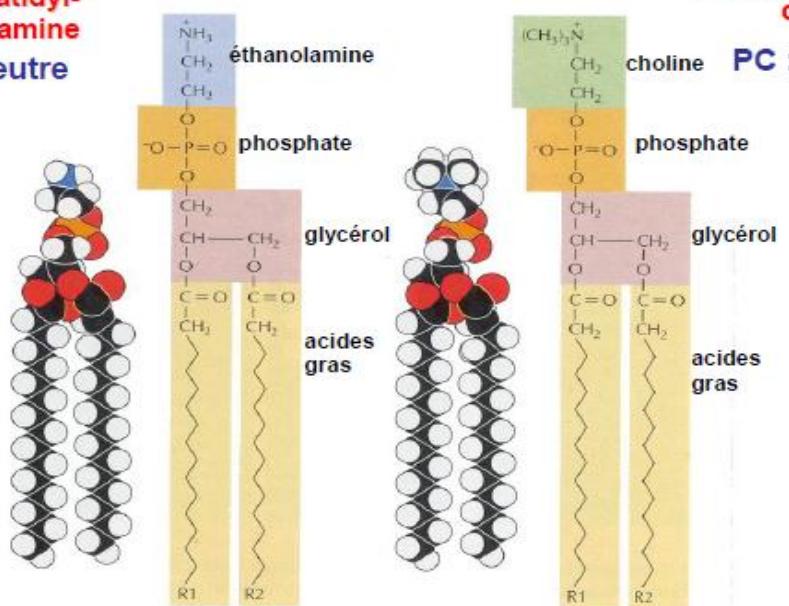
Sphingophospholipide

Fig 2

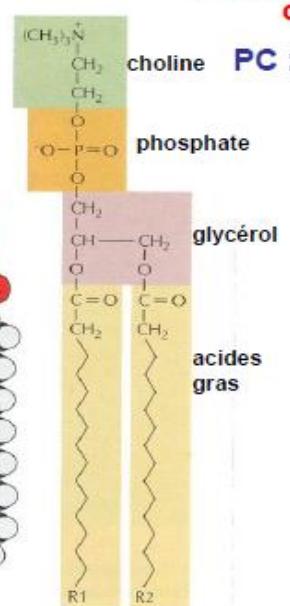
Sphingophospholipides : structure schématique



