

1. Draw out a plasma membrane with all components and possible protein transporters that could be present. Label and describe the function of each component,
2. You have a 300mM KCl solution in a jar with some alien cells (which have an osmolarity of 100mOsM) for a science experiment. These cells have a membrane that happens to be permeable to sucrose. While making tea, you accidentally put your tablespoon of sugar into the KCl solution instead of the tea, so now there is 200mM sucrose in the solution. What is the osmolarity and tonicity of the solution? Will the alien cells remain in tact or will you need to restart the experiment?
3. Draw out the knee-jerk reflex and compare the steps of this signal transduction pathway to the steps of a generic pathway. If you are in Dr. E's class, let the Dr. Wright students explain this to you!
4. Draw out the differences between continuous conduction and saltatory conduction, which happens faster? What ions are moving and in what direction? If you are in Dr. Wright's class, let the Dr. E students explain this to you!
5. What is the difference between a graded potential and an action potential?