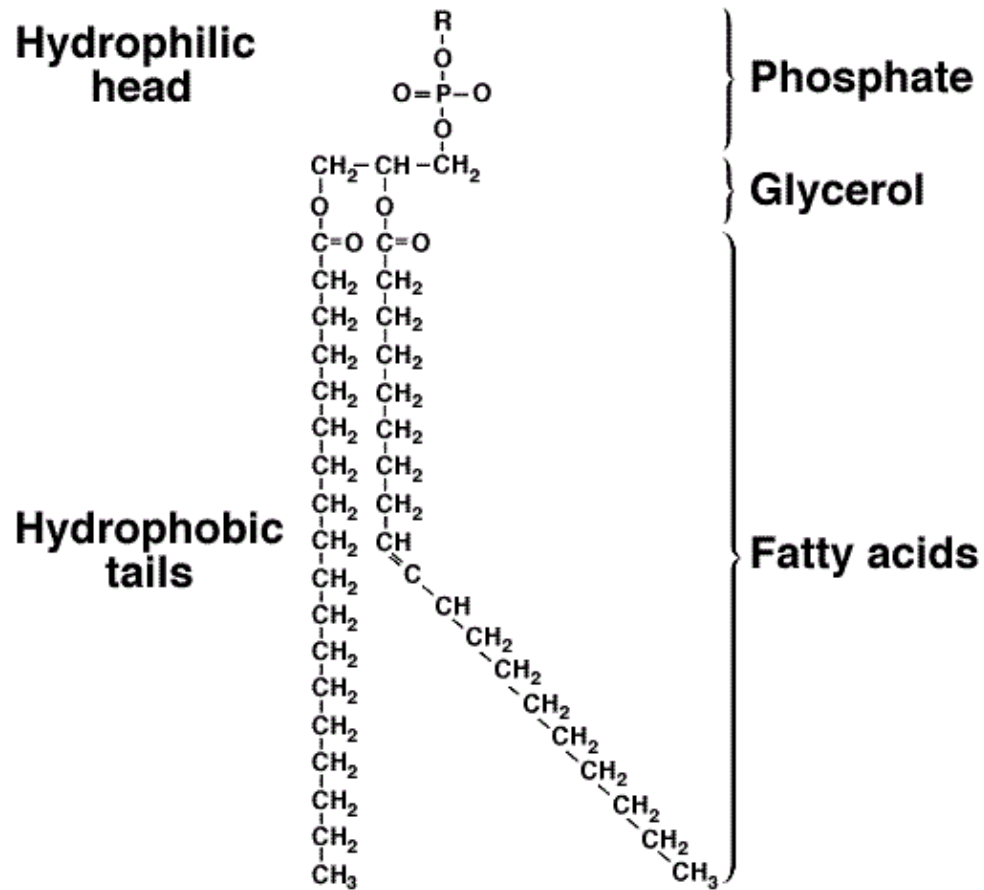


THROWBACK
THURSDAY!

