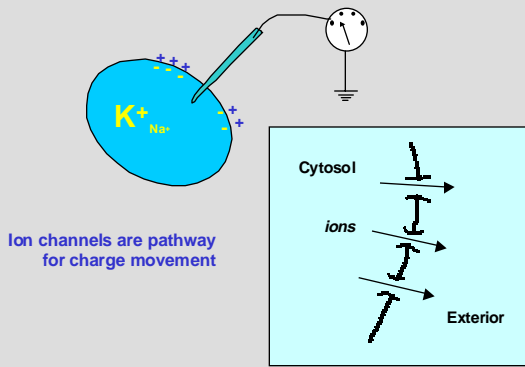
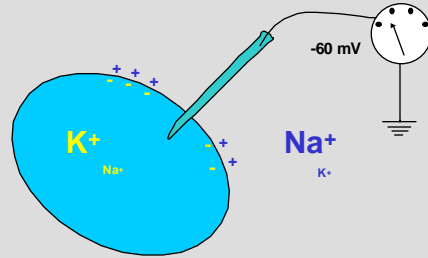


Ion Channels

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 Welcome Visiting Professor in the Basic Medical Sciences
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Cell Membrane Electrical Potential

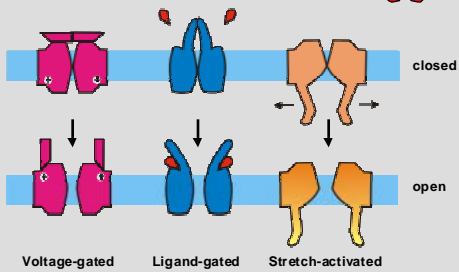


Properties of Ion Channels



- Membrane-spanning proteins
- Hydrophilic ion conductive pathway
 - Water-filled
 - Traversing ion must lose hydration shell
- Selective
 - Charge screening and size
 - Specific binding
- Gating properties
 - Exist in open and closed states

Ion Channel Gating Mechanisms



Patch Clamp:

Single channel recordings

