

**Appendix 1** to Tripathi A, Sato S, Medini P. Cortico-cortical connectivity behind acoustic information transfer to mouse orbitofrontal cortex is sensitive to neuromodulation and displays local sensory gating: relevance in disorders with auditory hallucinations? *J Psychiatry Neurosci* 2021. doi: 10.1503/jpn.200131

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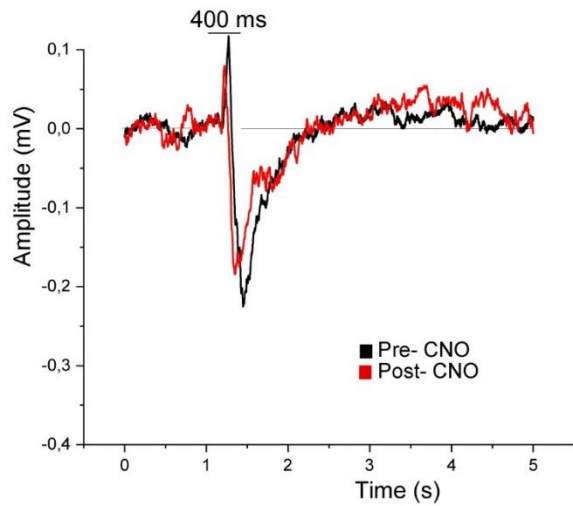
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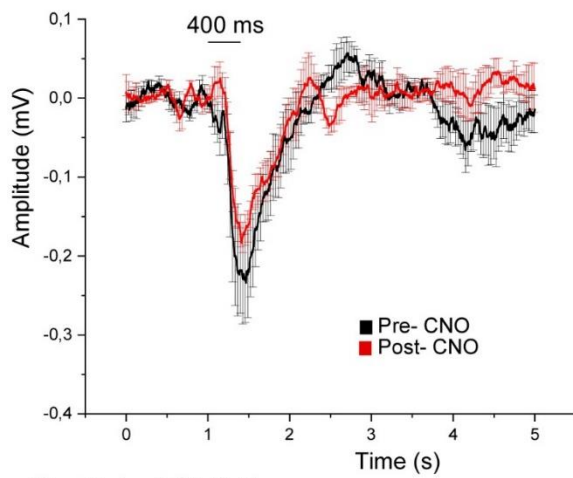
## Supplementary Figure Legends

### CNO Control Animals

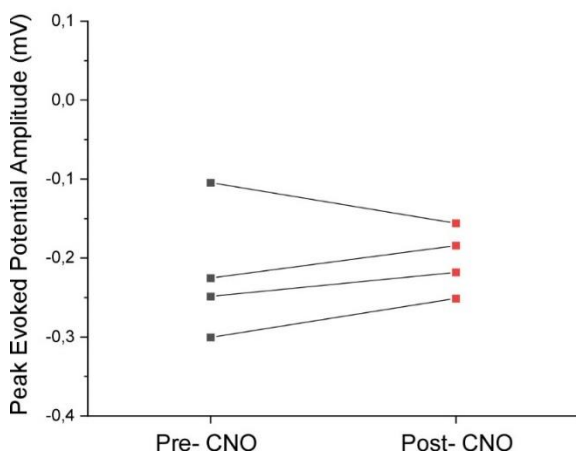
#### A Example



#### B Grand Average



#### C Paired Statistics



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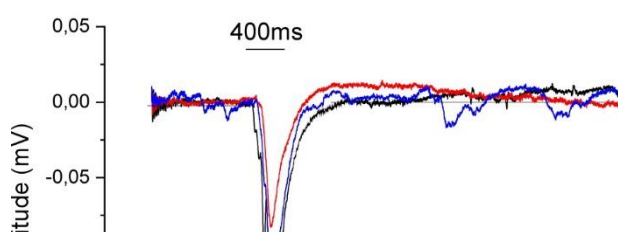
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**Figure 1. Application of Clozapine-N-Oxide (CNO) in the Auditory Association Cortex of control animals does not cause significant difference in auditory evoked potentials in the Orbitofrontal Cortex** **A**, Example of the change in auditory evoked potential (AEP) recorded from the OFC of a non-injected control mouse before (black) and 30min after injection of 10mM CNO in the AAC (red). Both signals are aligned to the auditory stimulus onset averaged over 50 presentations. **B**, The grand average of AEPs recorded from the OFC of 4 control mice before (black) and 30min after injection of CNO in the AAC (red). Both graphs represent the mean  $\pm$  SEM. **C**, Line graphs indicate no significant change in the peak amplitude of evoked responses recorded from the OFC in control mice before (black) and after (red) CNO injection in the AAC ( $p > 0,05$ , Paired T-test).

