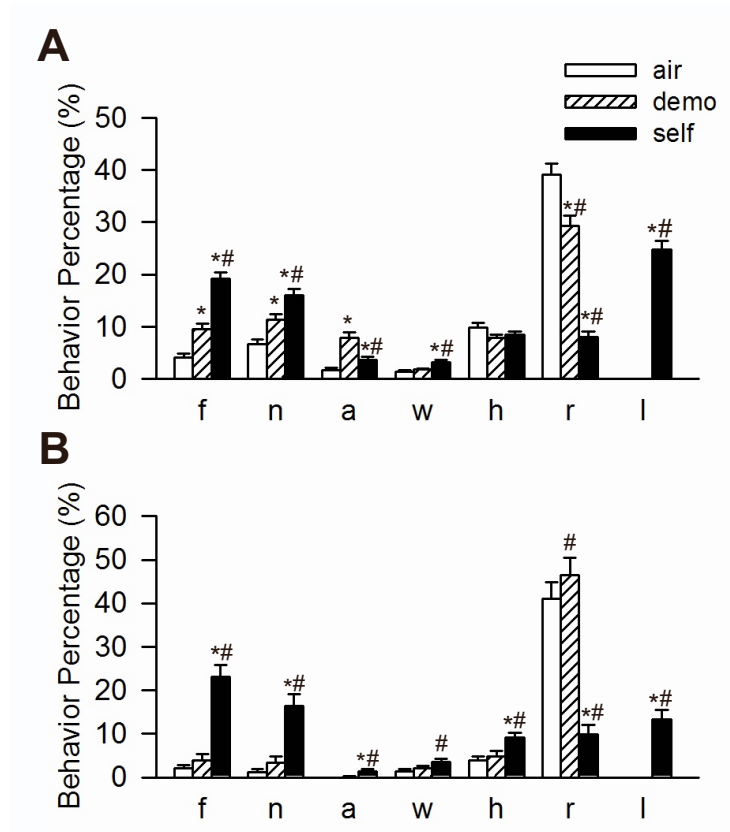# Supplemental information

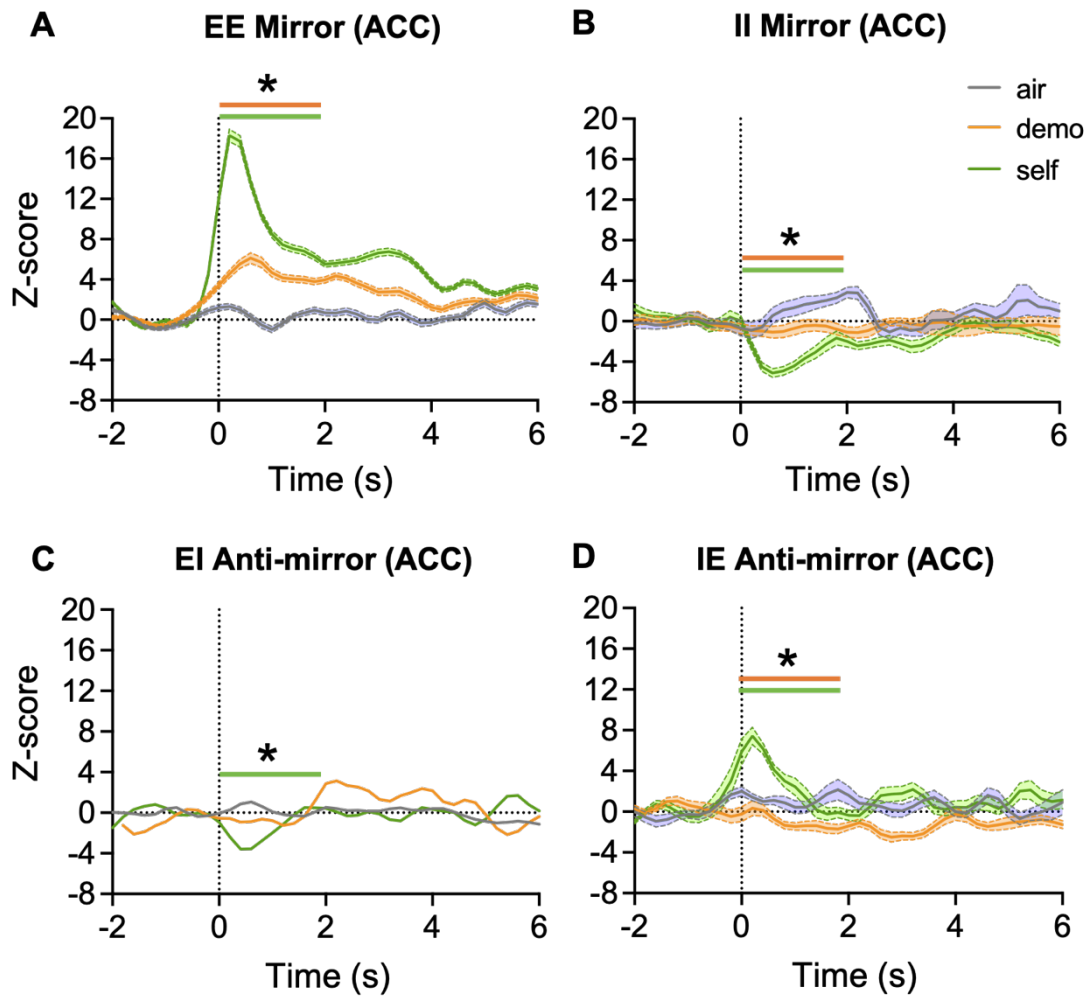# Affective mirror and anti-mirror

# neurons relate to prosocial help in rats

Wen-Yi