

Supplementary Information

Developmental regulation of CB1-mediated spike-time dependent depression at immature mossy fiber-CA3 synapses

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Figure S1

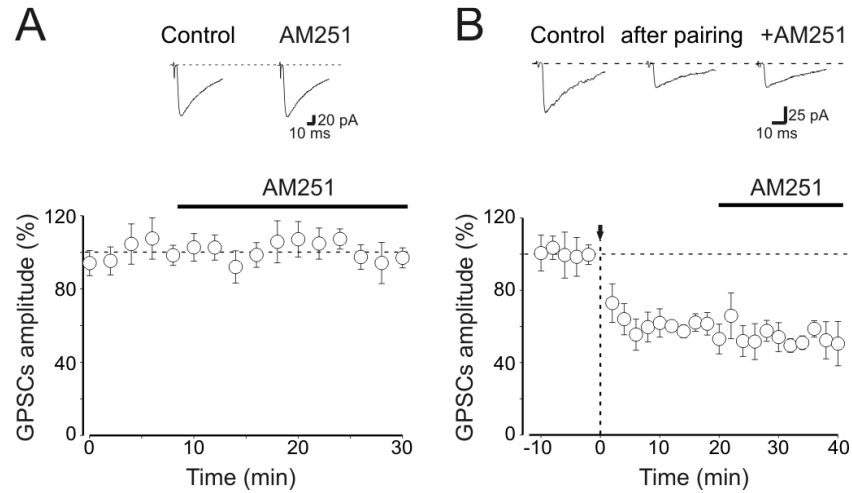


Figure S1. The CB1 receptor antagonist AM251 *per se* does not affect MF-GPSCs. A. The mean amplitude of GPSCs evoked by stimulation of granule cells in the dentate gyrus before and during bath application (bar) of 5 μ M AM251 is plotted against time (n=8). The traces above the graph represent synaptic responses obtained in control and during AM251. B. As in A, but AM251 was applied ~10 min after pairing (arrow at time 0; n=10).

Figure S2

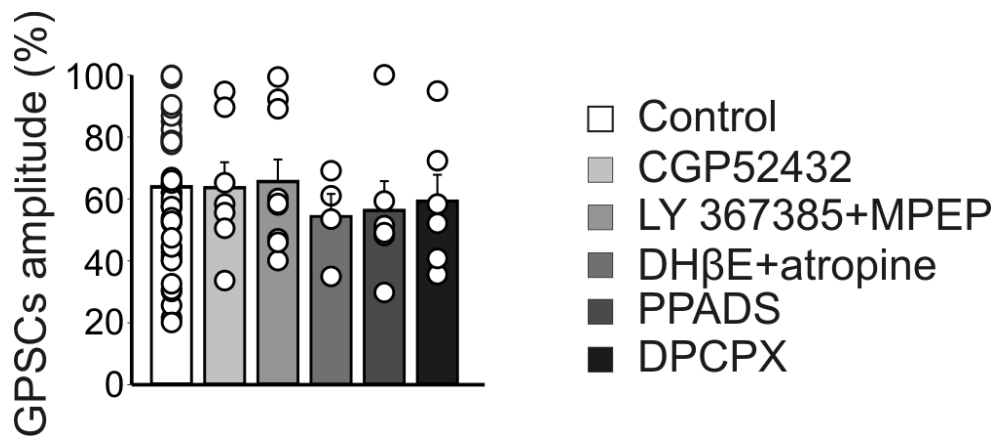


Figure S2. At immature MF-CA3 synapses, STD-LTD is not mediated by type I mGluR or by the indirect action of other receptors known to depress transmitter release. Each column represents the mean amplitude of MF-GPSCs measured 20 min after pairing in the absence (Control) or in the presence of selective antagonists for GABA_B receptors (CGP 52432, 3 μM; n=7), for type mGluR1 and mGluR5 (LY367385, 100 μM plus MPEP, 5μM; n=9), for muscarinic and nicotinic receptors (atropine 1 μM plus DHβE 50 μM; n=4), for purinergic P2Y (PPADS 50 μM; n=6) and for adenosine receptors (DPCPX, 10 μM; n=6). The mean amplitude of GPSCs obtained in different experimental groups was significantly different from that measured before pairing ($p<0.01$).