Phosphatidyl-éthanolamine
PE : neutre

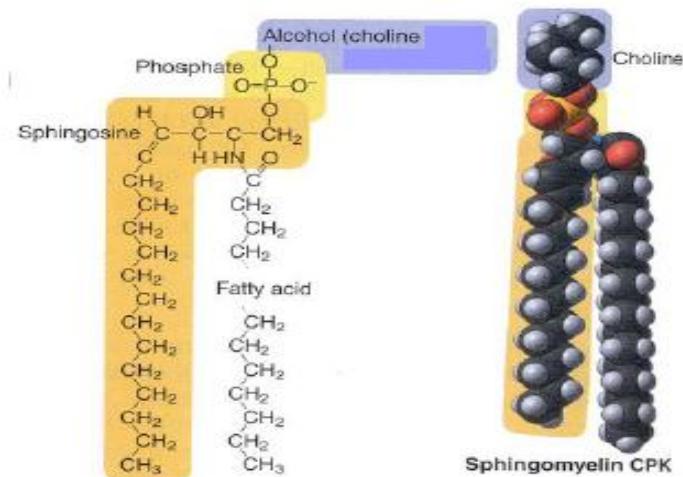


Phosphatidyl-choline
PC : neutre



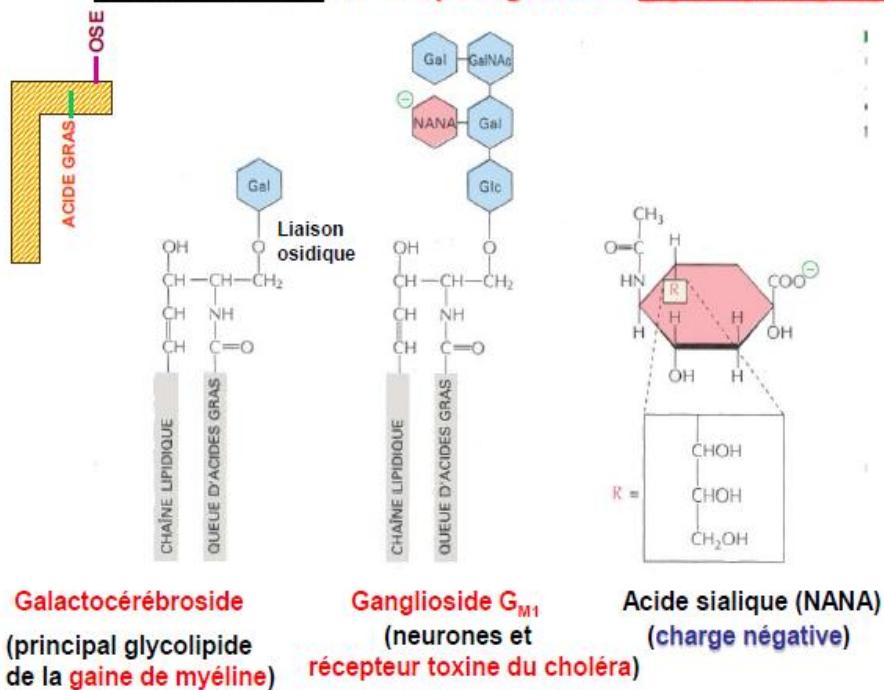
Structure des glycérophospholipides neutres

'un sphingophospholipide : la sphingomyéline

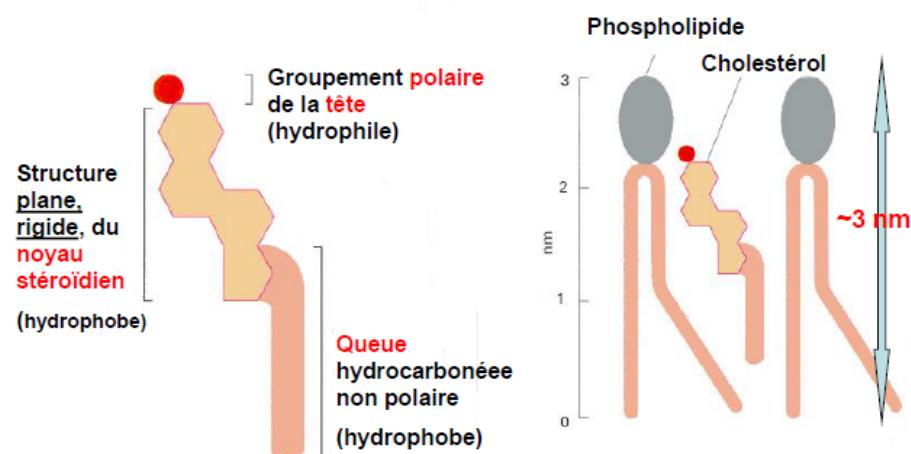
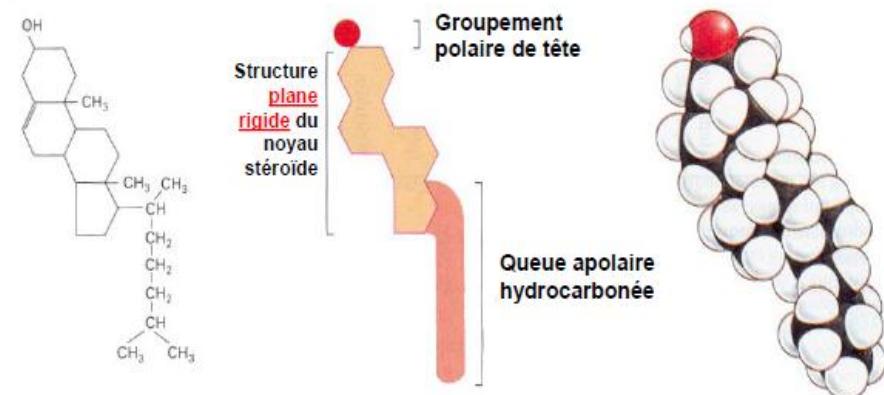


