

## Worksheet for lecture 8

- Draw a simple diagram of a neuron. Have it synapse on the dendrite of a second neuron. Imagine an action potential traveling down the axon of the first neuron leads to the second neuron initiating an action potential. Make a numbered list of the key steps starting with the first action potential arriving at the axon terminal and ending with the start of the second action potential. Indicate by numbers on your drawing where each step happens.
- Draw a simple diagram of a synapse that uses glutamate as the neurotransmitter. Use arrows on your drawing to indicate the routes by which neurotransmitter is cleared after release.
- Draw two simple diagrams showing how neurotransmitter alters the postsynaptic cell in ionotropic and metabotropic synapses. Indicate the time parameters for each.
- An active synapse can excite or inhibit the postsynaptic cell. Describe the nature of each of these two responses.