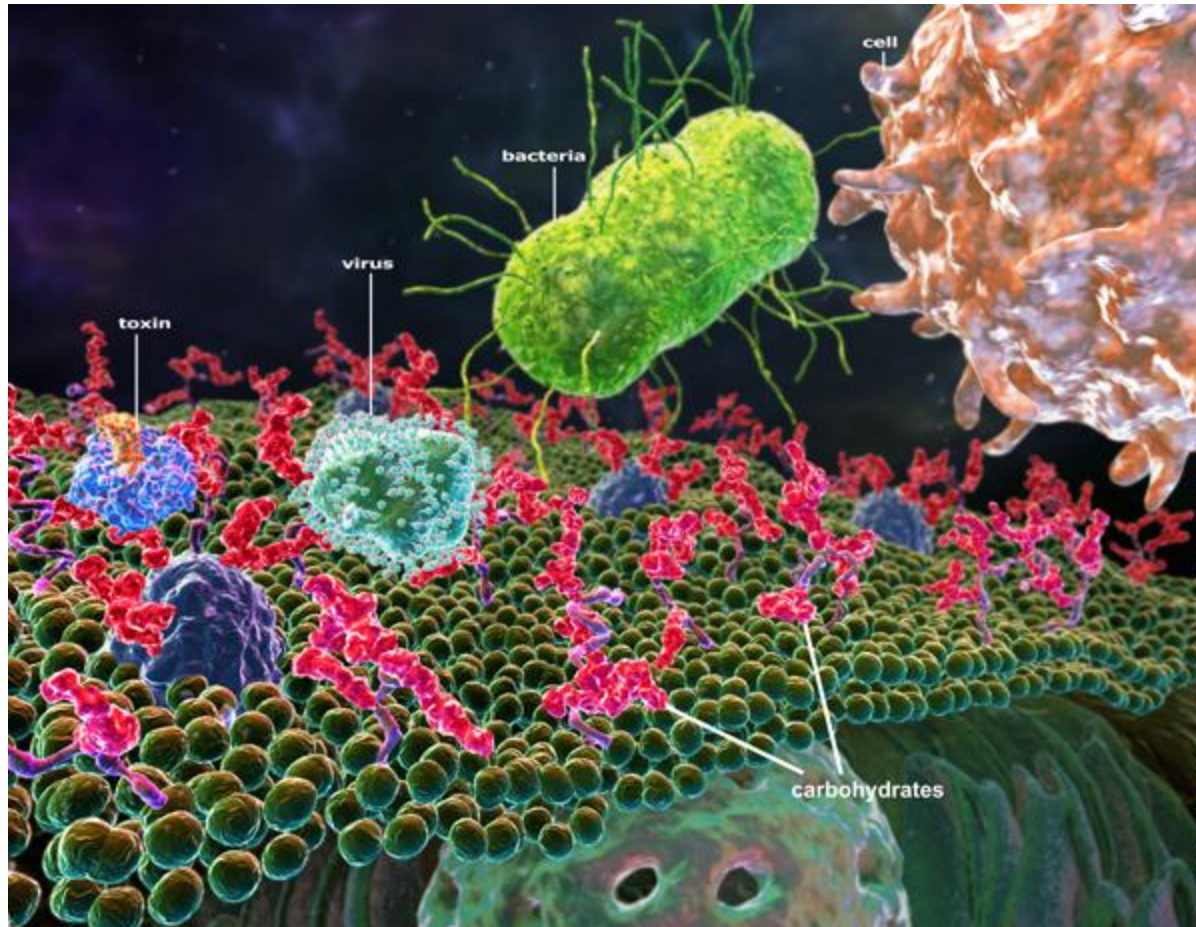


ΛΙΠΙΔΙΑ ΚΑΙ ΥΔΑΤΑΝΘΡΑΚΕΣ



Phospholipid



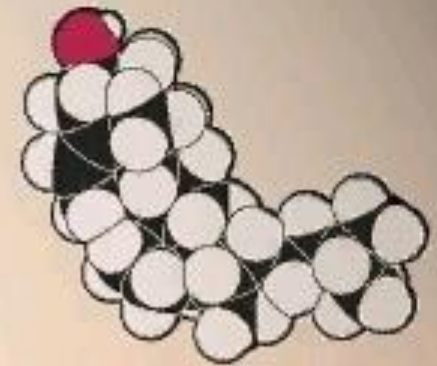
Phosphatidylcholine

Triglyceride



Triacylglycerol

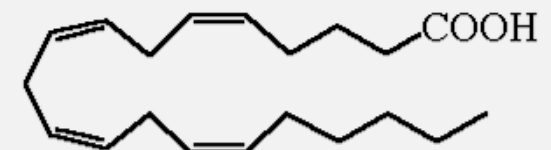
Steroid



