When just glutamate applied  $\rightarrow$  EPSC looks like bottom graph due to combination of AMPA and NMDA.

If just one applied, they behave differently (see slide).

## Questions→

What types of ionotropic glutamate receptors are there? How are they different? What do the diagrams show?



Spines Oducs on the dendrites Thicks where synapses are (blue bits) contain post synapse.

In EM $\rightarrow$  can see postsynaptic density. This is all protein, 200 types.

Experiment  $\rightarrow$  use antibody to see what is bound to NMDA receptor- pulled out about 200 proteins/signalling molecules. The post sites are a neuronal sheet changes when calcium binds.

Can see at bottom dendrites/spines. One rat kept in two types of cage, ie unenriched- dull cage, nothing to do. Enriched- things to do. See rats which have been exposed have more spines as have been exposed to more, more memories etc.

Can also see difference in normal patient and alzheimers at bottom dendrites. In the early stages the number of synapses decrease. Normal patient has more spines/synapses.

## Questions→

Whats the blue bit in the picture? What experiment was done with an antibody? What do bottom 4 pictures show?