Wu, Yawei Cheng, Keng-Chen Liang, Ray X. Lee, and Chen-Tung Yen
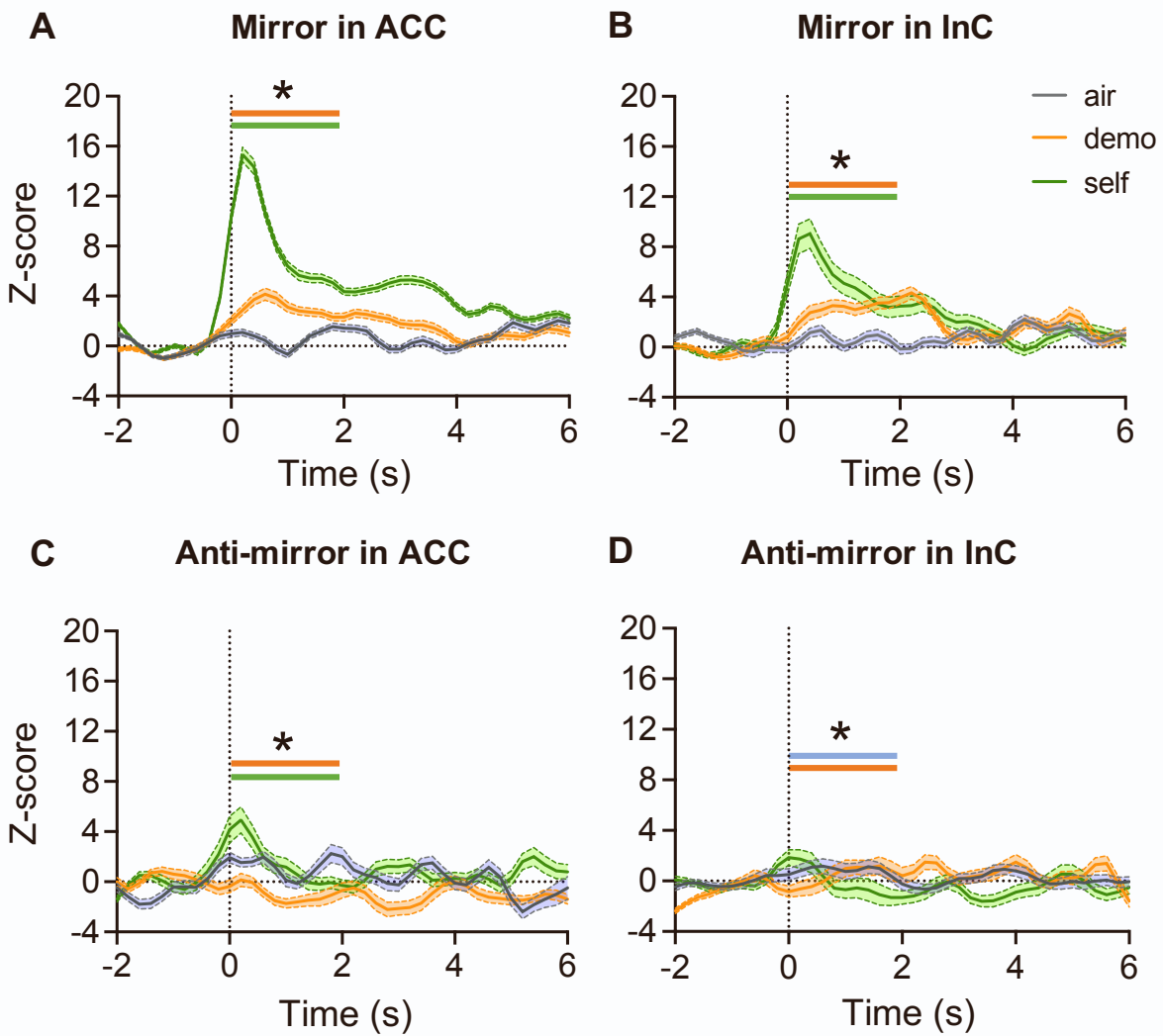
**Figure S1. Seven focal behaviors in transparent (A) and opaque (B) partition experiments.**