Sphingomyéline
constituant de la gaine de myéline
(tête phosphocholine estérifiant une
sphingosine liée par liaison amide à un acide gras)

Autres dérivés de la sphingosine : glycosphingolipide



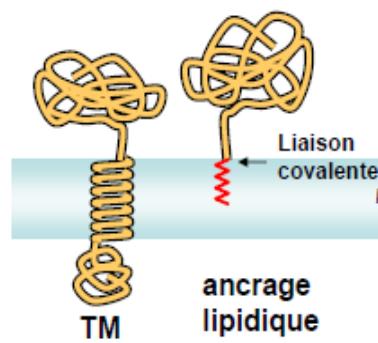
Structure du cholestérol



Position du cholestérol dans les membranes cellulaires

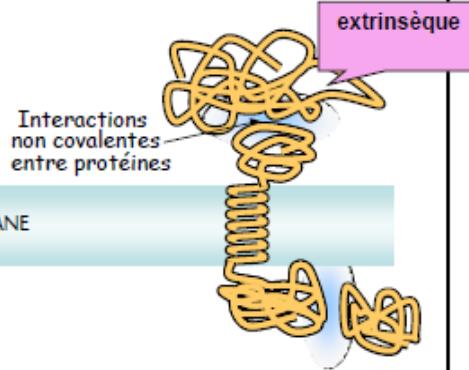
➤ **Protéines intrinsèques**

– interaction directe avec les lipides de la bicouche



➤ **Protéines extrinsèques**

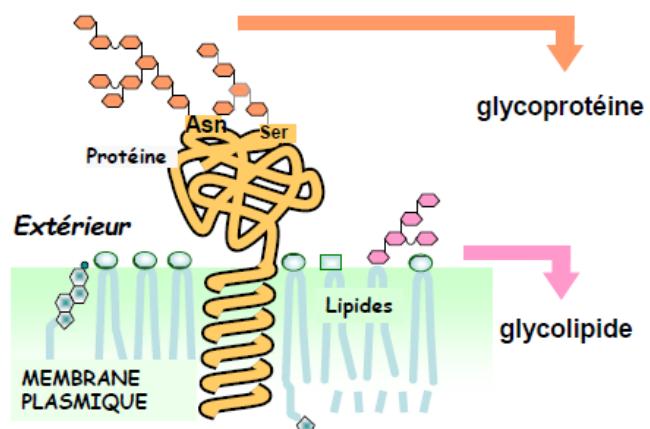
– Pas de contact direct avec les lipides de la bicouche

