



Simplified Chemical Synapse

Chemical Synapse Steps

- ① Action potential travels down axon on the pre-synaptic neuron
- ② voltage-gated channels on pre-synaptic neuron open & Ca^{2+} enters the cell
- ③ The Ca^{2+} ions attach to the vesicles containing the neurotransmitter & allow them to merge w/ the pre-synaptic membrane
- ④ merged vesicles release their cargo into synaptic cleft & neurotransmitters diffuse across the cleft, towards post-synaptic membrane
- ⑤ neurotransmitter binds to ligand-gated receptor on post-synaptic neuron & activates it, causing a graded potential (post-synaptic)