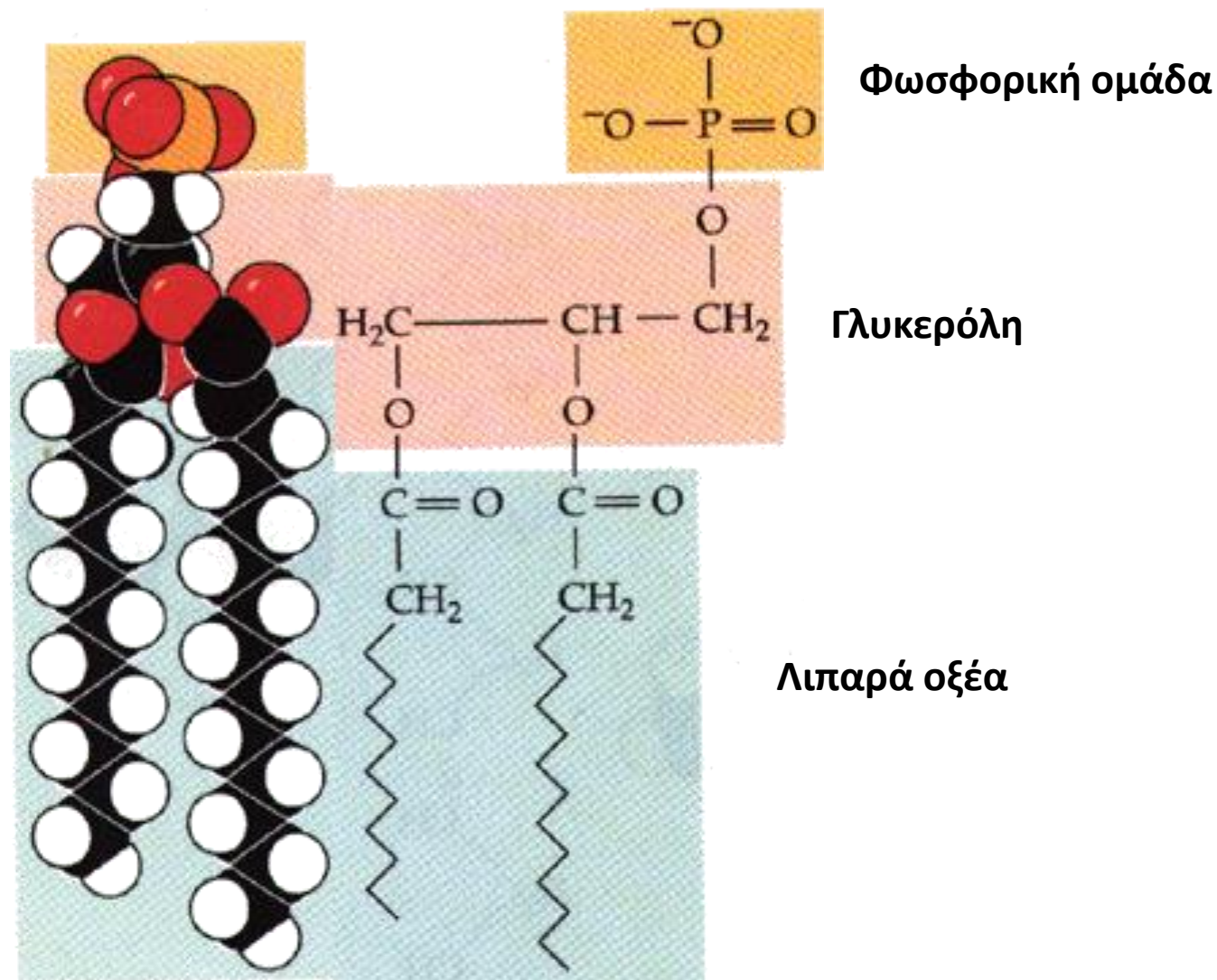
Cholesterol

Lipid

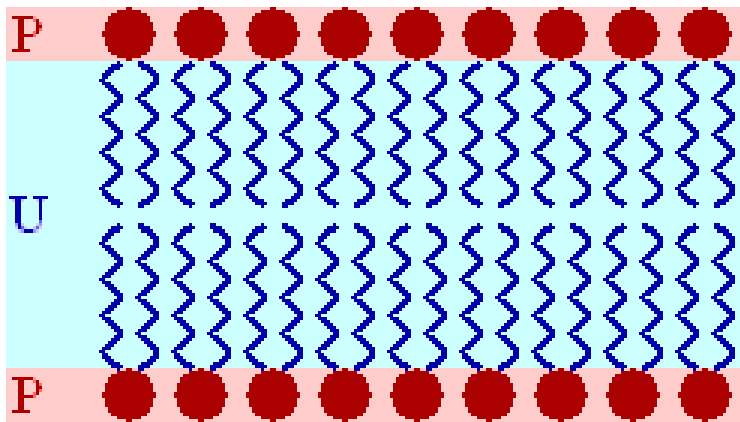
Prostaglandins



Arachidonic acid
Prostaglandins Precursor



①



②

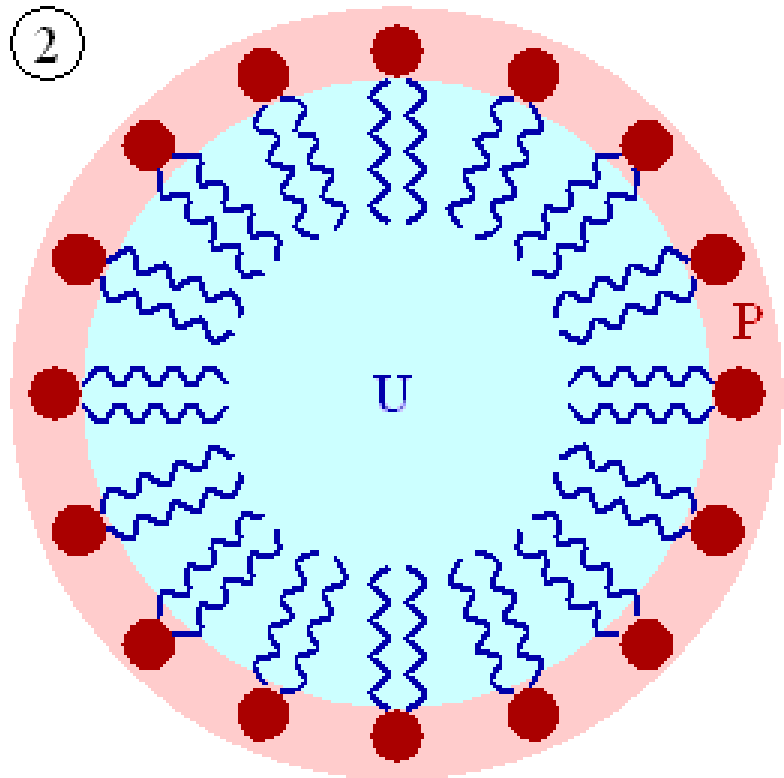
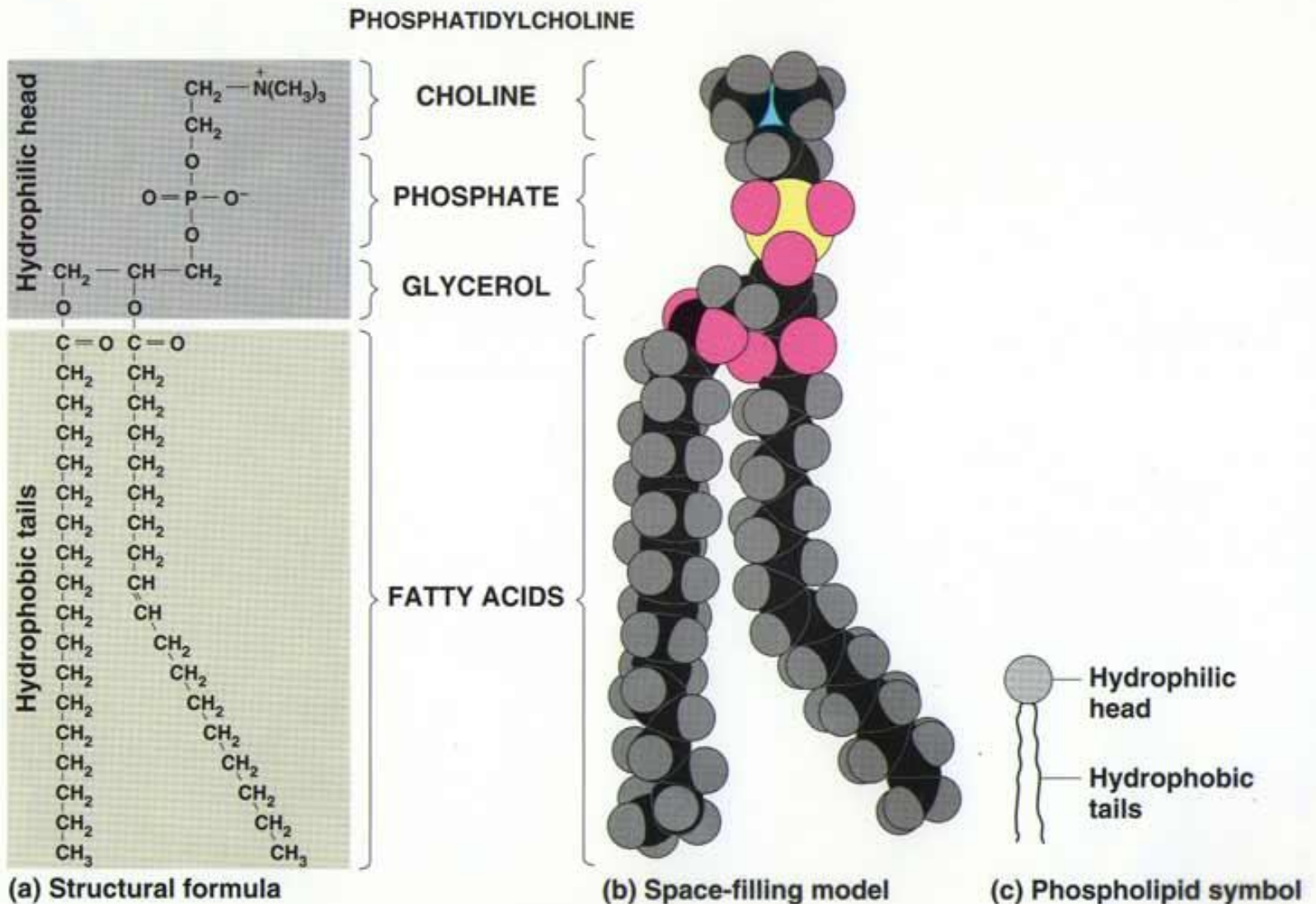


