LTP is triggered by Ca\(^{2+}\) influx into the PS neurons, opening both NMDAR and L-voltage-dependent Ca\(^{2+}\) channels:
- Insertion of additional AMPAR in the PS membrane
- PKA and MAPK activate CREB \(\rightarrow\) gene expression, necessary for the persistence of the memory for learned fear and the synaptic changes

Pavlovian classical conditioning modifies the strength of synaptic transmission. When the tone is presented immediately before a foot shock (US, unconditioned stimulus), the animal learns to associate the tone (CS, conditioned stimulus) with the shock. From now on, the tone alone will be enough for the animal to elicit a fear response. After fear conditioning the electrophysiological response in the LA is greater than the response prior to conditioning. (Picture from 3)

**REFERENCES**