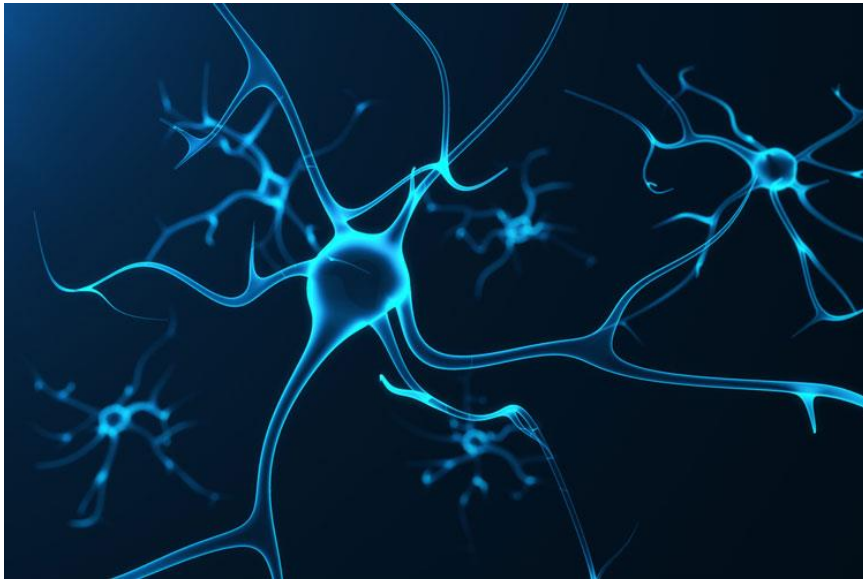




CNS Services



ICE Bioscience INC

ICE CNS Excitability Research Platform

1, CNS Ion channel & GPCR target screen services

- 50+ CNS ion channel cell lines
- 60+ CNS GPCR targets
- CNS transporters and enzymes

2, Electrophysiology services

- Single neuron patch clamp
Cells: cultured or acutely isolated cortical, hippocampus, or DRG neurons
- Slices electrophysiology
Tissue: brain or spinal cord slice
Action potential
Miniature EPSC/IPSC
Evoked EPSC/IPSC
Long term potentiation/depression (LTP/LTD)

3, CNS disease animal models

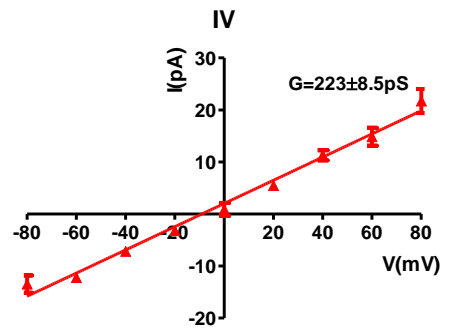
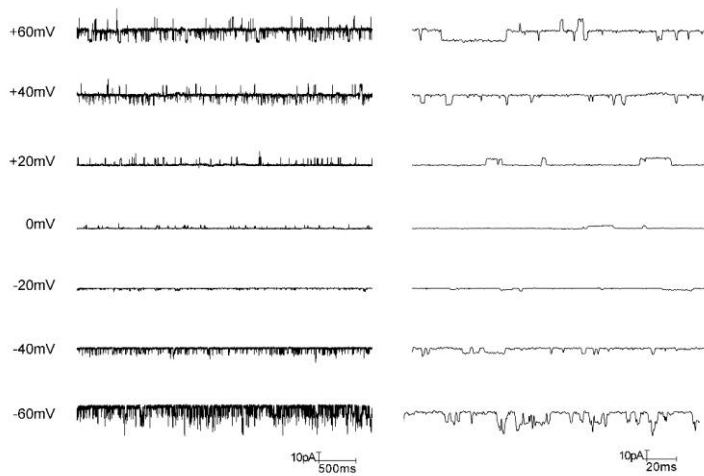
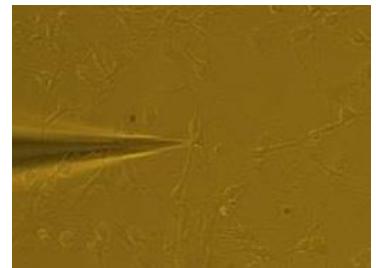
Pain/ Neurodegeneration disease (AD/PD)/ Epilepsy models



