

**S2 Fig:** A-B) Goodness-of-fit for EPSC (A) and IPSC (B) short-term plasticity models assessed by Bayesian posterior predictive *p*-values. Plots show the observed data for all experiments (EPSCs and IPSCs respectively) together with the expected values from the model before and after the application of 5  $\mu$ M carbachol. *p*-values close to 0.5 indicate best fit. C-D) Posterior distributions for parameters of best fitting models given data for EPSCs (C) and IPSCs (D).