

HOW DOES THE SYNAPSE WORK?

Group: ____ - ____

Members: _____

The _____ is located between the end of the axon and the neuron, muscle, or gland to which the neuron is sending a signal. When an _____ reaches the axon bulb at the end of the axon, it triggers _____ containing _____ to fuse with the _____ on the _____ side of the synapse. The _____ then release the _____ into the synapse by the process of _____. The _____ then cross the synapse by the process of _____ and bind with _____ on the _____ gates, located on the _____ membrane. This causes the gates to open and _____ ions to flow in to the next cell, inducing other _____ channels to open and triggering an action potential. The _____ that are opened when _____ bind to them would be considered _____-mediated (you may also see the term ligand-mediated) as opposed to those that are opened because of the change of charge, which might be labeled _____-mediated (you may also see the term voltage-mediated).

If the _____ remain in the _____, they would repeatedly trigger _____ by attaching to the _____, which are made of proteins, and opening the _____ gates. To prevent this, they must be removed. In the case of _____, which triggers opening of the gates in neuromuscular synapses, an _____ called _____ catalyzes the breakdown of the _____. Another mechanism is _____, which is the transport of the neurotransmitter back through the _____ neuron membrane, to be repackaged and used again.

Because each protein takes on a unique shape, _____ are specific to different _____, and act like a lock and key opening different gates. Different neurons have receptors on them that bind to different neurotransmitters. Any one neuron may have _____ one type of receptor.