Figure 5.12 The structure of a phospholipid



Name of glycerophospholipid R_3 (in Figure 10.6)

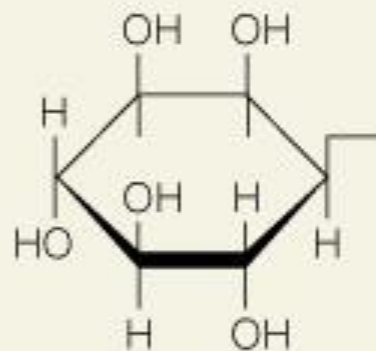
Phosphatidic acid $H-$ (ionized at neutral pH)

Phosphatidylethanolamine $H_3\overset{+}{N}-CH_2-CH_2-$

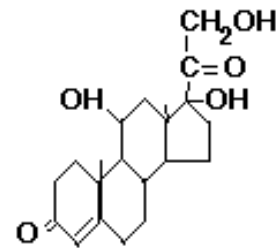
Phosphatidylcholine $(CH_3)_3\overset{+}{N}-CH_2-CH_2-$

Phosphatidylserine $H_3\overset{+}{N}-\underset{\begin{array}{c} | \\ COO^- \end{array}}{CH}-CH_2-$

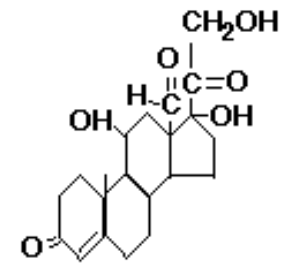
Phosphatidyl inositol



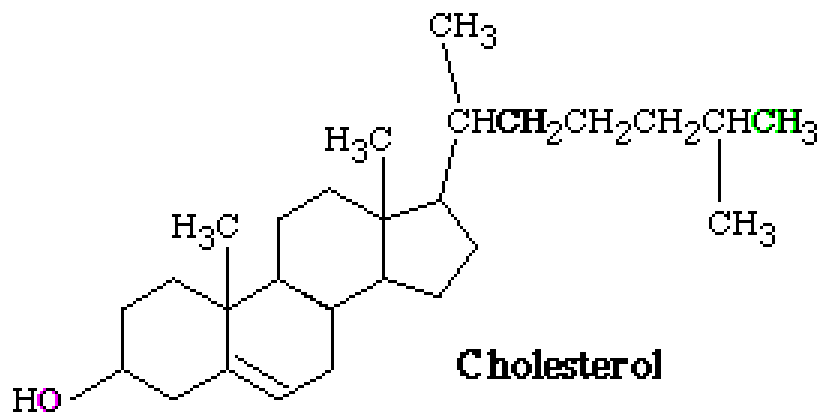
Στεροειδή



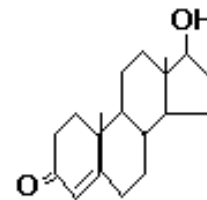
Cortisol
(a glucocorticoid)



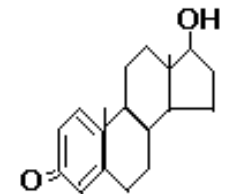
Aldosterone
(a mineralocorticoid)



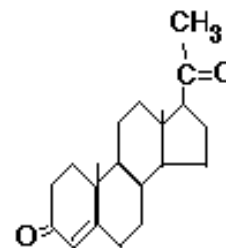
Cholesterol



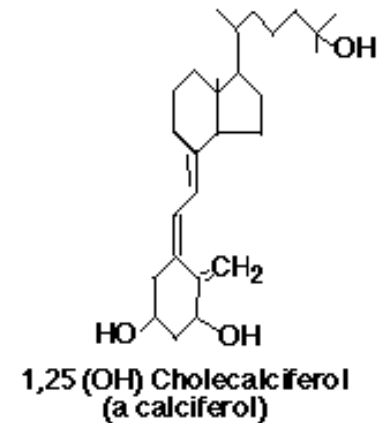
Testosterone
(an androgen)



Estradiol
(an estrogen)

