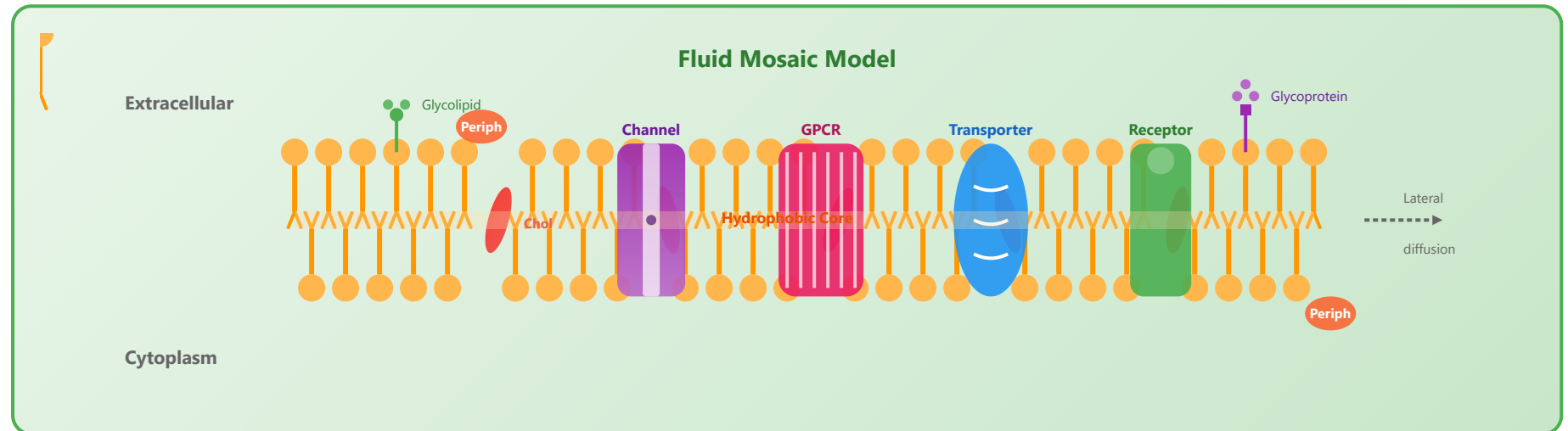


Cell Membrane Structure



Lipid Bilayer

- Phospholipids: hydrophobic core
- Cholesterol: membrane fluidity
- Glycolipids: cell recognition
- Asymmetric distribution

Membrane Proteins

- Integral: span membrane
- Peripheral: surface attachment
- Channels and transporters
- Receptors and enzymes

Fluid Mosaic Model

- Dynamic structure
- Lateral diffusion of components
- Restricted rotation
- Temperature-dependent fluidity

Transport Mechanisms

- Passive: down concentration gradient
- Active: against gradient (ATP)
- Facilitated diffusion
- Endocytosis and exocytosis