Supplementary Information

Opioid addiction and withdrawal differentially drive long-tern depression of inhibitory synaptic transmission in the hippocampus

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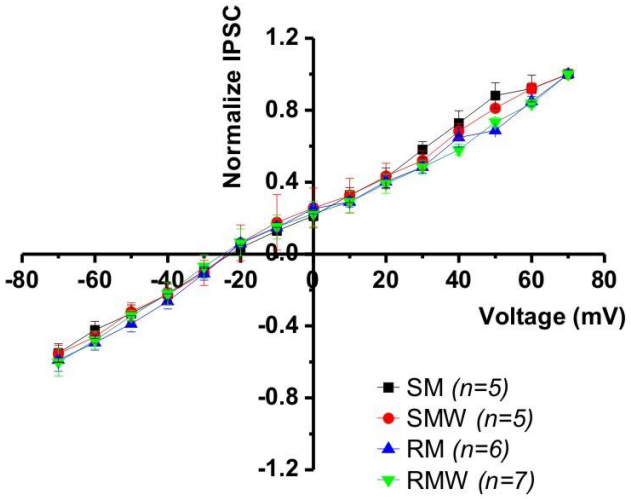
Supplementary methods

I-V curves

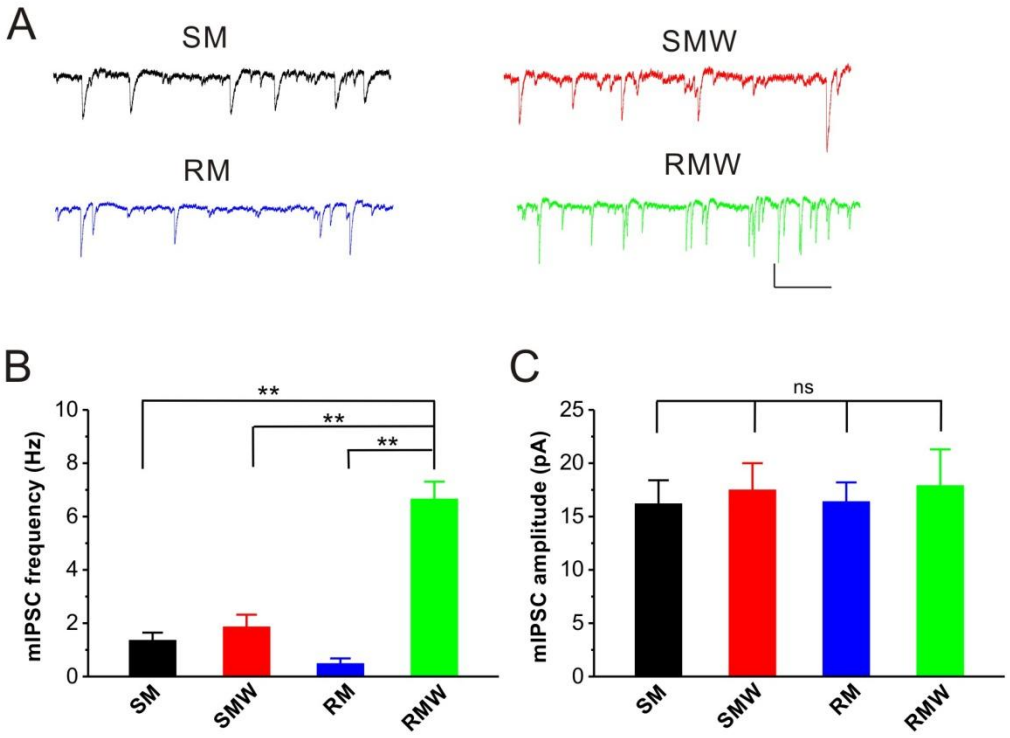
Whole cell voltage-clamp recordings were performed at room temperature at a holding potential of -70 mV. I-V curves were obtained by ramping the membrane potential from -70 mV to +70 mV by 10 mV interval.

Miniature IPSC recording

Miniature IPSCs (mIPSC) were recorded in whole-cell configuration. Series resistance and leak currents were monitored continuously during the experiments. Recordings started 5-10 min after a stable whole cell access was obtained. Recordings were terminated if series resistance and leak currents changed significantly.



sFigure 1 The I-V relationship of IPSCs obtained from SM, RM and withdrawal groups. The holding potential was -70 mV and test potentials ranged from -70 mV to +70 mV in 10 mV increments. Reversal potential and current responses at various membrane potentials are not altered in all groups.



sFigure 2 The mIPSCs obtained from SM, RM and withdrawal groups. (A) Representative traces from corresponding hippocampal slices (Scale bar: horizontal = 1 s, vertical = 10 pA). **(B)** The mean frequency of sIPSCs was significantly increased in RMW group, compared with SM, SMW or RM groups. **p < 0.01, post hoc Turkey's test after ANOVA ($F_{(3, 28)} = 41.338$; $p < 0.001$). **(C)** The mean amplitude of mIPSCs remained unchanged among these groups. ns = no significantly difference, post hoc Turkey's test after ANOVA ($F_{(3, 28)} = 0.108$; $p = 0.954$).