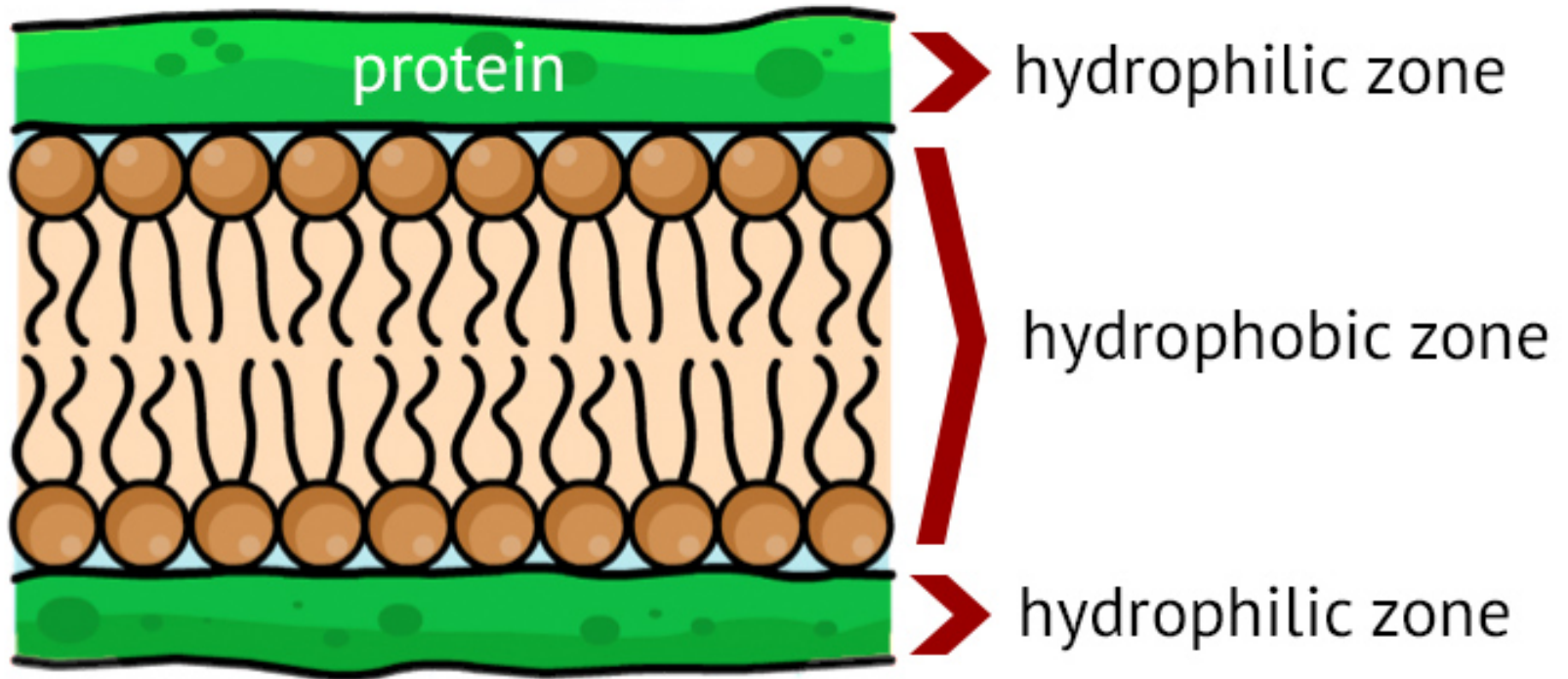


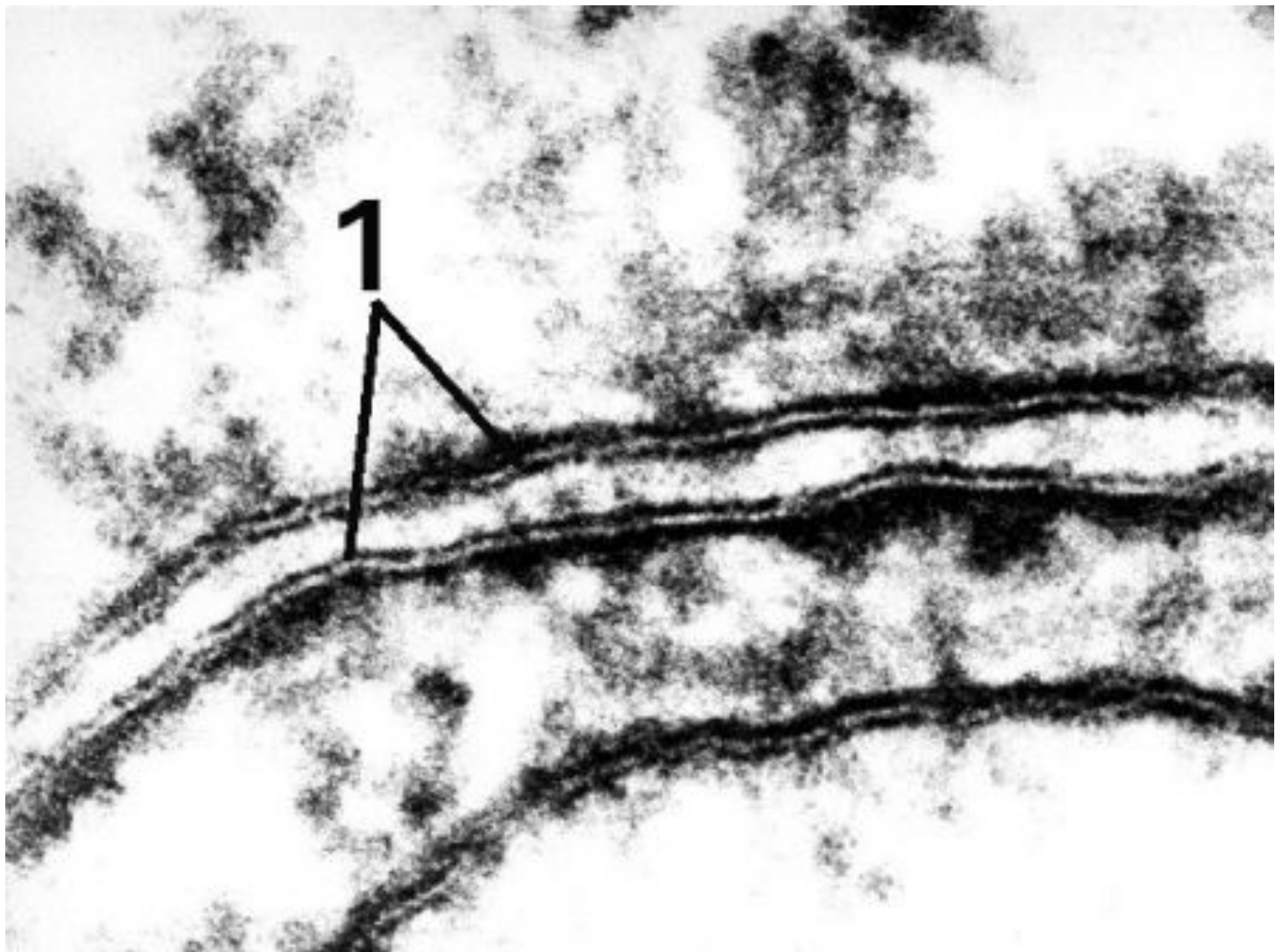
I will meet the
challenge and
you will know I
am capable!

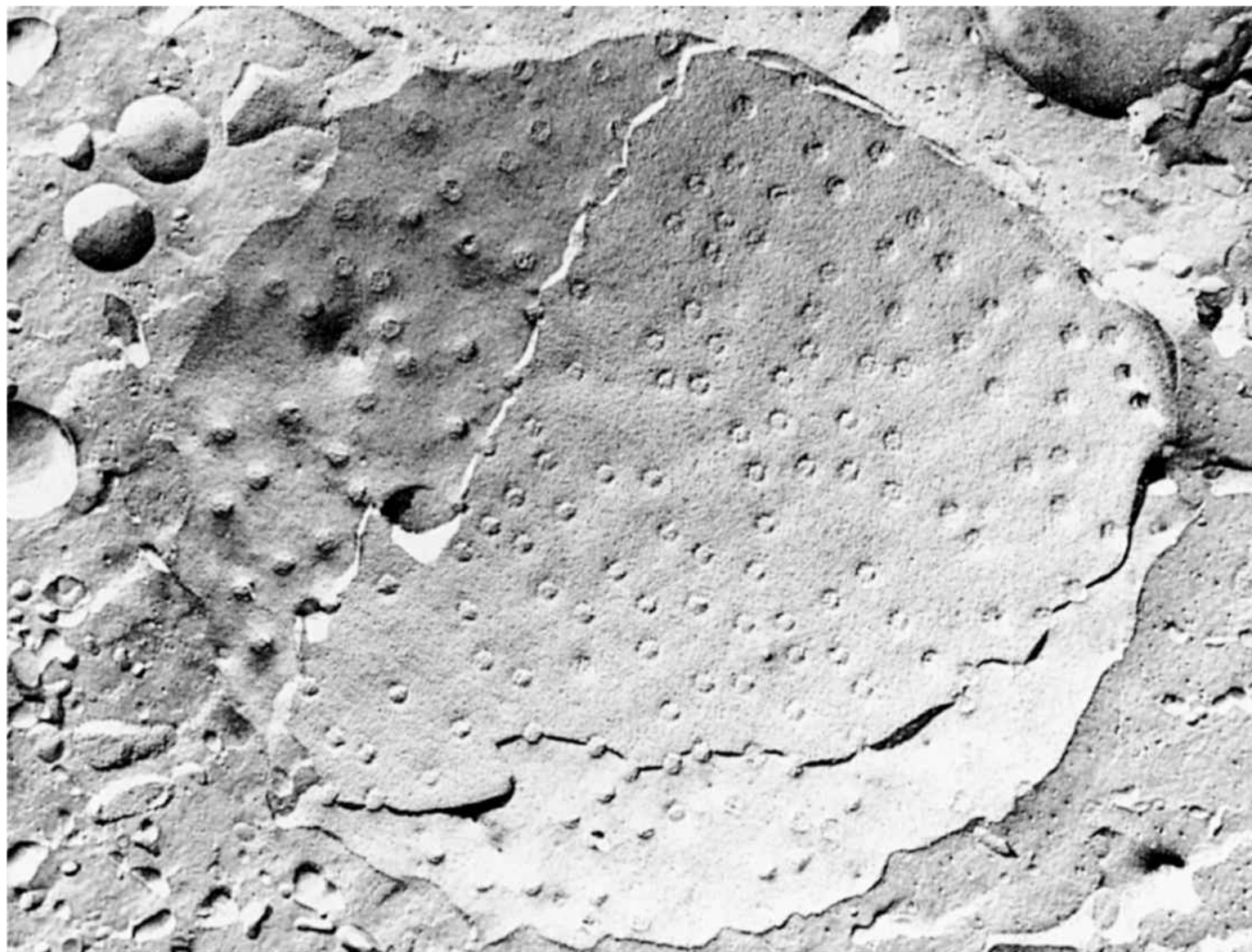
Phospholipids form bilayers in water due to the **amphipathic** properties of phospholipid molecules