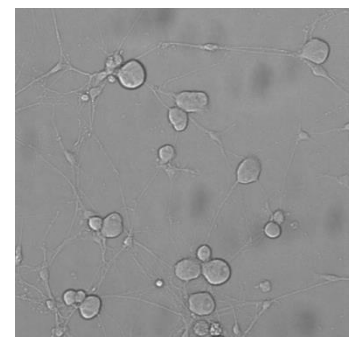
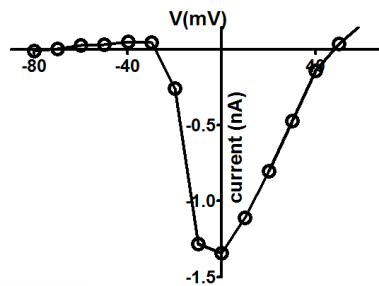
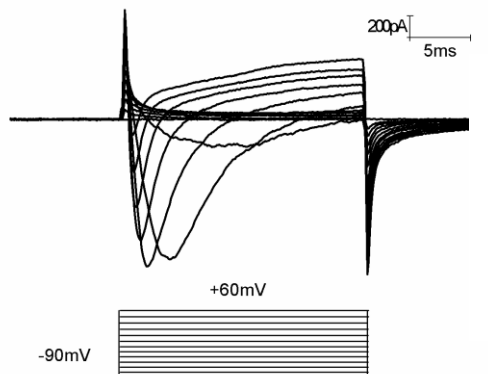
Primary neuron culture and patch clamp

Example: Primary hippocampus neuron (from 12W adult rat)
 Channel: BKCa channel
 Method: inside-out patch clamp

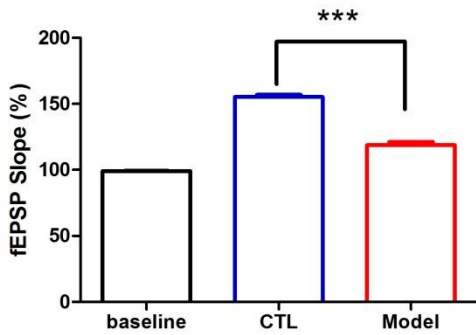
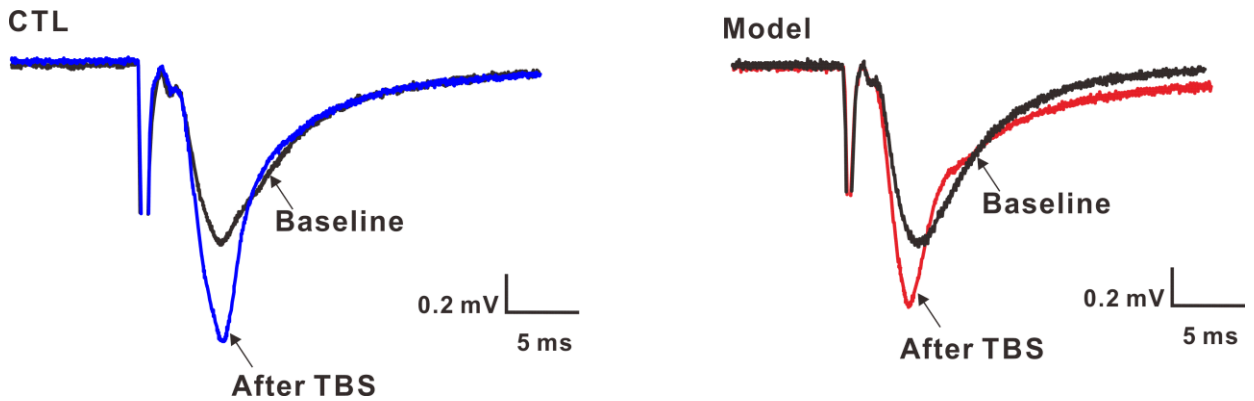
Original recordings and IV curve:



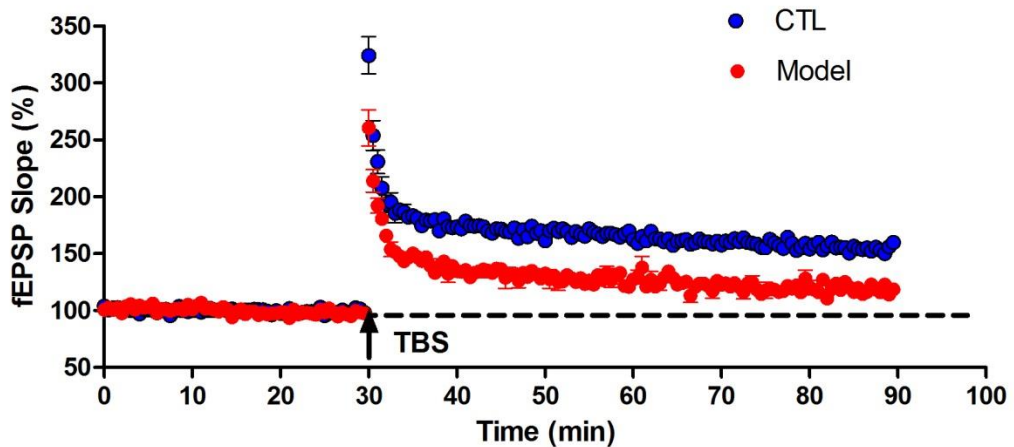
Example: Primary DRG neuron (from newborn rat)
 Channel: Na⁺ channel



Long term potentiation (LTP) recording on CA3-CA1 in the hippocampus of mice



LTP was reduced significantly in the model mice compared with their WT littermates



Excitatory miniature postsynaptic currents (mEPSCs) on pyramidal neuron of CA1 in rat hippocampal slice

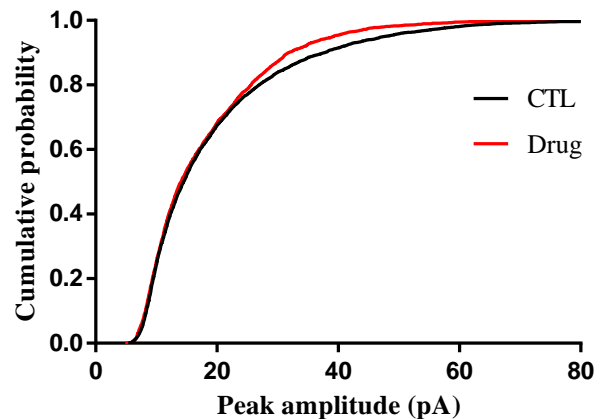
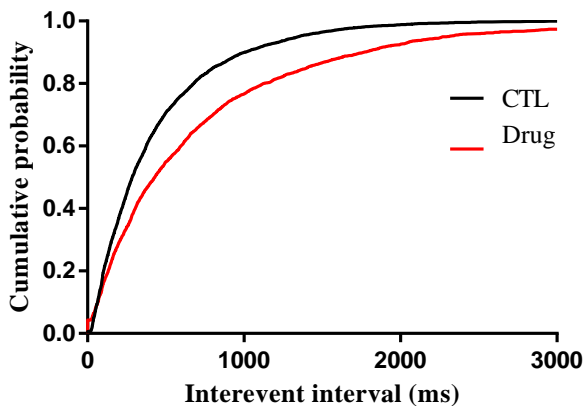
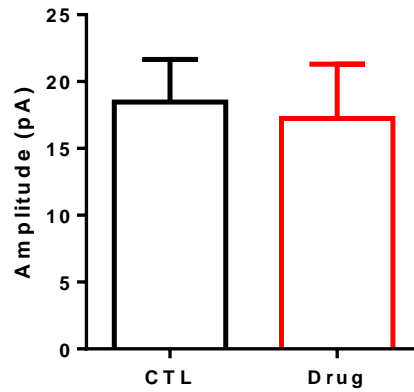
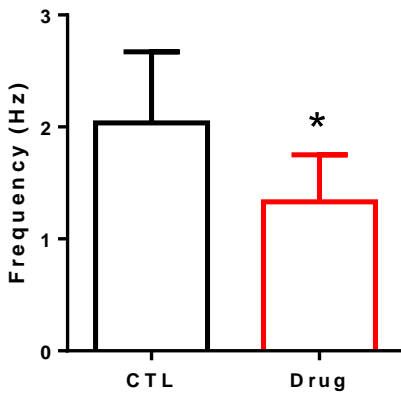
CTL