Figure S3

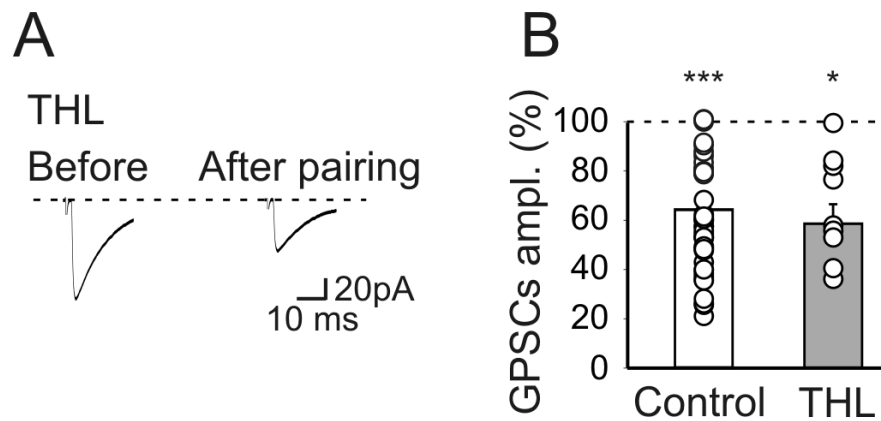


Figure S3. 2-AG is not involved in CB1-dependent STD-LTD. A. MF-GPSC recorded with a patch pipette containing THL. B. Pairing-induced changes in GPSCs amplitude in cells loaded (n=9, grey column) or not (n=44, white column) with THL. * $p<0.05$; *** $p<0.001$.

Figure S4

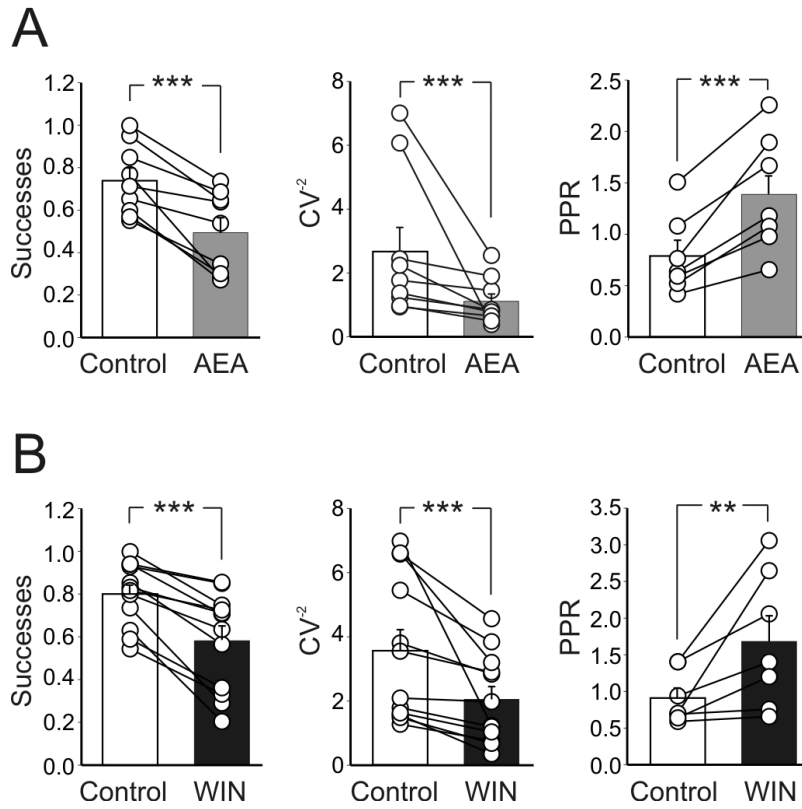


Figure S4. AEA and WIN act at presynaptic sites. A. Successes (n=9), CV² (n=9) and PPR (n=7) values obtained before (Control, white columns) and after bath application of anandamide (AEA; 30 μ M, grey columns). B. Successes (n=12), CV² (n=12) and PPR (n=7) values obtained before (Control, white columns) and after bath application of the selective CB1 receptor agonist WIN 55,212-2 (WIN; 2 μ M, black columns). ** $p < 0.01$; *** $p < 0.001$.