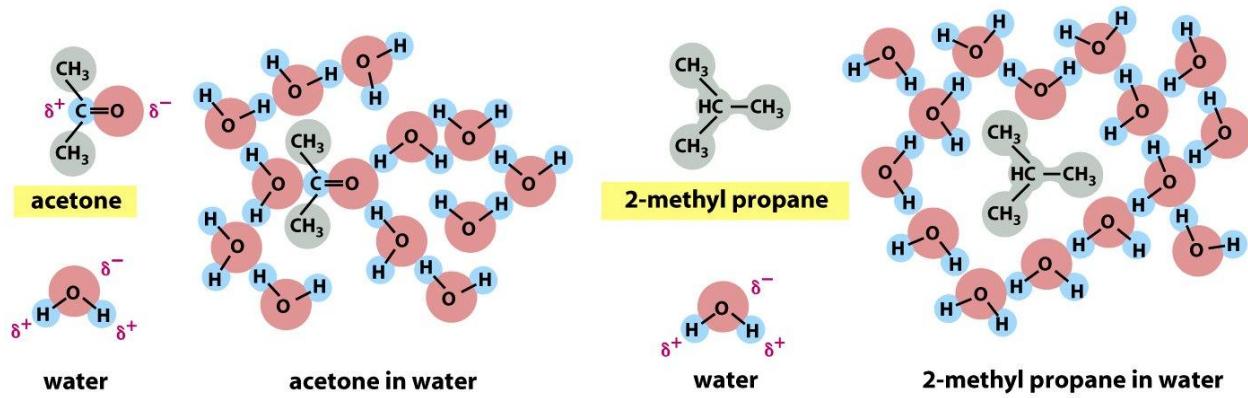


I-2. Protéines intrinsèques : 2 types d'ancrage hydrophobe direct dans bicouche lipidique

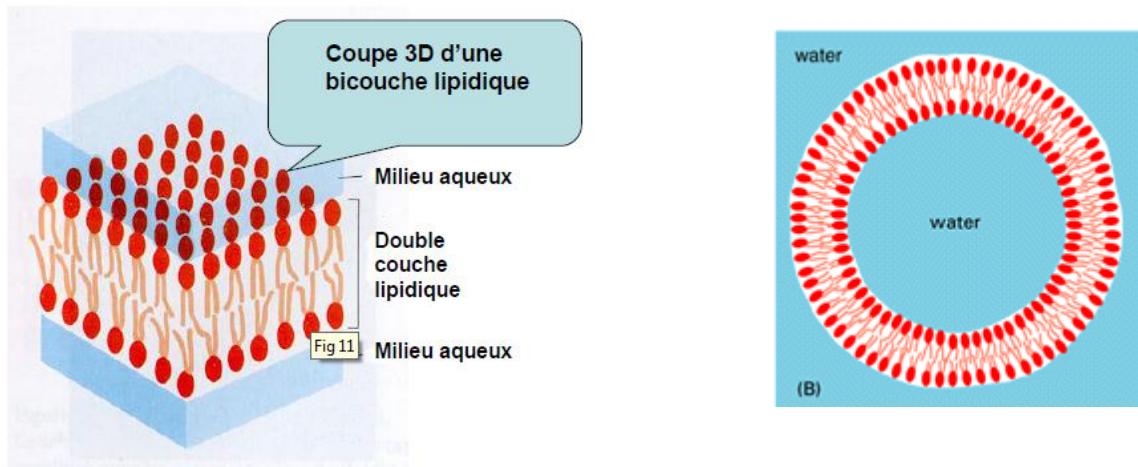
Ancrage par la protéine	Ancrage par un lipide

