



**Supplementary Figure 7: Scaled mEPSC amplitude distributions, and other mEPSC features.** (a) Scaled mEPSC amplitude distributions for CNQX, CNQX+photostimulation, TTX, and TTX+CTZ (same data as Figs. 3 and 4). Scaled distributions are no different that those from sister controls (CNQX,  $p>0.9$ ; CNQX+stim,  $p>0.9$ ; TTX,  $p>0.7$ ; TTX+CTZ,  $p>0.5$ ). (b) Mean frequency (control,  $1.645\pm0.168$  pA,  $n=44$  cells; CNQX,  $2.282\pm0.270$  pA,  $n=51$  cells; CNQX+photostimulation,  $2.640\pm0.253$  pA,  $n=46$  cells;  $p<0.02$ ), charge per event (control,  $26.957\pm1.209$  nC; CNQX,  $34.804\pm1.643$  nC; CNQX+photostimulation,  $33.527\pm1.373$  nC;  $p<10^{-3}$ ), and decay time (control,  $1.973\pm0.062$  ms; CNQX,  $1.908\pm0.062$  ms; CNQX+photostimulation,  $1.841\pm0.044$ ;  $p>0.2$ ) for CNQX+photostimulation experiments. There are significance difference in frequency of control vs. CNQX+photostimulation conditions ( $p<10^{-2}$ ), and in charge per event of control vs. both CNQX cases (control vs. CNQX,  $p<10^{-3}$ ; control vs. CNQX+photostimulation,  $p<10^{-3}$ ). (c) Mean frequency (control,  $2.962\pm0.297$  pA,  $n=47$  cells; TTX,  $3.321\pm0.368$  pA,  $n=58$  cells; TTX+CTZ,  $3.008\pm0.368$  pA,  $n=50$  cells;  $p>0.6$ ), charge per event (control,  $24.909\pm0.928$  nC; TTX,  $39.965\pm1.931$  nC; TTX+CTZ,  $29.867\pm1.439$  nC;  $p<10^{-10}$ ), and decay time (control,  $1.832\pm0.056$  ms; TTX,  $2.037\pm0.053$  ms; TTX+CTZ,  $1.850\pm0.061$ ;  $p<0.02$ ) for TTX+CTZ experiments. There are significance difference in charge between all conditions (control vs. TTX,  $p<10^{-8}$ ; control vs. TTX+CTZ,  $p<10^{-2}$ ; TTX vs. TTX+CTZ,  $p<10^{-4}$ ), and in decay time for cultures treated with TTX (control vs. TTX,  $p<10^{-2}$ ).