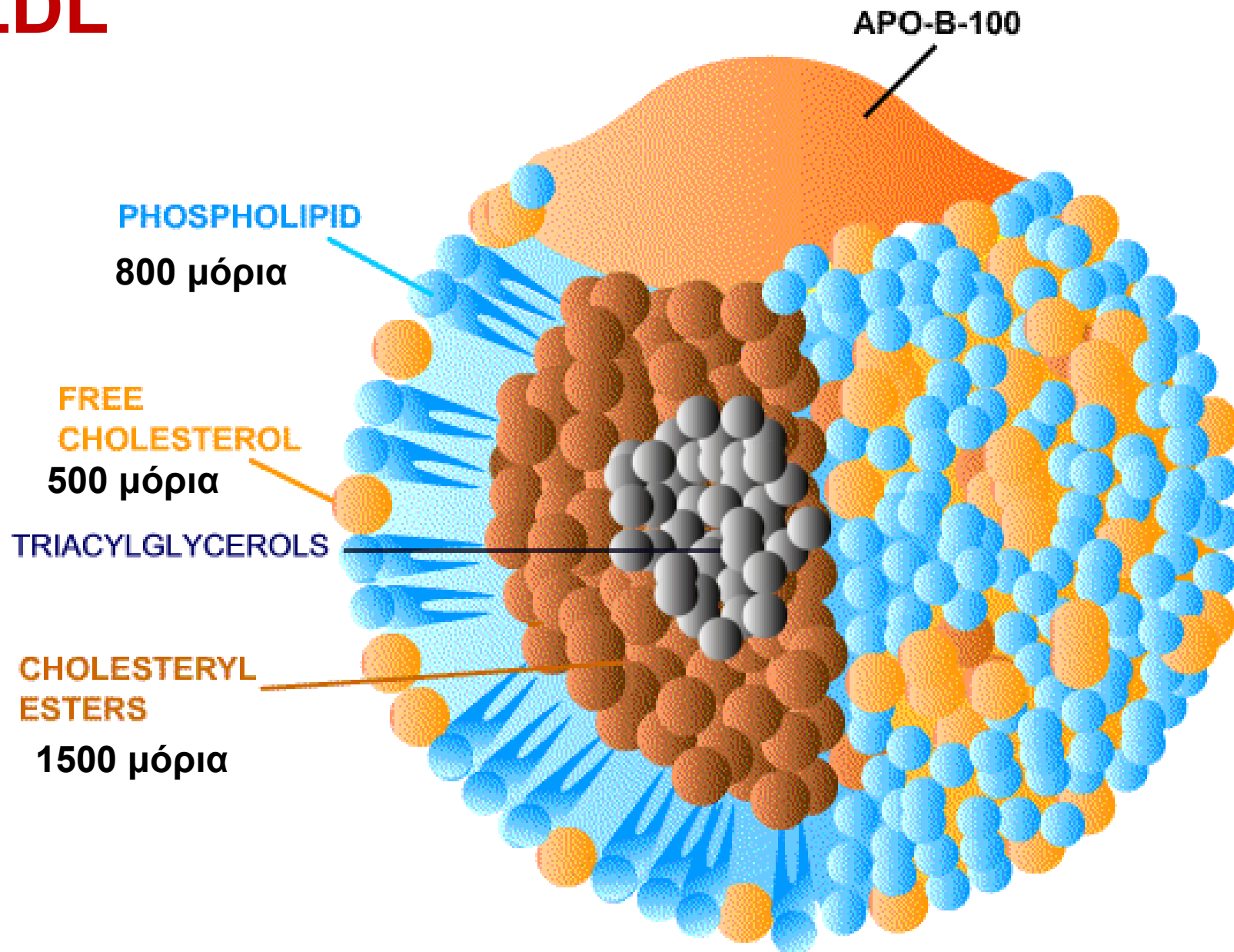


Progesterone
(a progestin)

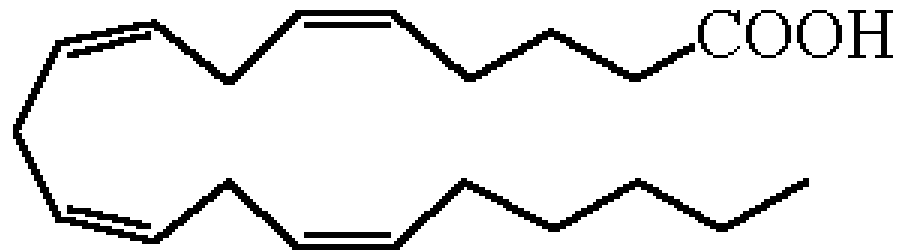


1,25 (OH)₂ Cholecalciferol
(a calciferol)