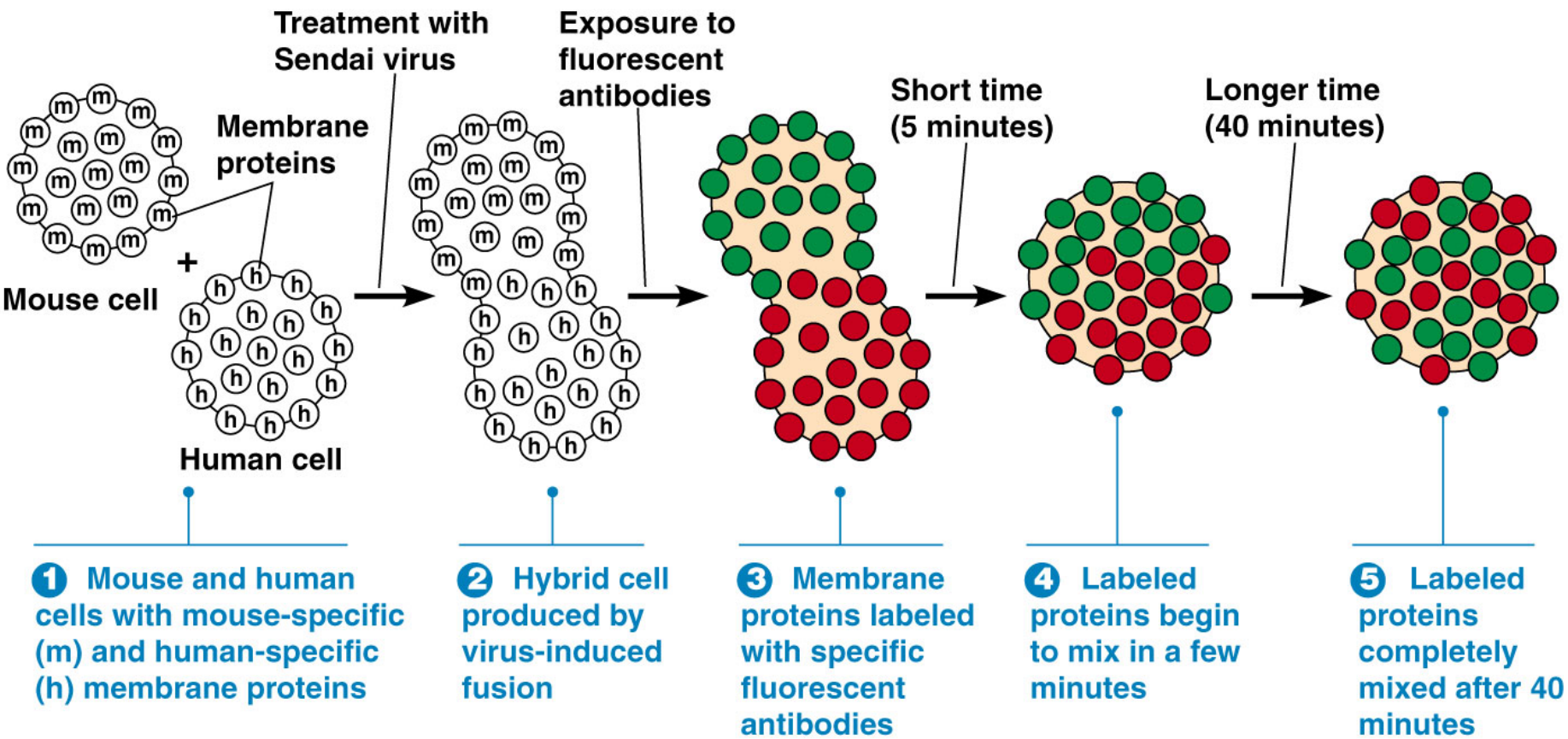


Model 1 Davson -Danielli Model

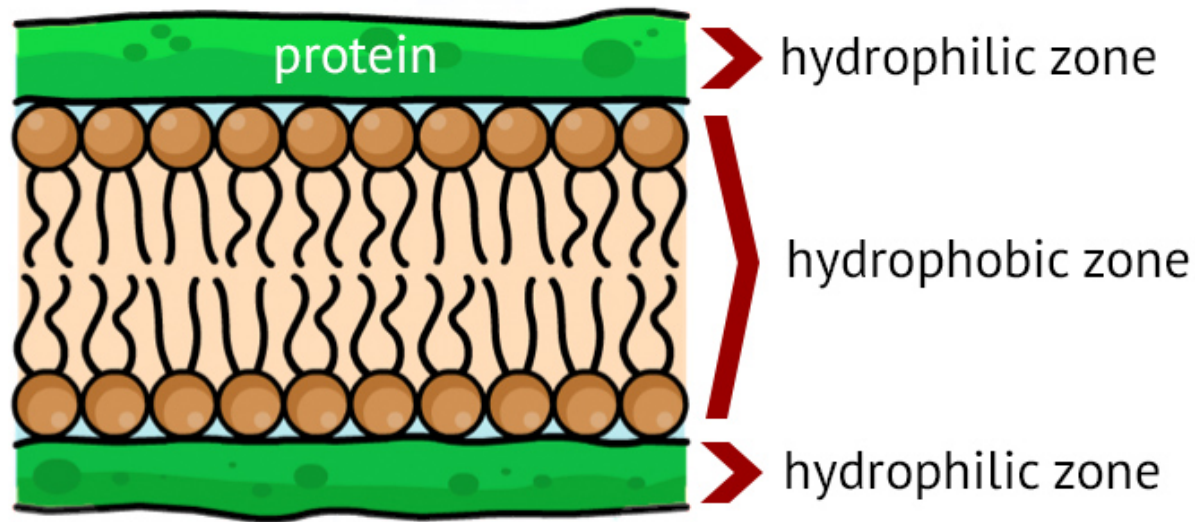








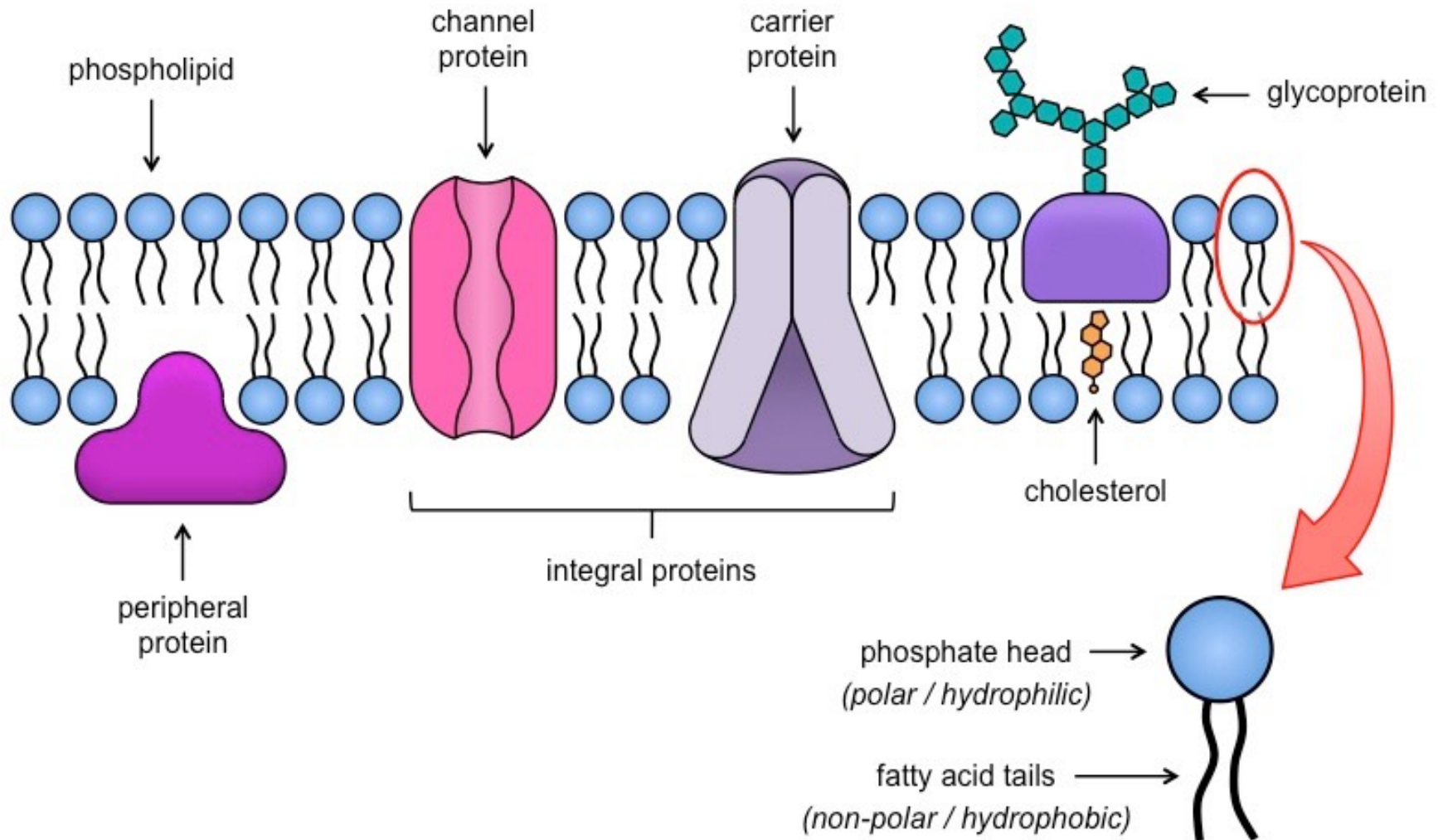
Model 1 Davson -Danielli Model



Model flaws:

- freeze fracture appeared to show transport proteins that are trans-membrane