Related to Figure 1. Mean percentages of each behavior shown by observer rats in 1-s time bins for the 3 types of blocks. Data are presented as mean ± SEM, *$p < 0.025$ compared to values in the "air" block; #$p < 0.025$, compared to values in the "demo" block (one sided Mann-Whitney U test at a significance level of $\alpha = 0.05$, with Bonferroni correction); Abbreviation: f, freezing; n, sniffing; a, social approach; w, walking; h, heading; r, resting; k, whisking; l, licking.
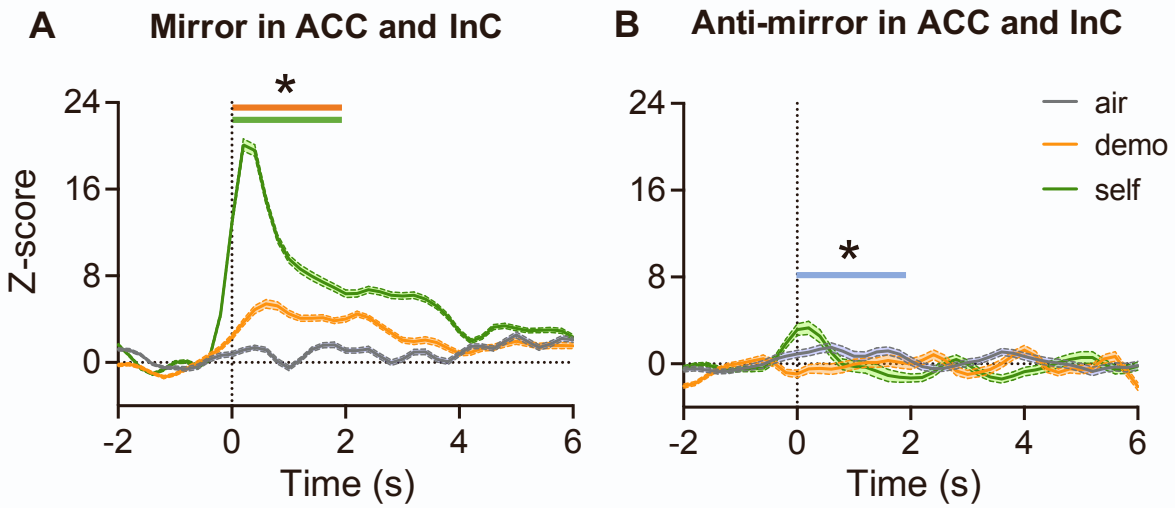
**Figure S2. Activities of ACC EE, ACC II, ACC EI, and ACC IE ensembles around laser pulses in the observational distress test.** Related to Figure 2. Data are presented as mean ± SEM.

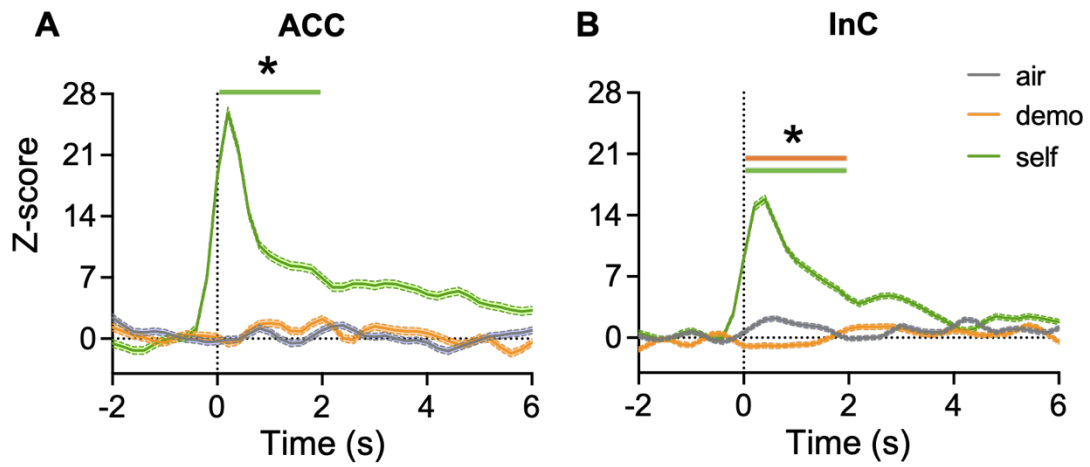* $p < 0.05$, Mann-Whitney U-test compared to air.

