



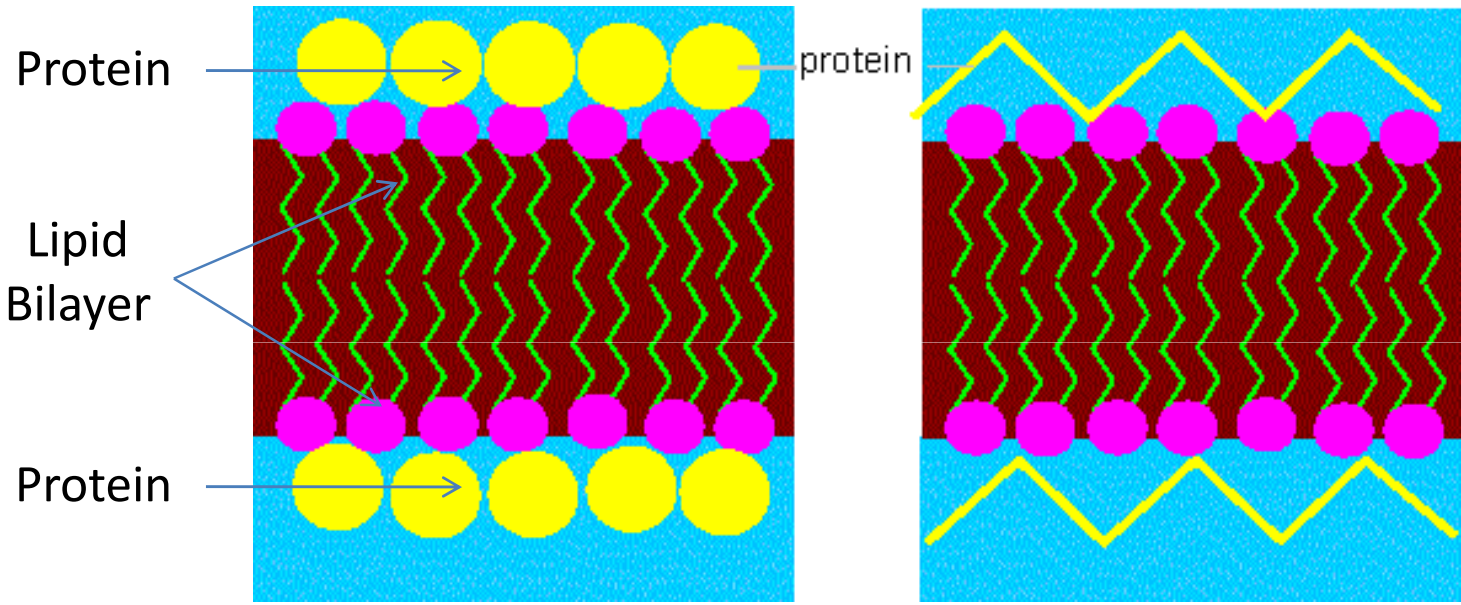
# **The Danielly-Davson Membrane Model (1935)**

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# Criteria

- Cell membrane is made of a phospholipid bilayer sandwiched between two layers of globular protein.
- The polar (hydrophilic) heads of phospholipids are oriented towards the protein layers forming a hydrophilic zone.
- The nonpolar (hydrophobic) tails of phospholipids are oriented in between polar heads forming a hydrophobic zone.
- Though the phospholipid bilayer is probably accurate, there are problems with the **Davson- Danielli model**:
  - Not all membranes are identical or symmetrical.
  - Membranes with different functions also differ in chemical composition and structure.
  - Membranes are bifacial with distinct inside and outside faces.
  - A membrane with an outside layer of proteins would be an unstable structure.
  - Membrane proteins are not soluble in water, and, like phospholipid, they are amphipathic.

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