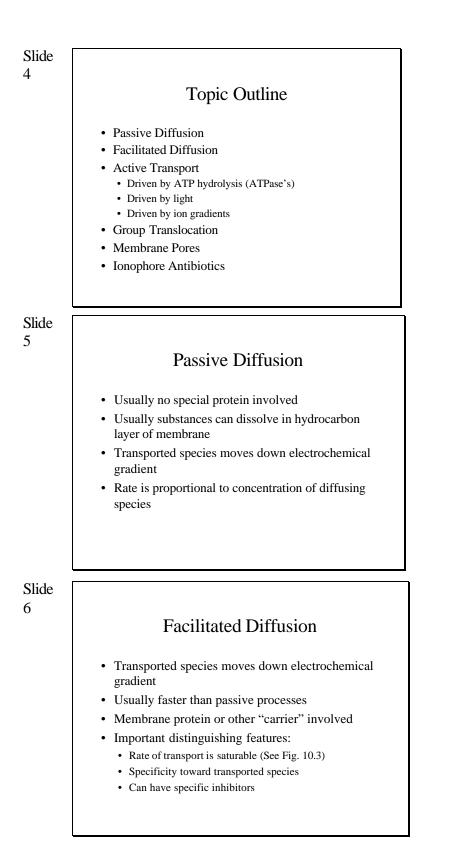


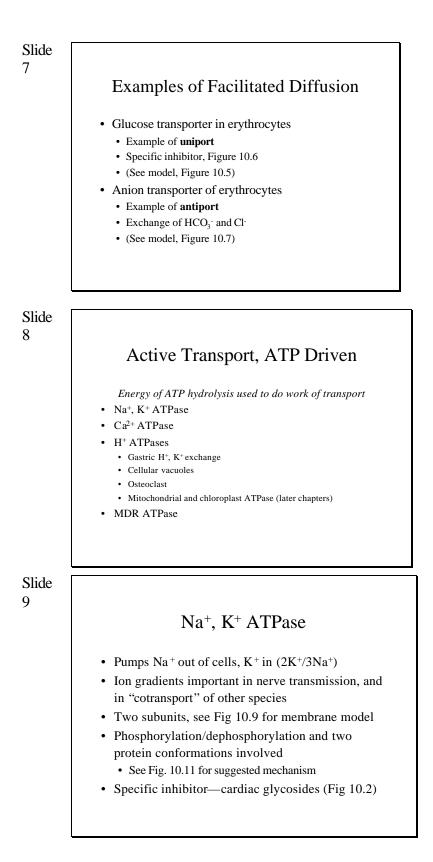
BCH 4053 Spring 2001 Chapter 10 Lecture Notes

We did not discuss the electrical component in Chapter 3. Recall that what we are calling C here is really the activity, i.e. the concentration relative to the standard state. Review your standard state conventions.

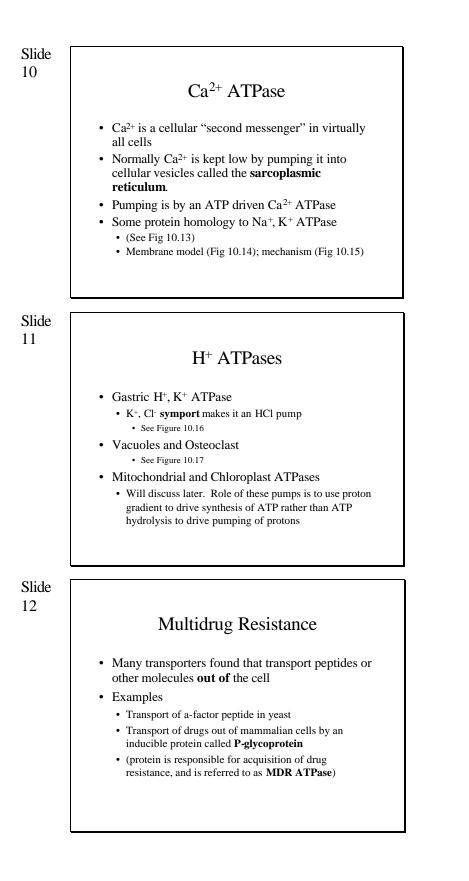
Because μ^{o} is the same on both sides of the membrane, this term cancels out.

Remember if ΔG is negative, the process is spontaneous, and ΔG represents the maximum work we can get from the process. If ΔG is positive, the process is not spontaneous, and ΔG is the minimum work required to realize it. The first term is negative when a substance is moving from a high concentration to a lower concentration ($C_2 < C_1$). The second term is negative when a positive ion (Z is +) moves to a lower potential ($\Delta \Psi$ is -) or a negative ion (Z is -) moves to a higher potential ($\Delta \Psi$ is +).

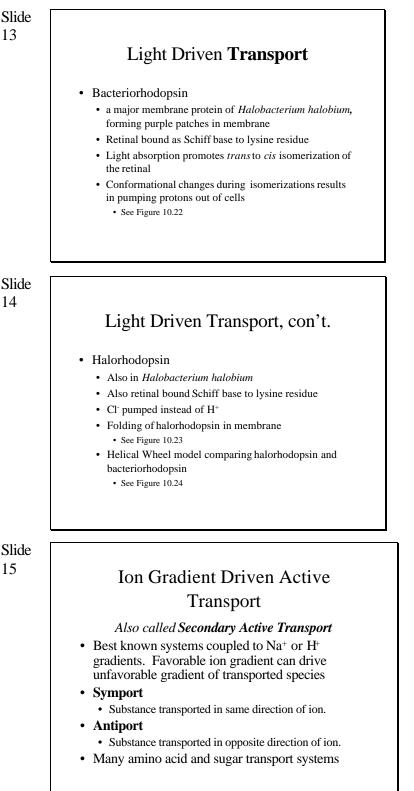




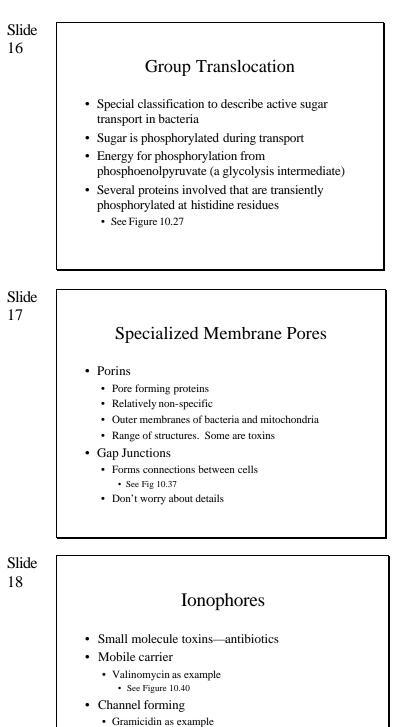
Inhibitors of the Na⁺, K⁺ ATPase can cause high blood pressure!



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This is called secondary active transport because the ion gradients were developed by the "primary" active transport, often an ATPase.



• See Figure 10.41