Drug

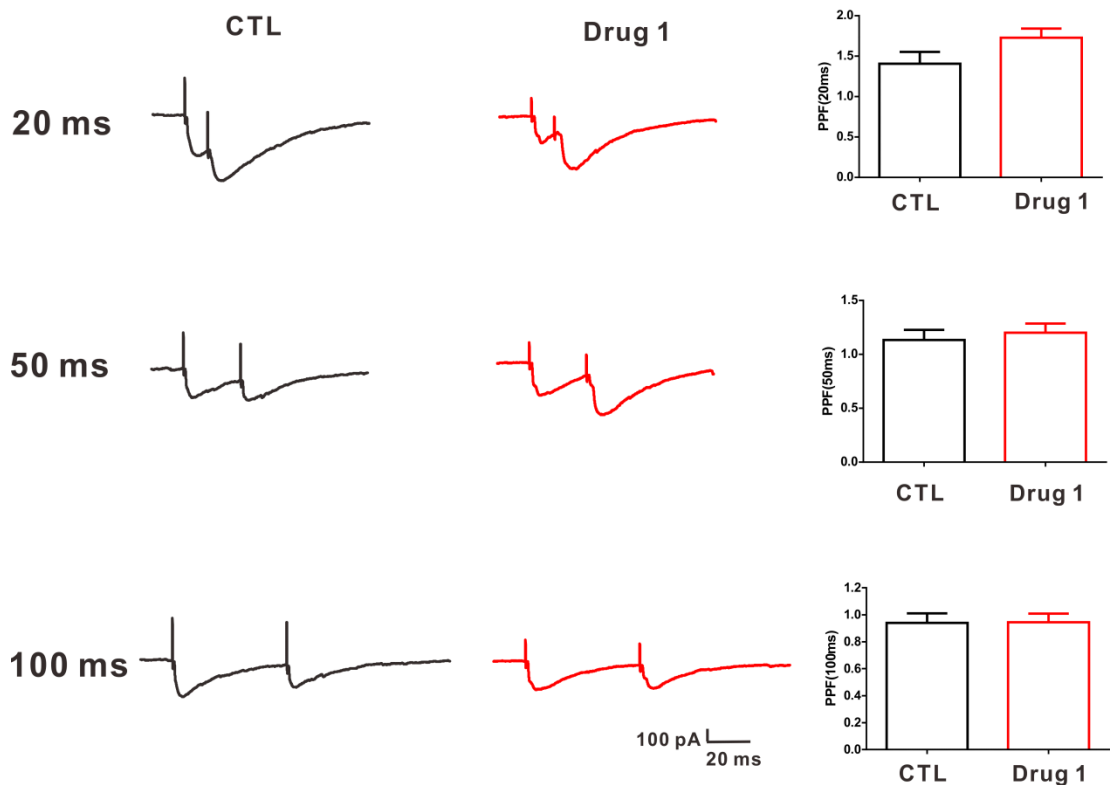


20 pA
20 ms



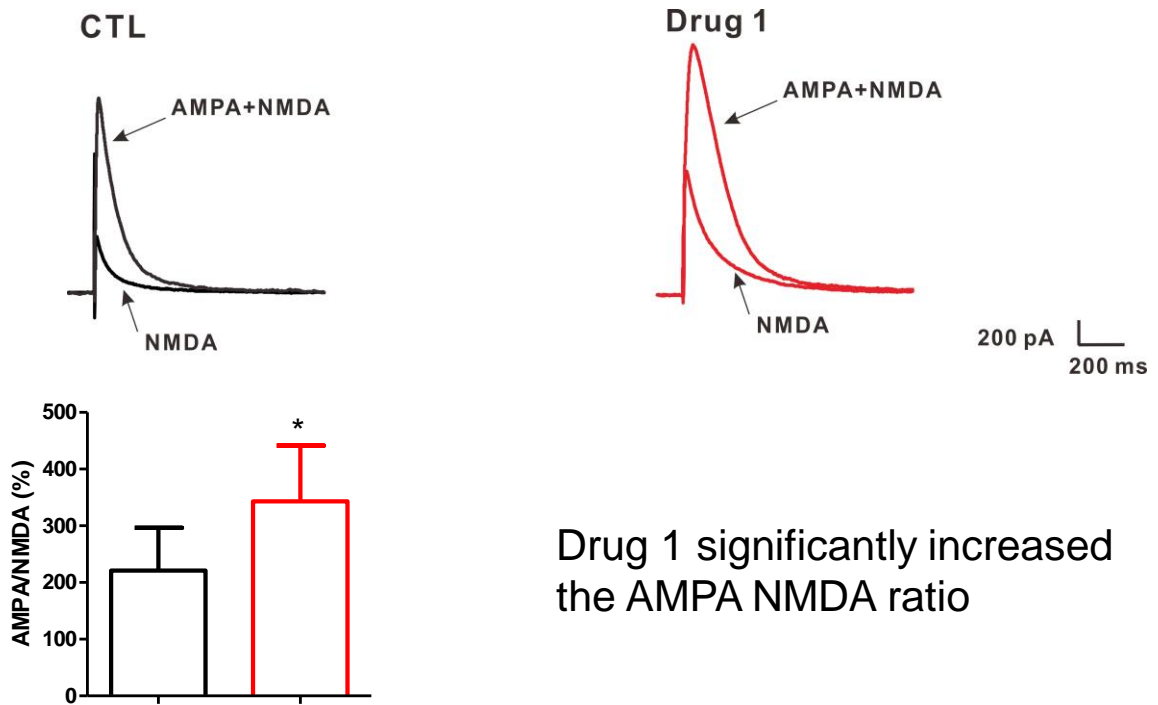
The drug reduced the mEPSC frequency corresponding to the right shift of interevent interval but no effects on mEPSC amplitude

