



Organic Molecules Lipids-2 (Lecture 31)



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Organic Molecules

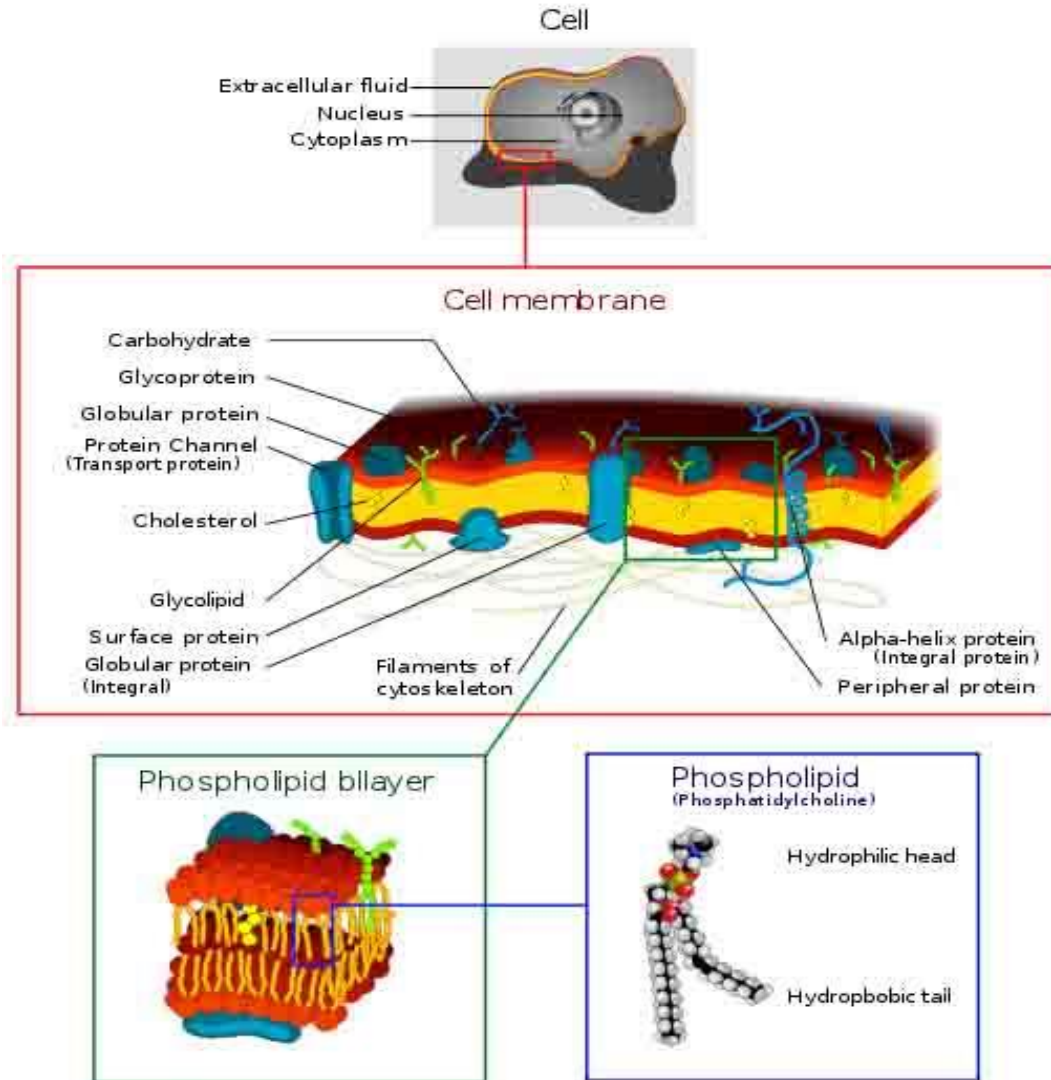
Lipids-2

Organic Molecules - Lipids

(Fats, Phospholipids, Waxes & Steroids)

Phospholipids

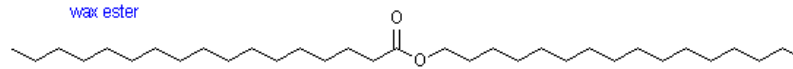
- Phospholipids are a major component of all cell membranes.
- Most phospholipids contain a diglyceride as the tail, and a phosphate group for head.
- Hydrocarbon tails are **hydrophobic**, but phosphate heads are **hydrophilic**.
- So phospholipids are soluble in both water and oil.
- Tails from both layers facing inward and the heads facing outward = **phospholipid bilayer**.



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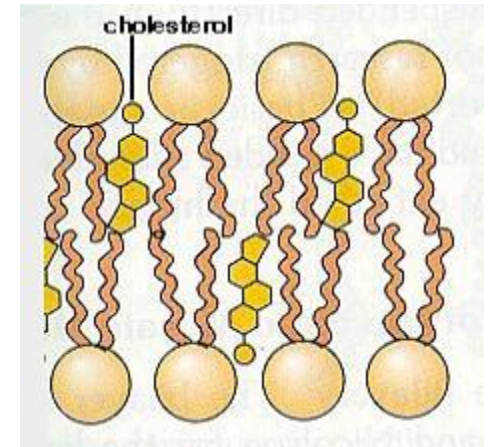
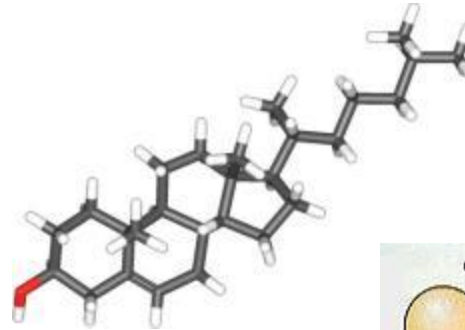
Waxes



- Do not have a hydrophilic head: so completely water insoluble.

Steroids

- The central core of a cholesterol molecule (4 fused rings) is shared by all steroids.
- Cholesterol is precursor to our **sex** hormones and Vitamin **D**.
- Our cell membranes contain cholesterol (in between the phospholipids) to help keep membrane "fluid" even when exposed to cooler temperatures.



Thank You