

7.98J/9.301J QUIZ #1

SYNAPTIC PLASTICITY

Mechanisms for modifying the strength of synaptic connections play a fundamental role in the process of synaptic plasticity (LTP, LTD, etc.). However, it is often difficult to pinpoint the locus (pre- vs. post-synaptic) of these modifications in the CNS. This complication arises from the fact that it may be possible to change several different parameters for either the pre- or post-synaptic terminal, and induce the same overall effect of increased/decreased strength at any given synapse. For both the pre- and post-synaptic side:

- 1) List all of the parameters that could undergo modifications.
- 2) For each of these possibilities, outline an experimental approach that could potentially determine if that particular parameter indeed plays a role in modifying the strength of synaptic connections. Clearly state any underlying assumptions you may need to make for a given experimental approach.