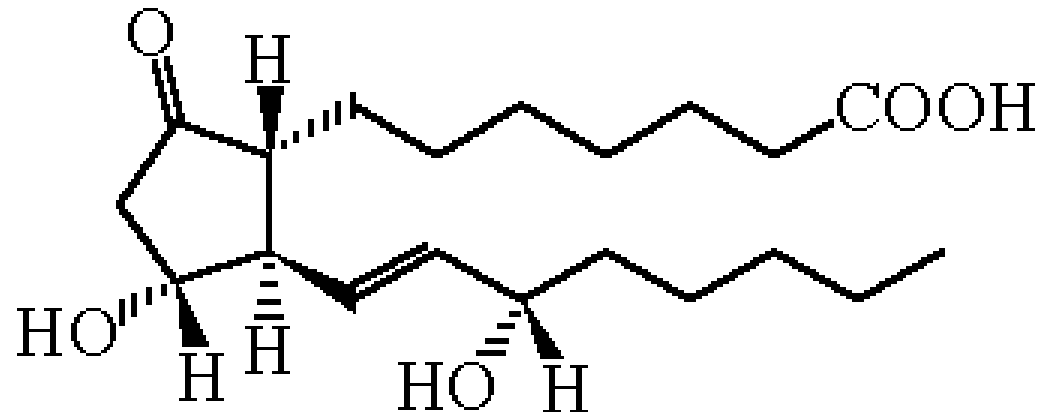
LDL



Prostaglandins

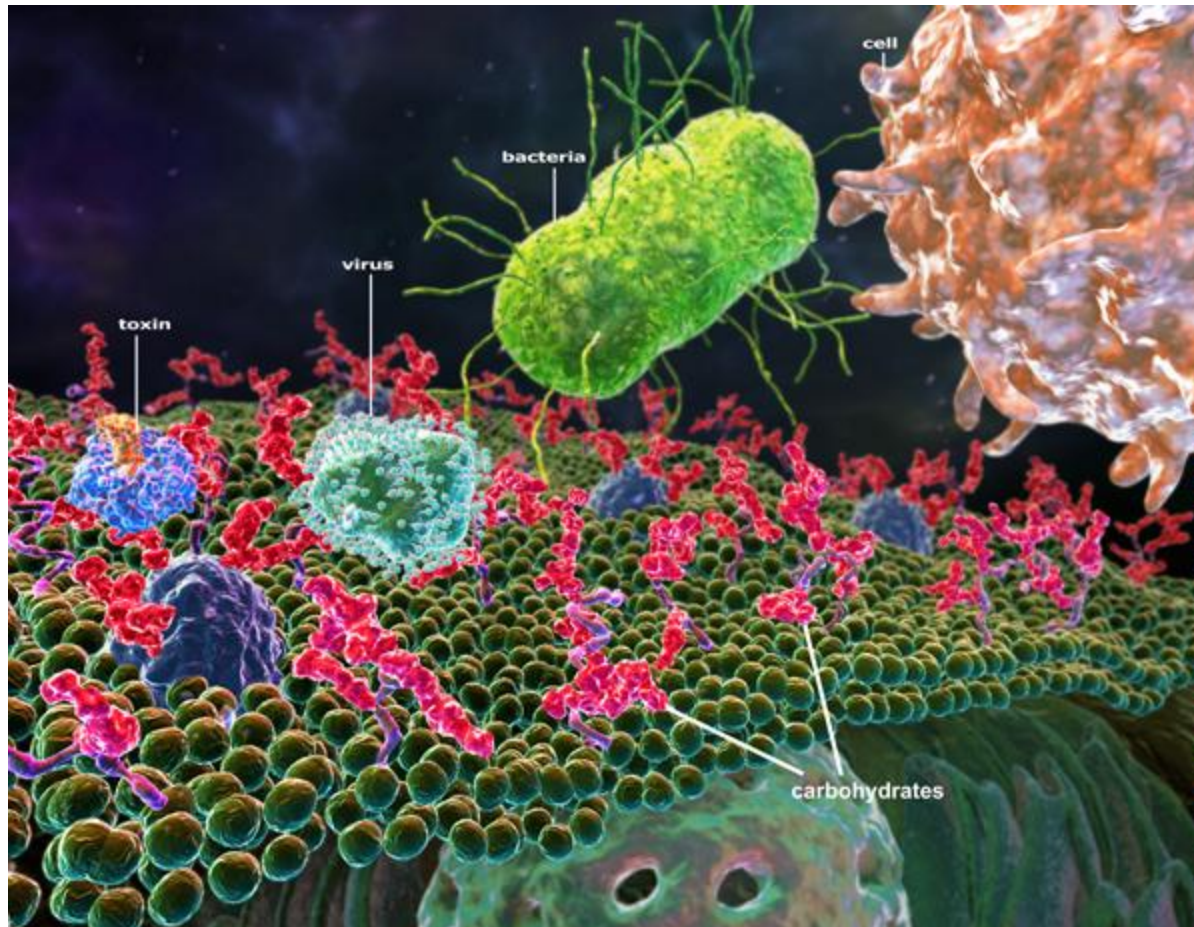


Arachidonic acid
Prostaglandins Precursor

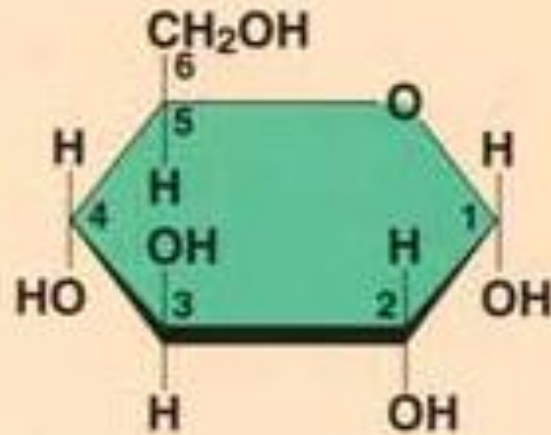


Prostaglandin E₁

ΥΔΑΤΑΝΘΡΑΚΕΣ

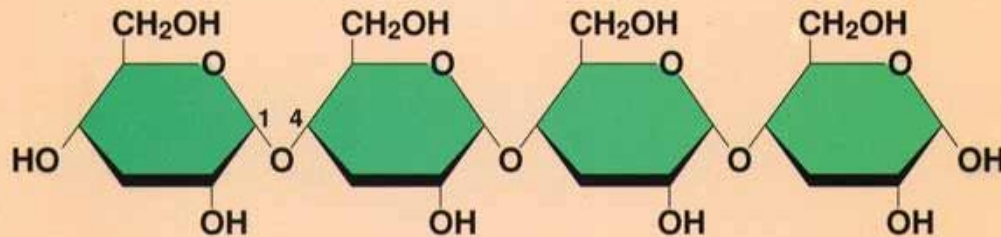


ΑΠΛΟΙ ΥΔΑΤΑΝΘΡΑΚΕΣ

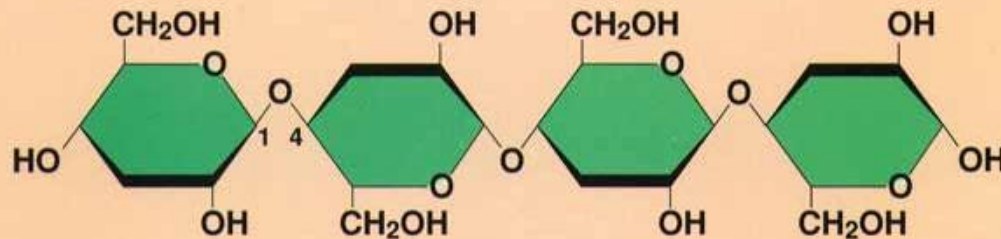


Γλυκόζη

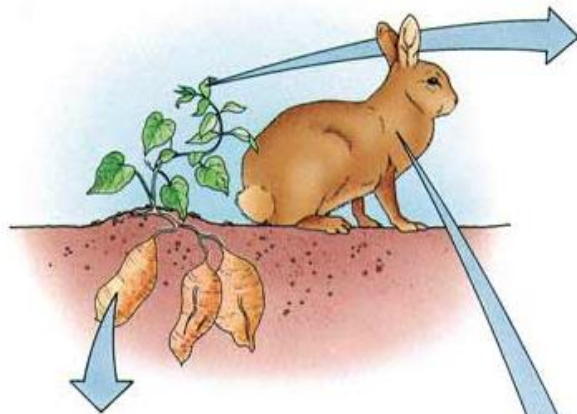
ΣΥΝΘΕΤΟΙ ΥΔΑΤΑΝΘΡΑΚΕΣ- ΓΛΥΚΟΣΙΔΙΚΟΣ ΔΕΣΜΟΣ



(b) Starch: 1–4 linkage of α glucose

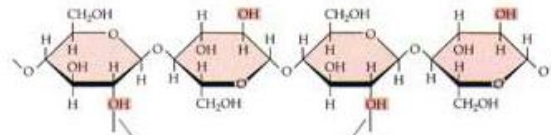
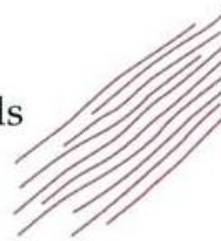