**Figure S3. Activities of mirror and anti-mirror ensembles in the ACC and InC around laser pulses in the observational distress test.** Related to Figure 2. Data are presented as mean ± SEM. * $p < 0.05$, Mann-Whitney U-test compared to air.
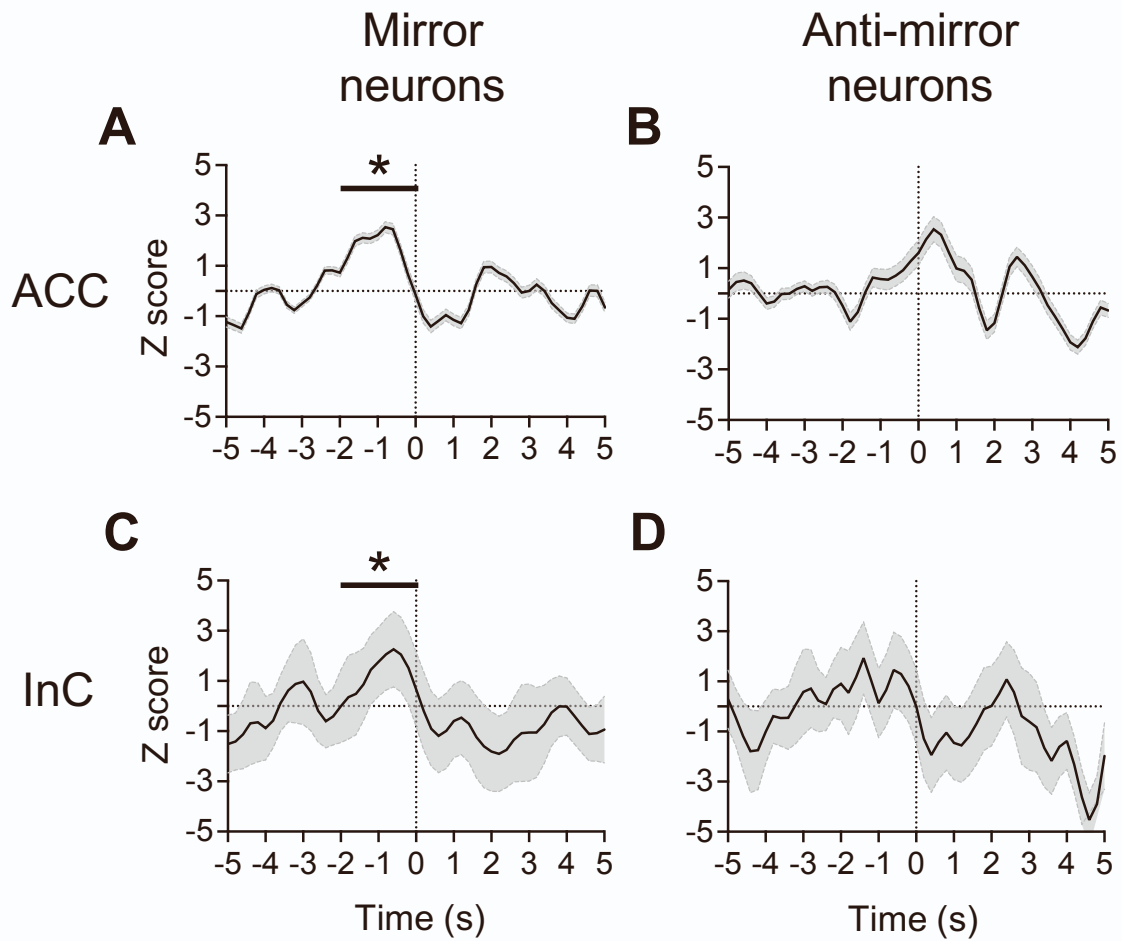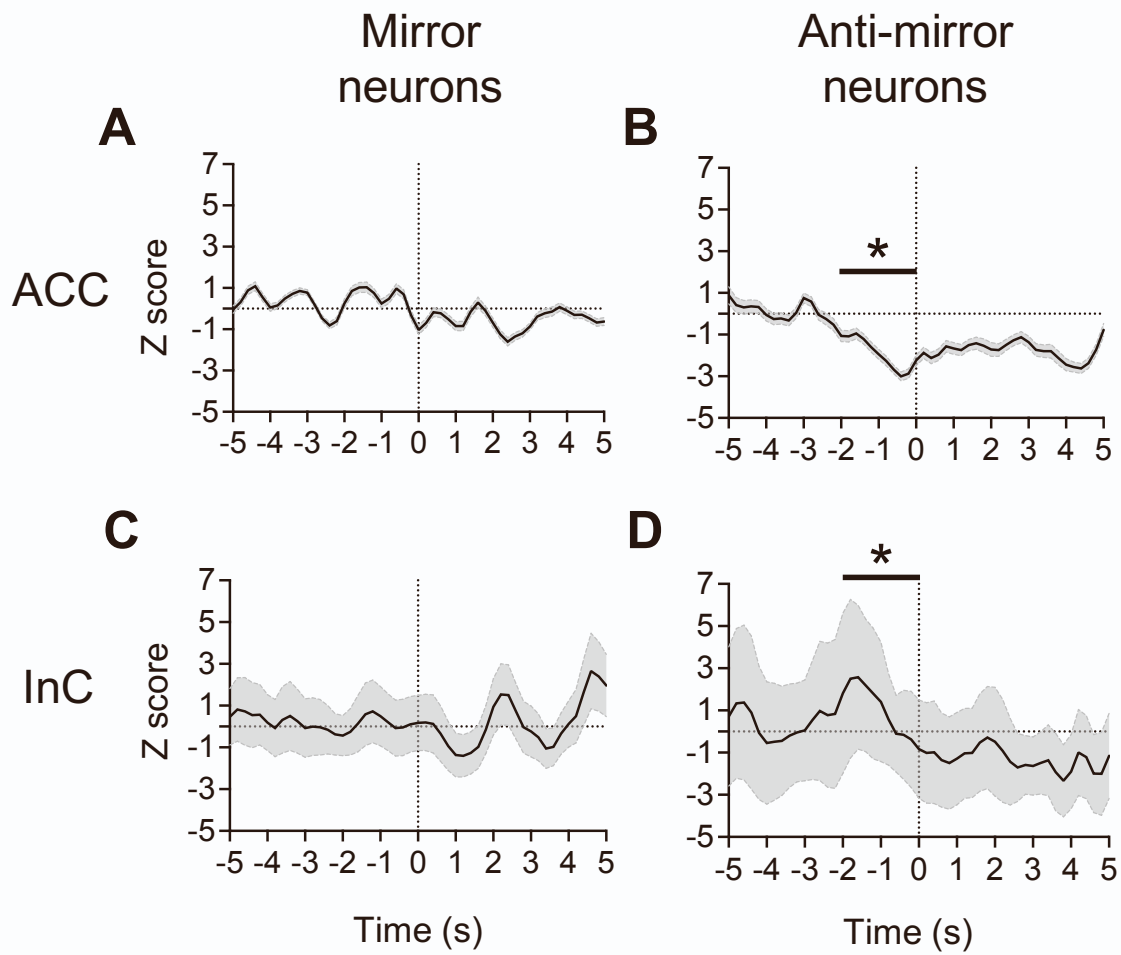
**Figure S4. Activities of the ACC-InC mirror and anti-mirror ensembles around laser pulses in the observational distress test.** Related to Figure 2. Data are presented as mean ± SEM. * $p < 0.05$, Mann-Whitney U-test compared to air.

**Figure S5. Activities of the ACC and InC ensembles around laser pulses in the observational distress test.** Related to Figure 2. Data are presented as mean ± SEM. * $p < 0.05$, Mann-Whitney U-test compared to air.

**Figure S6. Activities of neuronal ensembles around social approach behaviors in the observational distress test.** Related to Figure 4 and 5. Data are presented as mean ± SEM. * $p < 0.05$, one-sample Wilcoxon signed-rank test.

**Figure S7. Activities of neuronal ensembles around freezing behaviors in the observational distress test.** Related to Figure 4 and 5. Data are presented as mean ± SEM. * $p < 0.05$, one-sample Wilcoxon signed-rank test.