- membrane proteins vary in size and shape and some hydrophobic - no continuous layer possible
- fluorescent antibody tagging shows fluidity to proteins

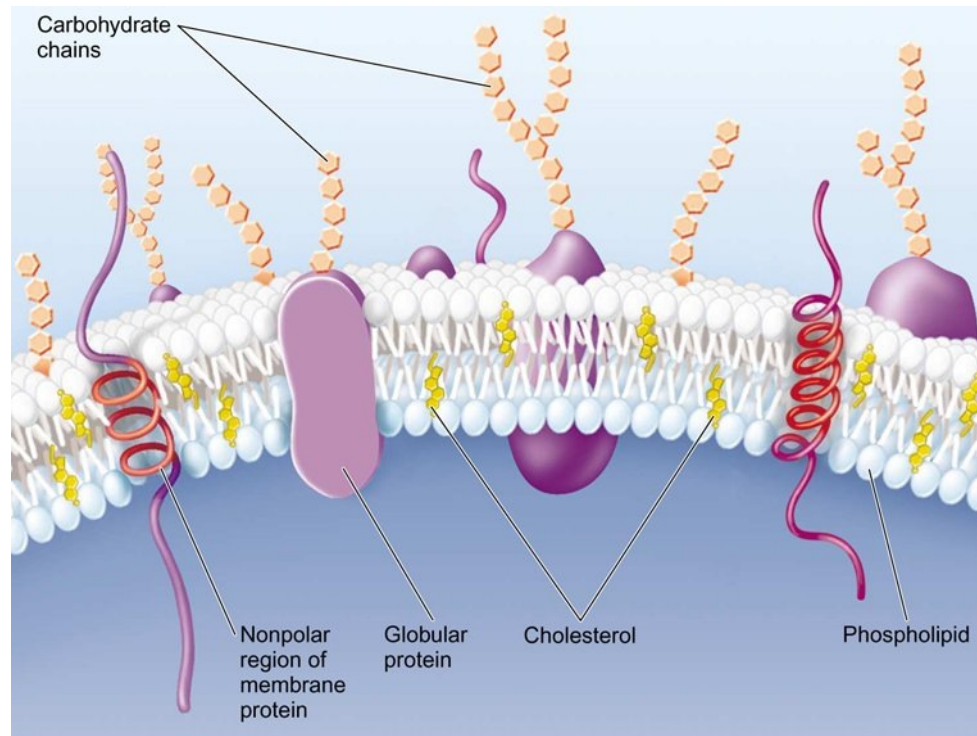
Singer-Nicolson The Fluid Mosaic Cell Membrane Model



Plasma Membrane

Function:

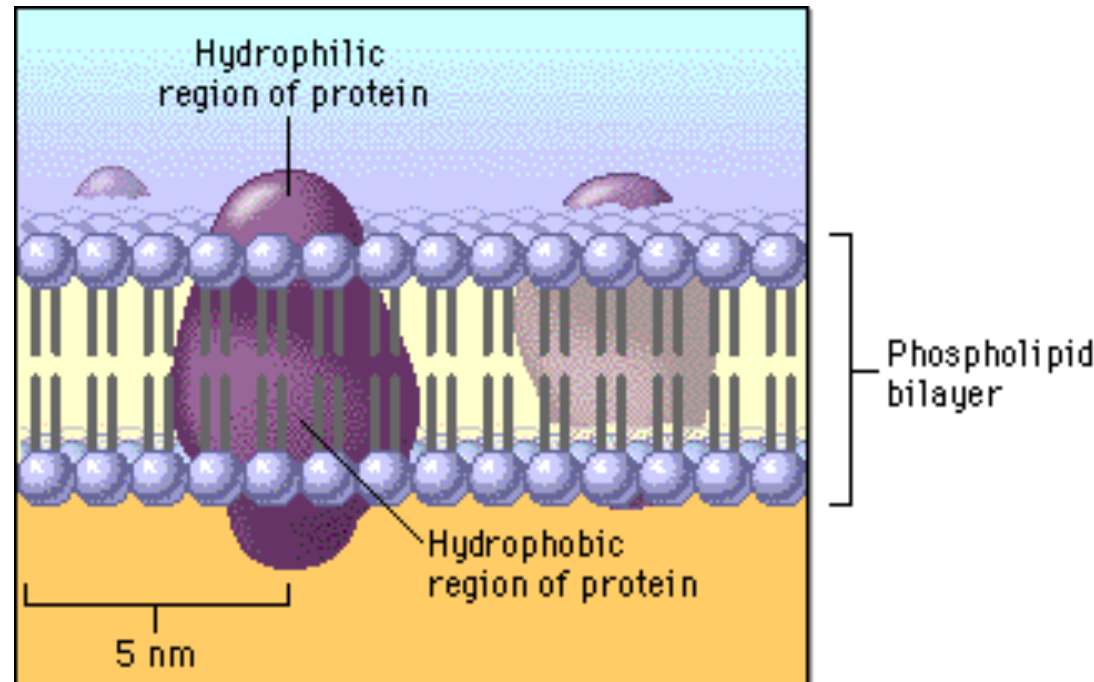
- transport raw materials into cell & products & wastes out
- keep unwanted matter out & essential matter in



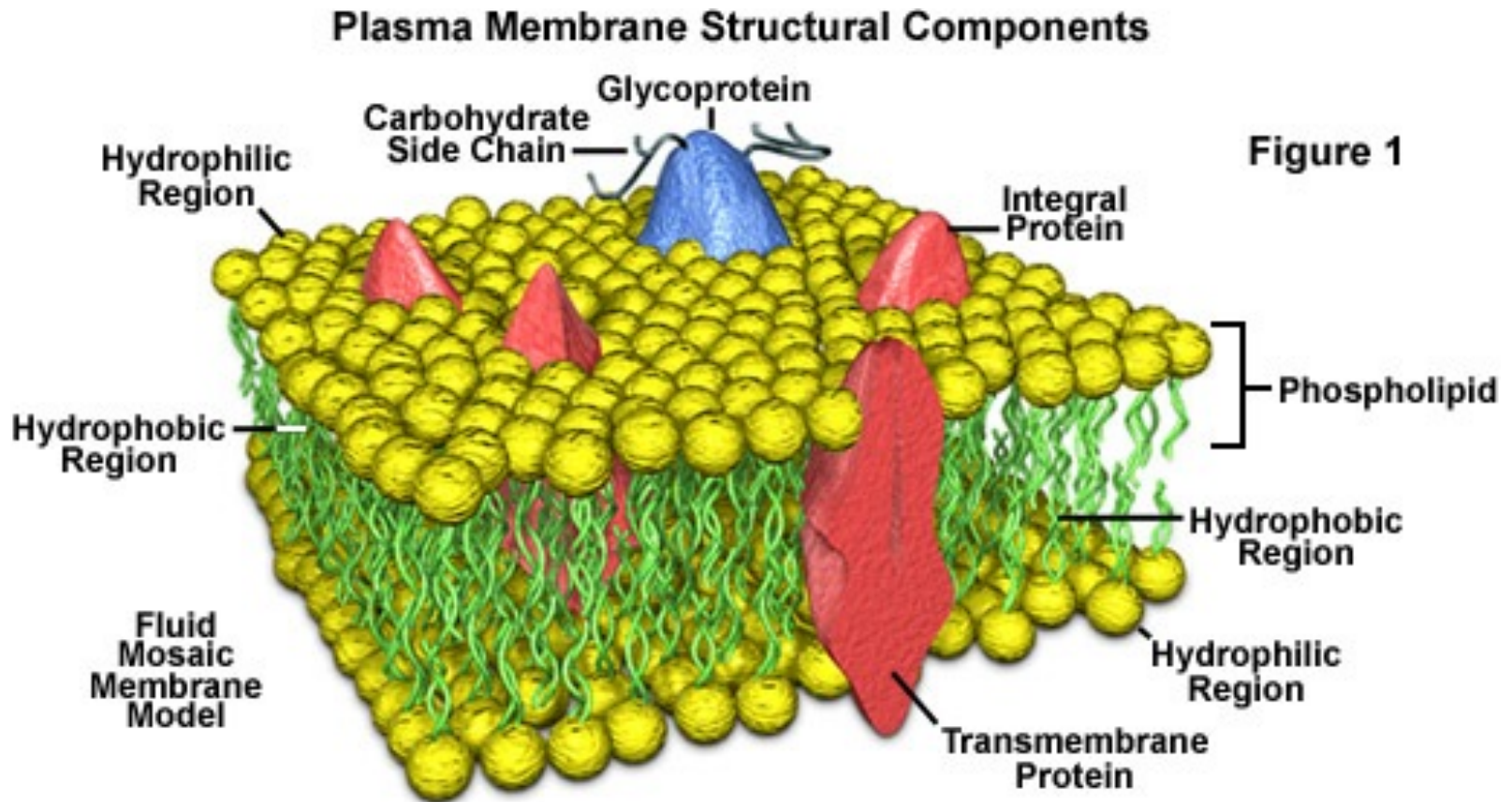
Cell Membrane Structure

Structure:

- less than 10 nm thick
- phospholipid bilayer
- protein molecules embedded in bilayer
- in motion (fluid)