## Apomorphine Control (Vehicle) OFC

### A Example



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**Figure 2. Apomorphine vehicle, Saline has no significant effect on the auditory evoked responses in the Orbitofrontal Cortex. A,** Example of an individual auditory evoked potential

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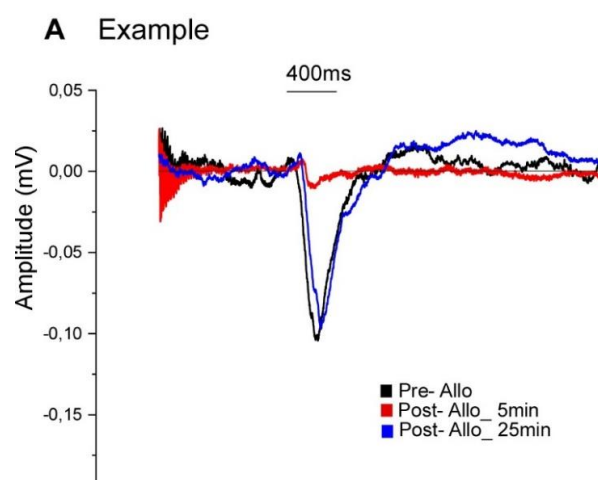
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(AEP) recorded from the OFC before (black) and after 5min (red) and 120min (blue) of saline (0,9%NaCl) injection in the OFC. All signals are aligned to the stimulus onset and averaged over 50 presentations. **B**, The grand average of AEPs recorded from the OFC of 4 animals for 2h before (black) and at two time points (5min-red; 120min-blue) after saline injection in the OFC. The graphs represent the mean  $\pm$  SEM. **C**, The line graphs indicate saline application led to no significant change in the peak evoked auditory responses recorded from the OFC during the entire duration of 120min ( $p > 0,05$ ; ANOVA repeated measures).

## Allopregnanolone OFC



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**Figure 3. Decrease in auditory evoked potential after Allopregnanolone injection in the Orbitofrontal Cortex is reversed in 25min. A,** Example of AEPs recorded from the OFC at time points before (black), after 5 min (red) and after 25min (blue) of injection of Allo in the OFC. All signals are

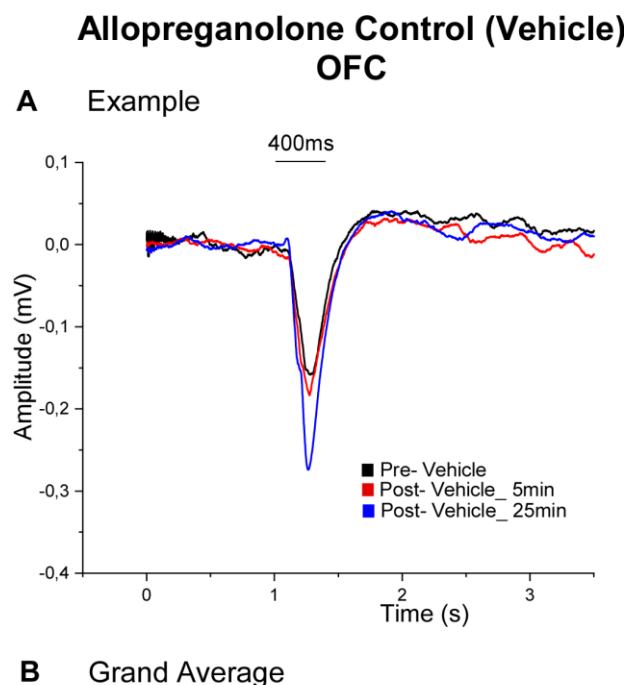
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aligned to the stimulus onset and averaged over 50 presentations. **B**, The grand average of AEPs recorded from 5 animals in the OFC before (black) and after (5 min: red, 25 min: blue) Allo injection in the OFC. The values represent mean  $\pm$  SEM. **C**, Line graphs indicate that there is a transient decrease in the peak amplitude of evoked response after Allo injection ( $p > 0,05$ ) but it is reversed and the signal returns to pre-Allo levels in the OFC in 25min ( $p < 0,05$ ; ANOVA repeated measures).



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**Figure 4. Injection of Allopregnanolone vehicle does not cause a significant reduction in the auditory evoked potential in the Orbitofrontal Cortex.** **A**, Example of AEPs recorded from the OFC at time points before (black), after 5min (red) and after 25min (blue) of injection of vehicle (50µM DMSO + Saline) in the OFC. All signals are aligned to the stimulus onset and averaged over 50 presentations. **B**, The grand average of AEPs recorded from 4 animals in the OFC before (black) and at two

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time points after (5min: red; 25min: blue) vehicle injection in the OFC. The values represent mean  $\pm$  SEM. **C**, Line graphs indicate that vehicle injection within the OFC caused no significant change in the auditory evoked responses recorded from the OFC at any time point of analysis ( $p > 0,05$ ; ANOVA repeated measures).