(c) Cellulose: 1–4 linkage of β glucose



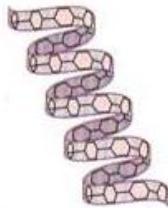
(a) Cellulose

Linear strands
of cellulose
molecules



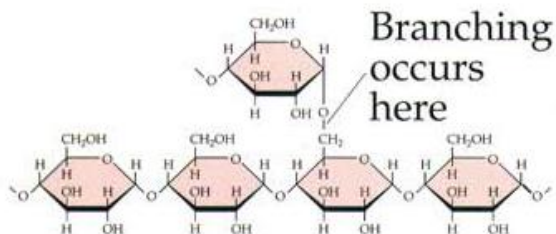
Hydrogen bonding to other
cellulose molecules can
occur at these points

(b) Starch (amylose)



Unbranched starch
molecule

Branched
starch
molecule



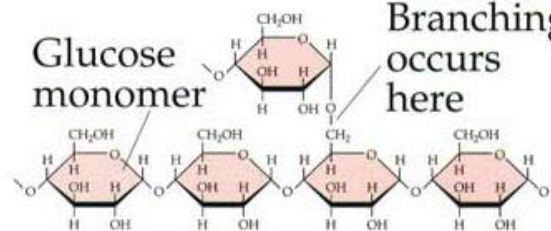
Branching
occurs
here

(c) Glycogen

Highly
branched
glycogen
molecule



Glucose
monomer



Branching
occurs
here

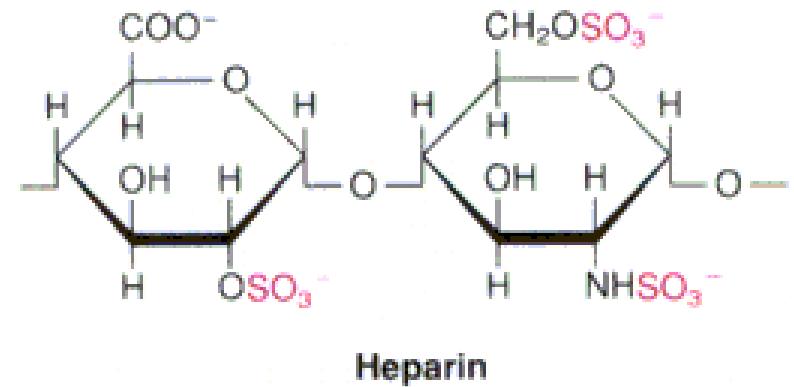
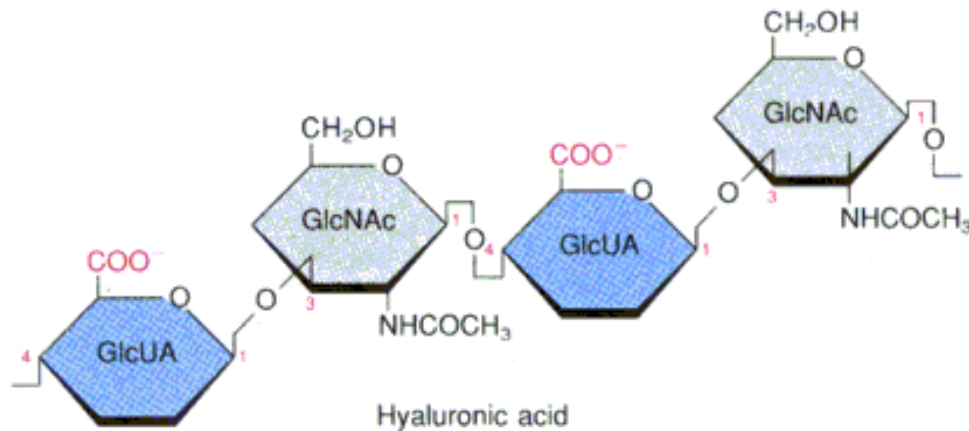
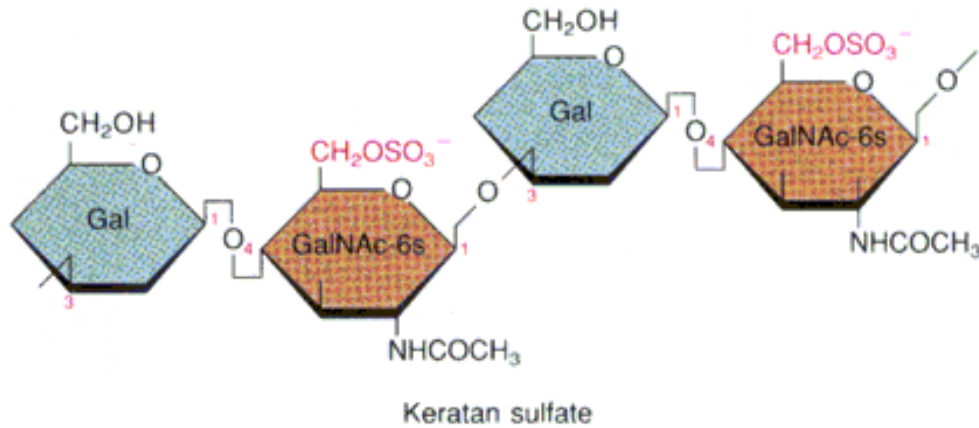
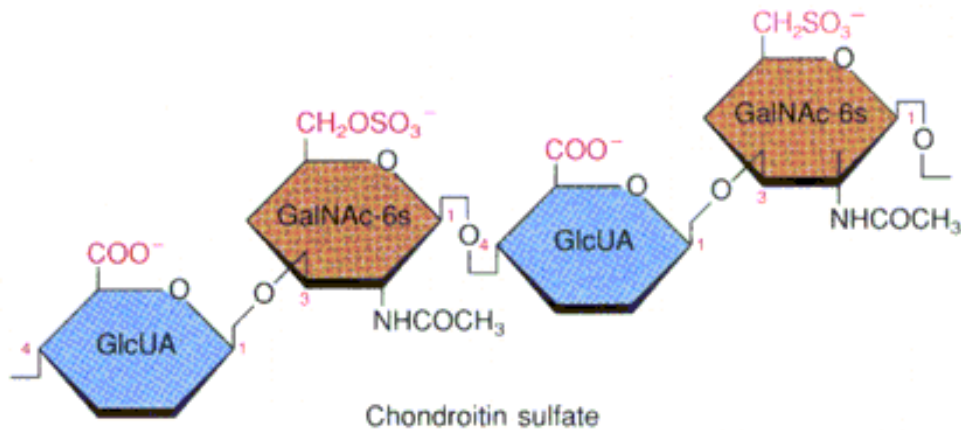
Γλυκοζαμινογλυκάνες