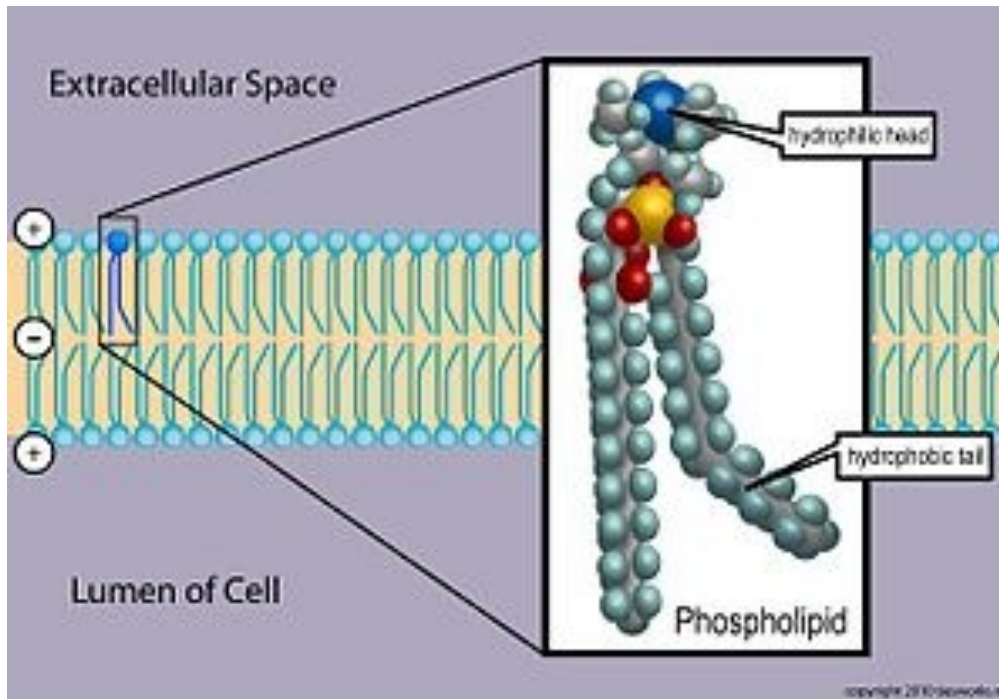


Cell Membrane Structure



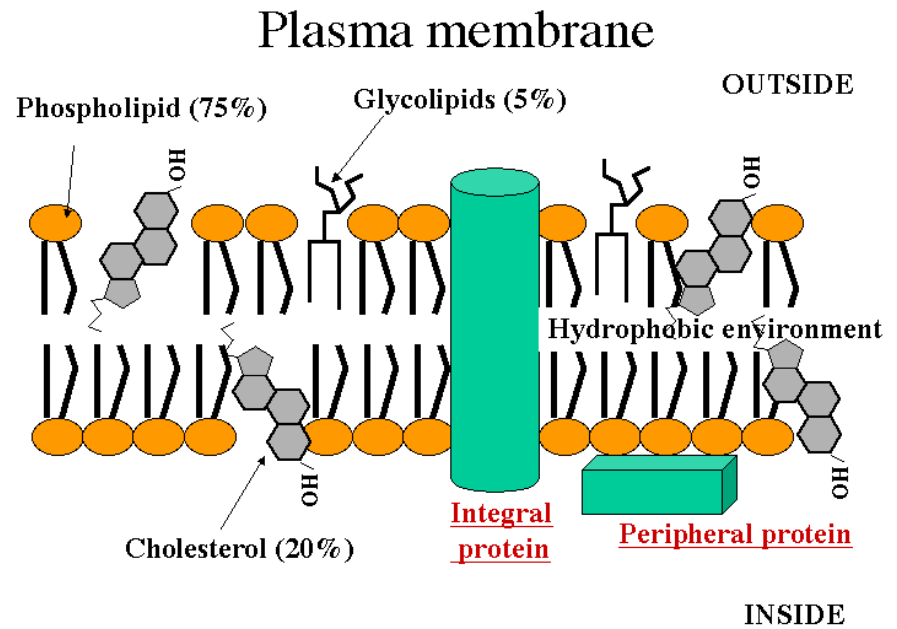
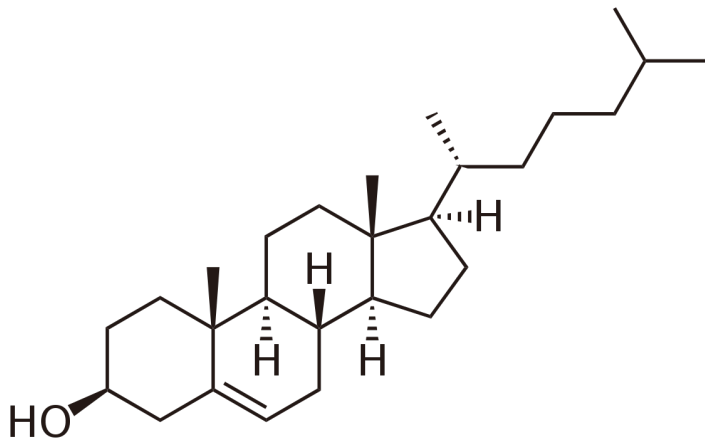
Phospholipids

- hydrophobic tails, and hydrophilic heads
- fluidity depends on type of fatty acids



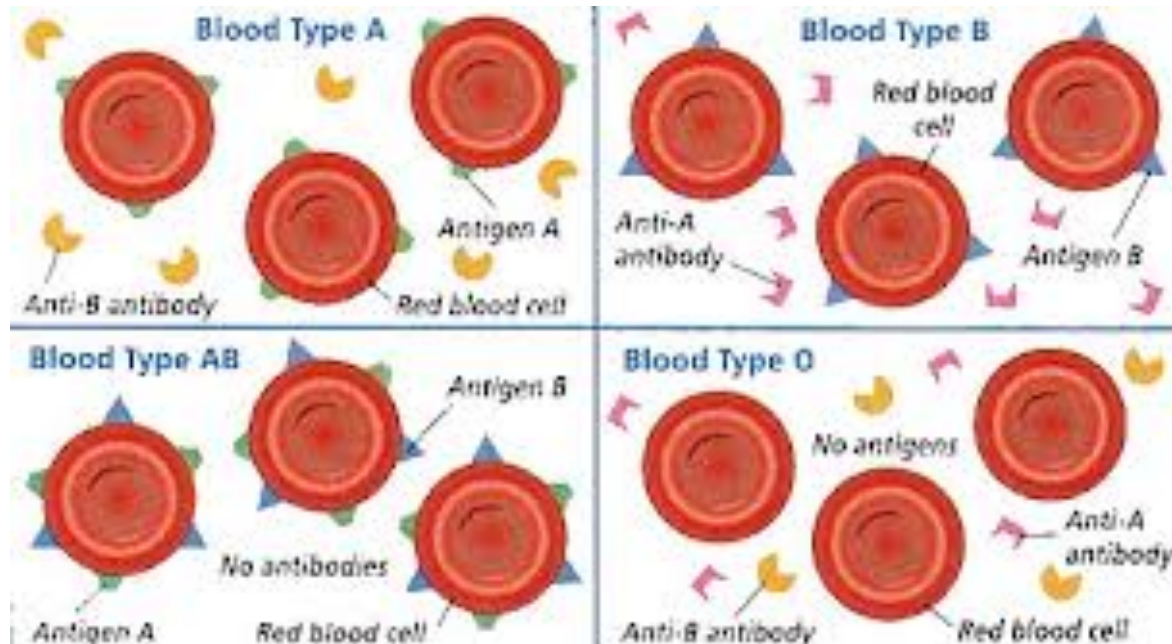
Cholesterol

- A lipid - called **sterols**
- allows cells to function in a wide range of temperatures
(stays solid at high temps, liquid at low temps)
- aids the membrane to curve
- hydroxyl group is hydrophilic and the rest is hydrophobic