Membrane plasmique : glycoprotéines et glycolipides

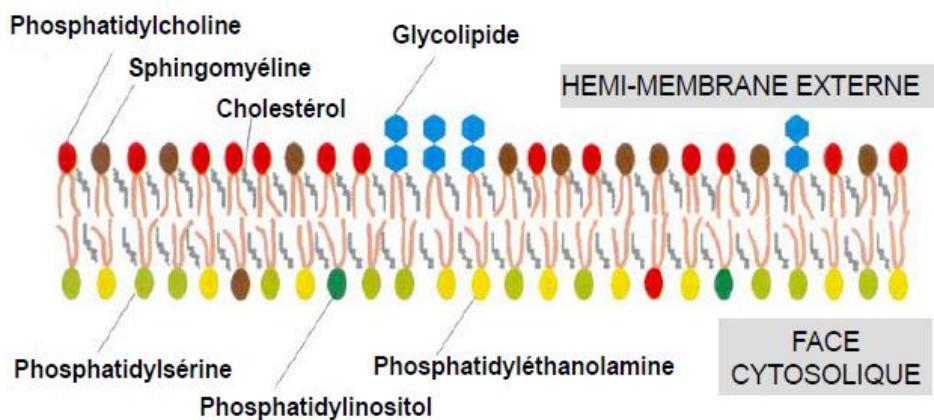




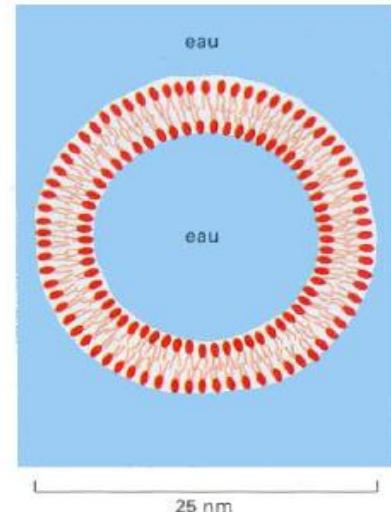
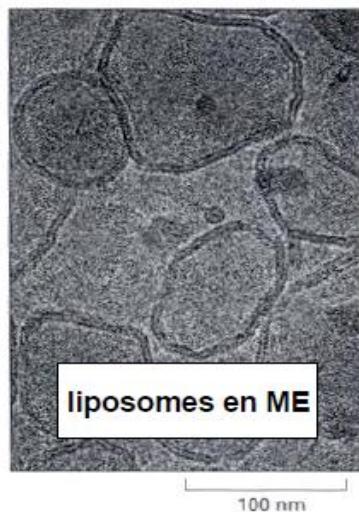
Interaction de molécules hydrophiles et hydrophobes avec l'eau



Asymétrie de la bicouche lipidique de la mb plasmique

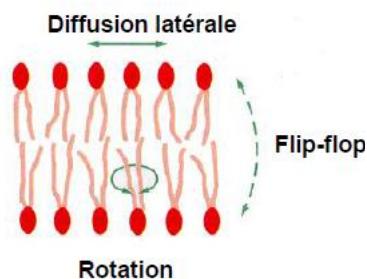


II-3b. La bicouche lipidique est **fluide**

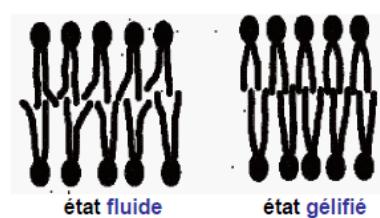


La fluidité de la bicouche lipidique peut être étudiée à l'aide de liposomes

Mouvements des phospholipides dans la bicouche



Facteurs influençant la fluidité de la bicouche lipidique



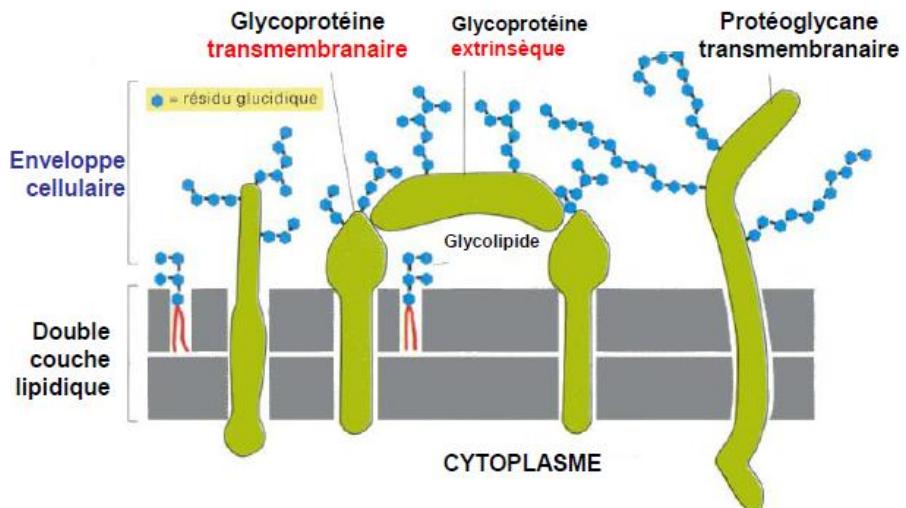


Schéma du glycocalyx

Glycocalyx : manteau glucidique