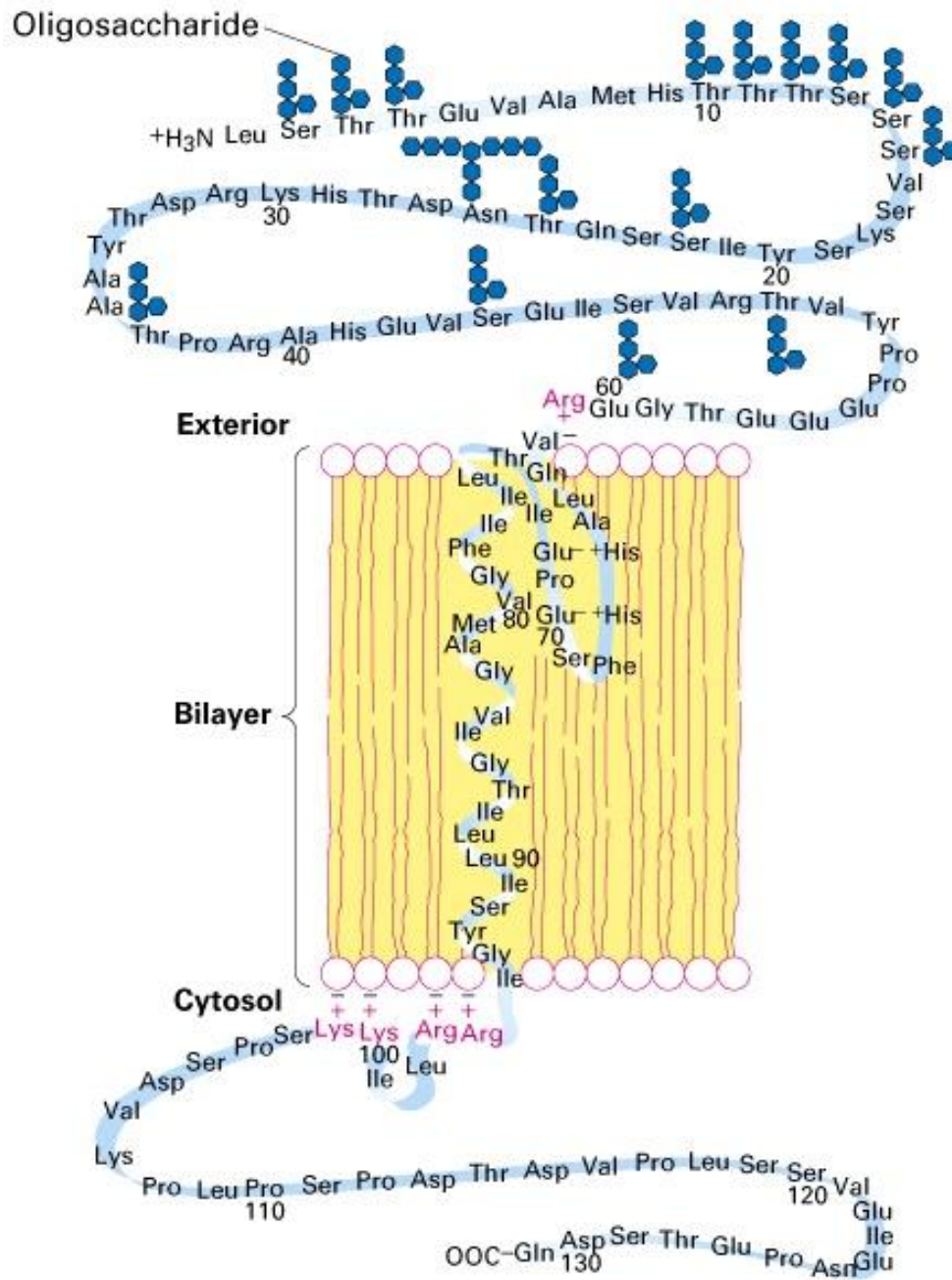
Χονδροϊτίνη

Κερατάνη

Ηπαρίνη

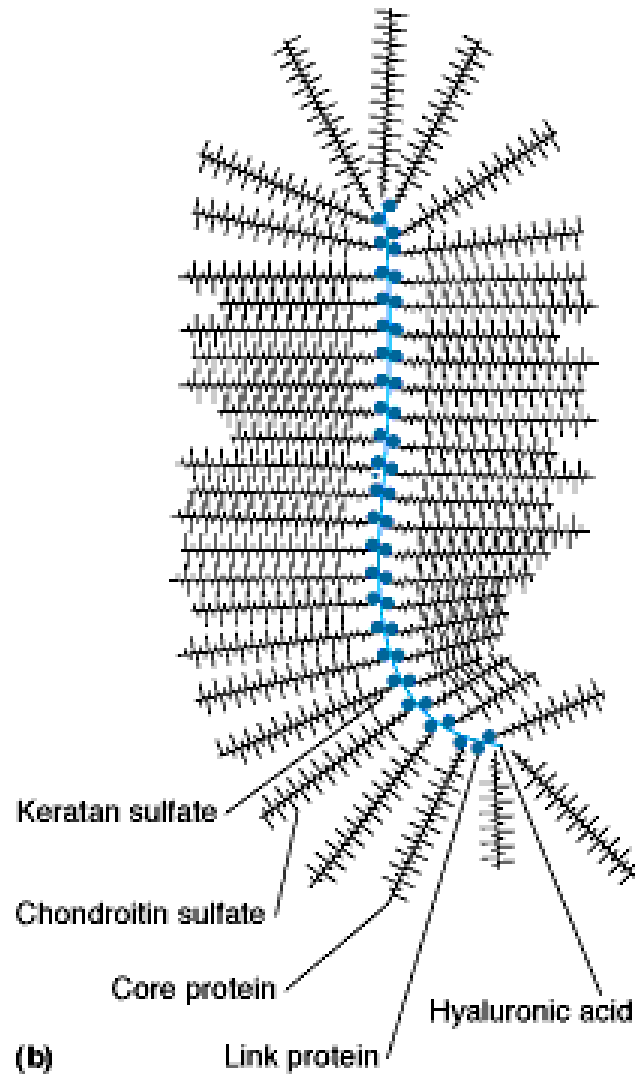
Υαλουρονικό Οξύ

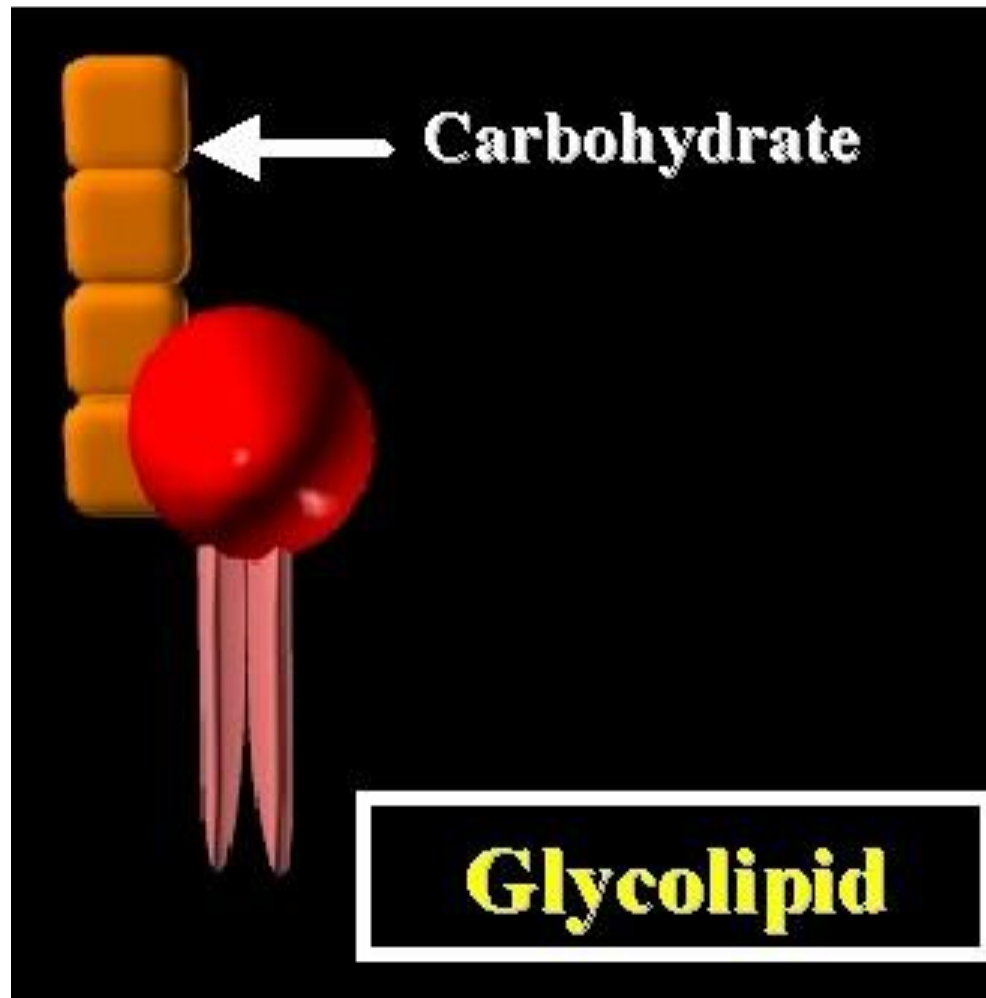




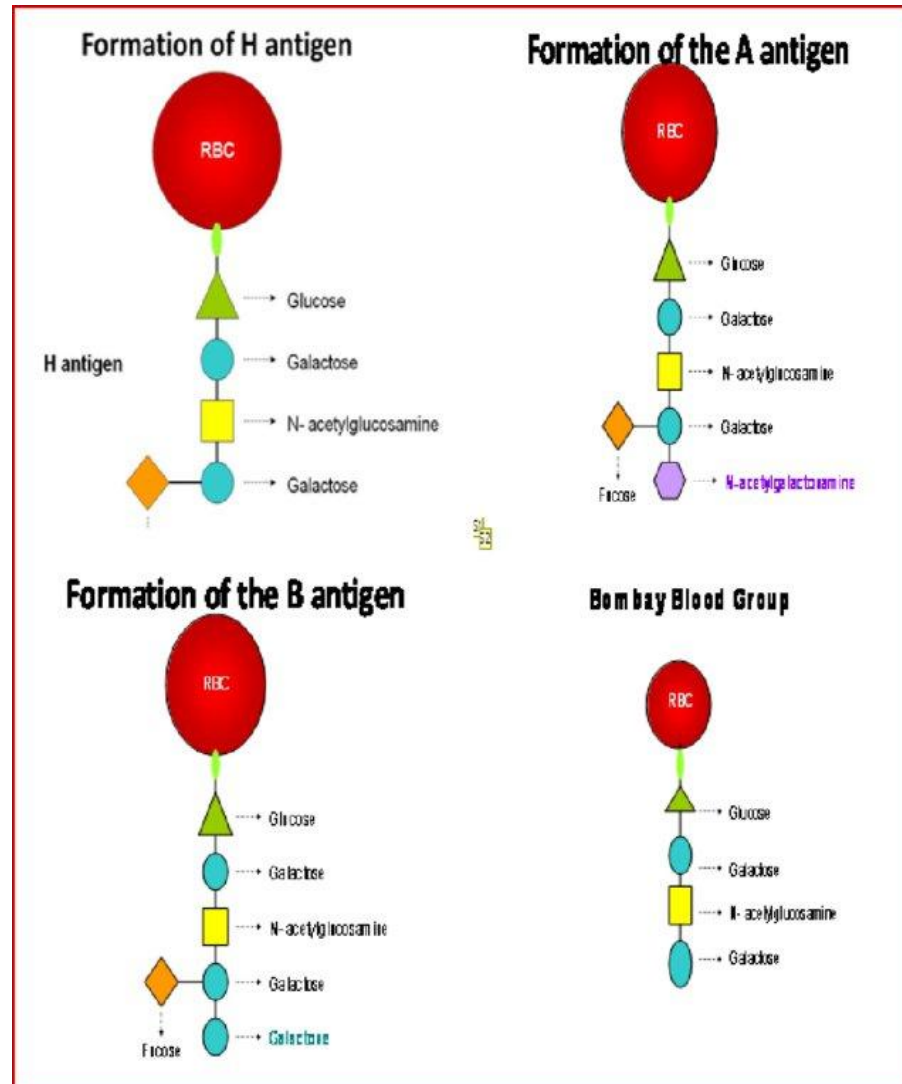
Γλυκοπρωτεΐνη

Πεπτιδογλυκάνη





Glycolipids Determine Blood Group



Ποια είναι η βασική δομή ενός φωσφολιπιδίου;
Ποια λιπίδια συναντούνται στην κυτταρική μεμβράνη;

Ποιοι είναι οι σημαντικότεροι αποθηκευτικοί υδατάνθρακες;
Τι είναι οι γλυκοζαμινογλυκάνες;
Ποια διαφορά έχουν στη σύστασή τους οι γλυκοπρωτεΐνες από τις πεπτιδογλυκάνες;