Membrane Glycoproteins Proteins

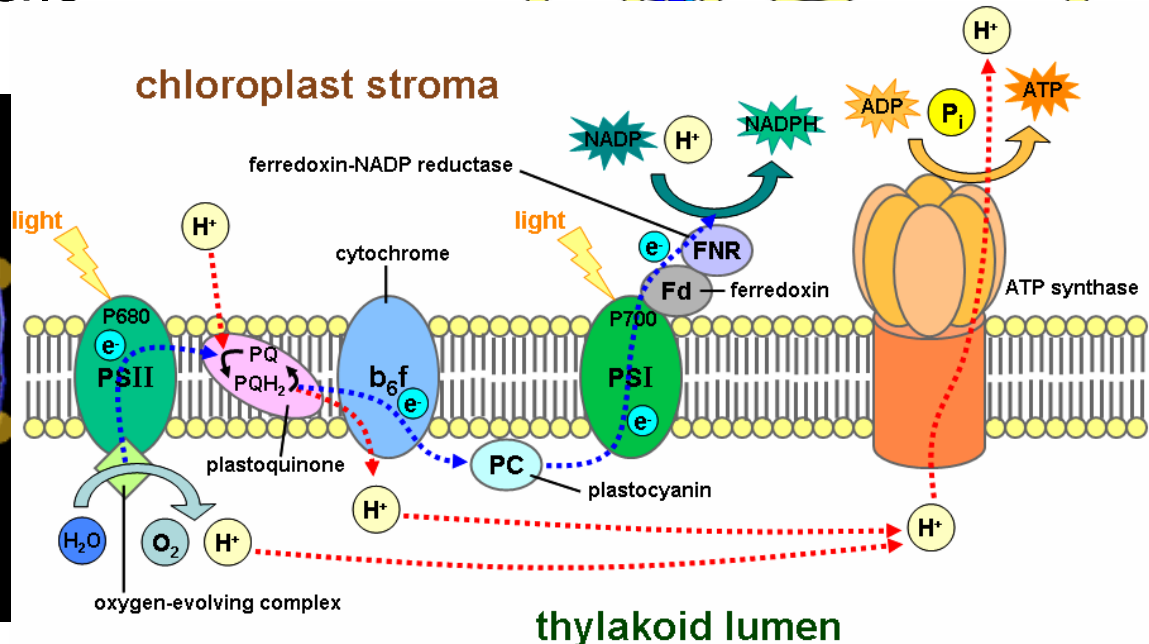
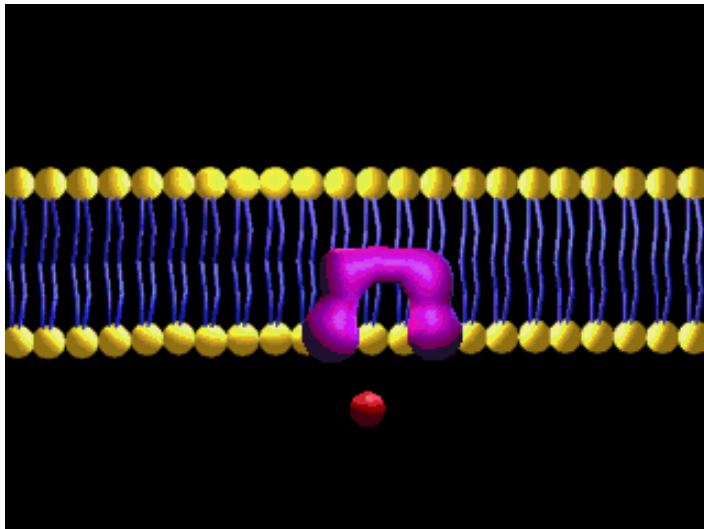
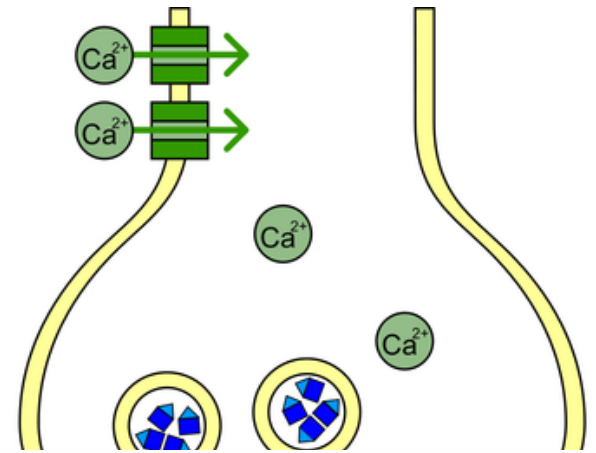
- glycoproteins provide cells with unique markers for cell recognition