AMPA receptor-induced paired pulse ratio (PPR) on CA1 pyramidal neuron in the CA3-CA1 pathway of rat



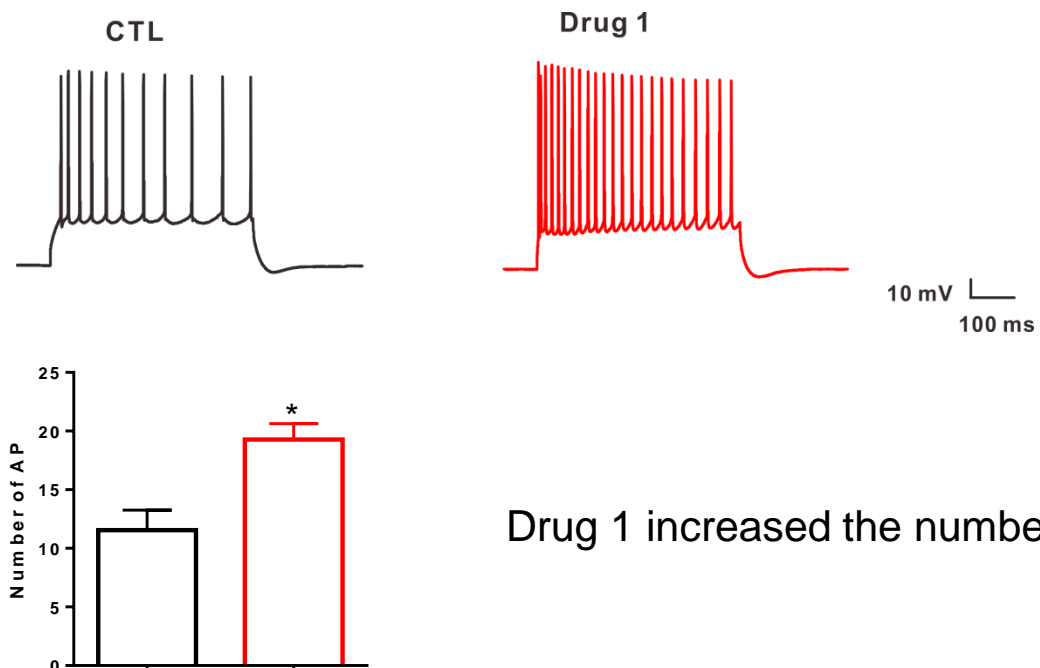
Drug 1 had no effects on AMPA receptor-induced PPR with 20 ms, 50 ms and 100 ms interval stimulation respectively.

Evoked excitatory postsynaptic currents (eEPSCs) on CA1 pyramidal neuron in the CA3-CA1 pathway of rat



Drug 1 significantly increased the AMPA NMDA ratio

Action potential (AP) on CA1 pyramidal neuron in rat hippocampal slice



Drug 1 increased the number of AP