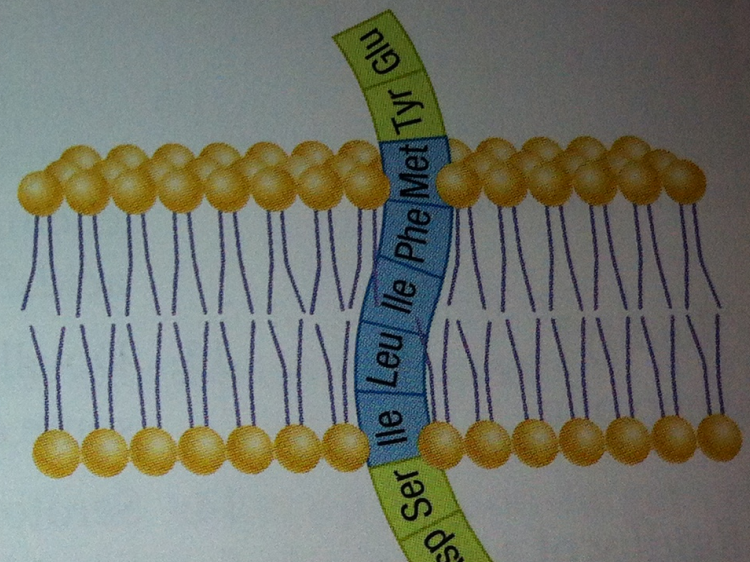
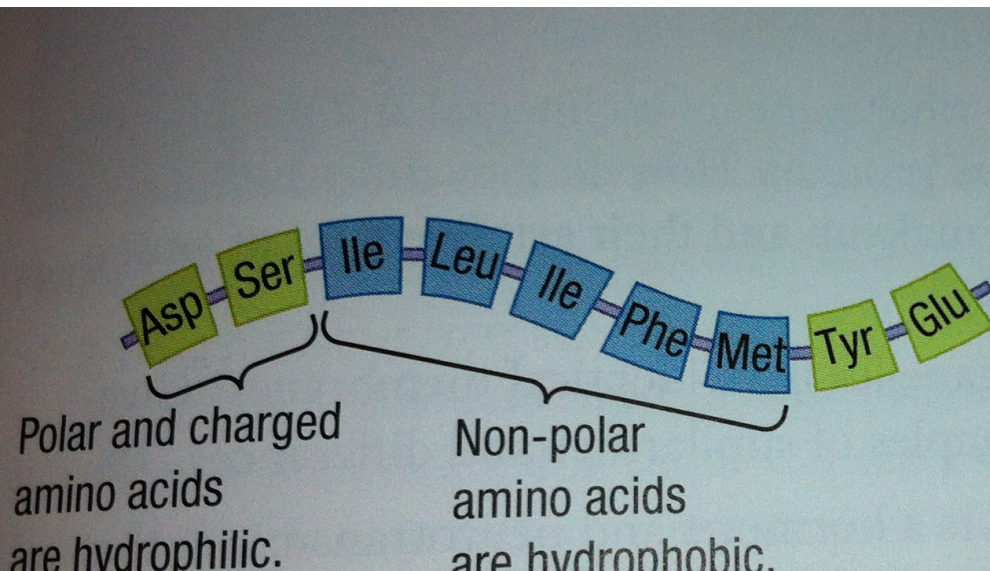
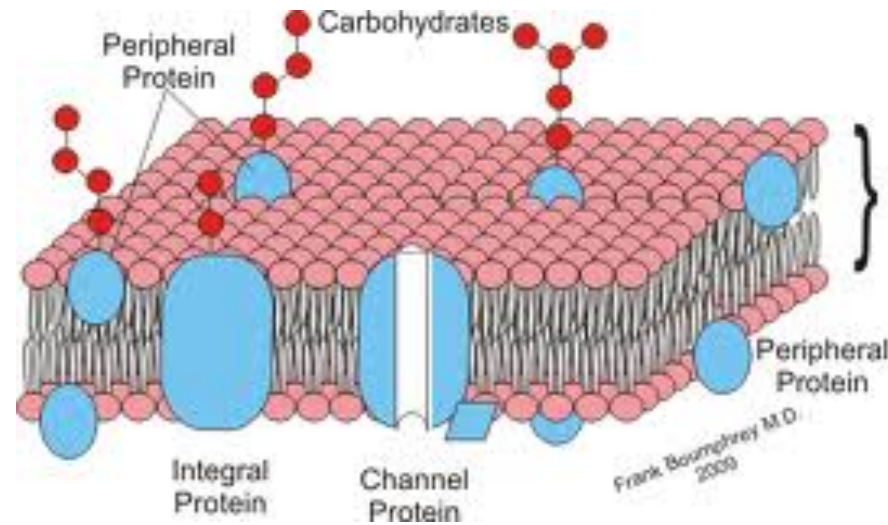
Membrane Proteins

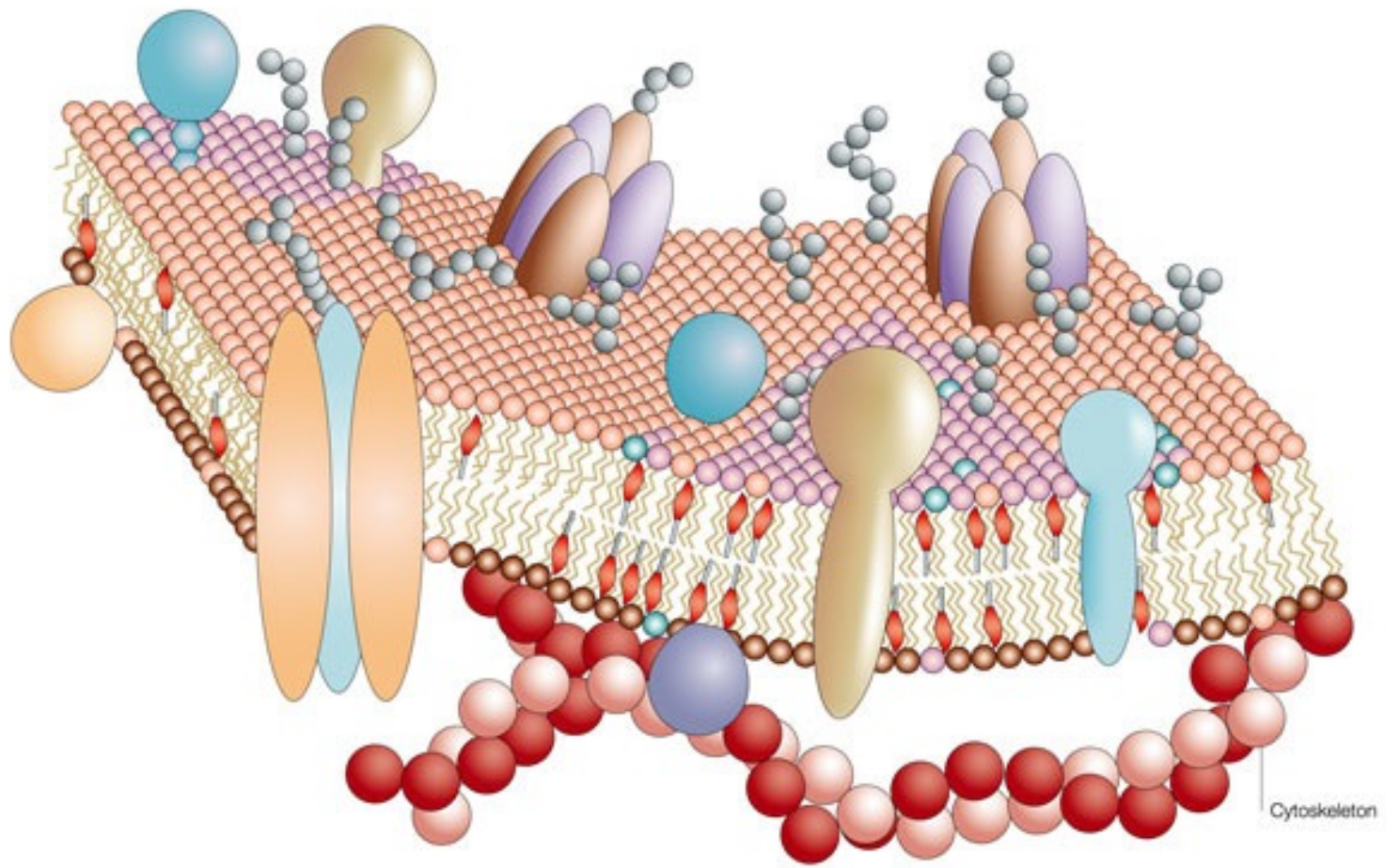
4 main functions:

- transport
- enzymatic activity
- triggering signals



- Integral proteins embedded in lipid bilayer
- Or
- Peripheral proteins at the surface of the cell





The “Bubble” Demo

- The purpose of the lab is to visualize how a mb can be fluid and yet allow material in and out.
- Please use a paper towel at your desk and work carefully... avoid mess.
- Follow the directions.
- Complete the questions as you do the lab.



Explain how the bubble lab helped to reinforce characteristics of the cell membrane.