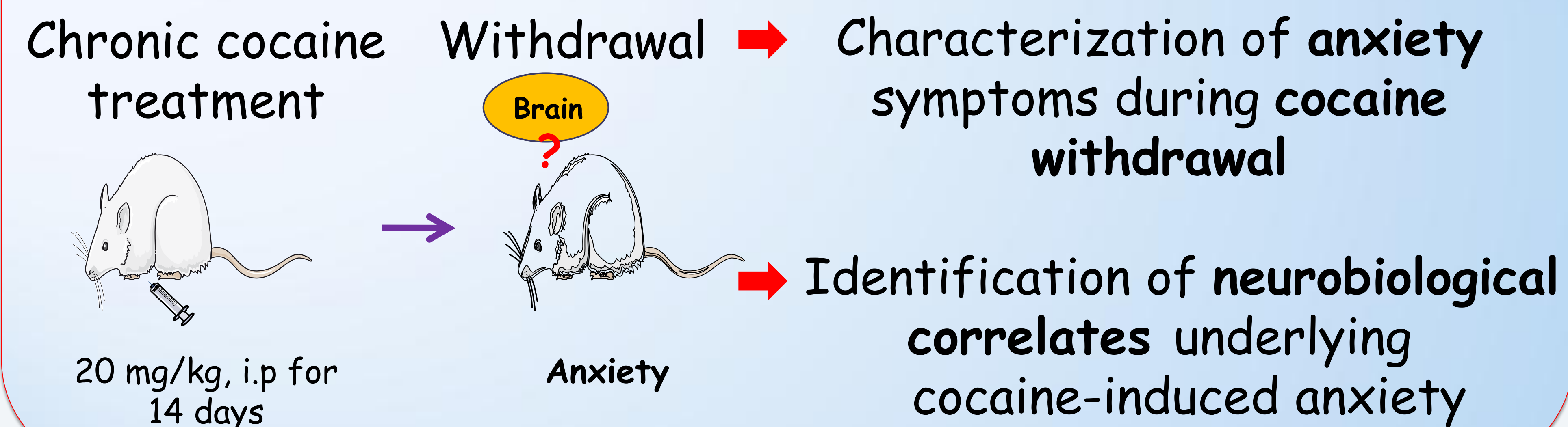


Neurobiological correlates of cocaine-induced anxiety in withdrawn rats



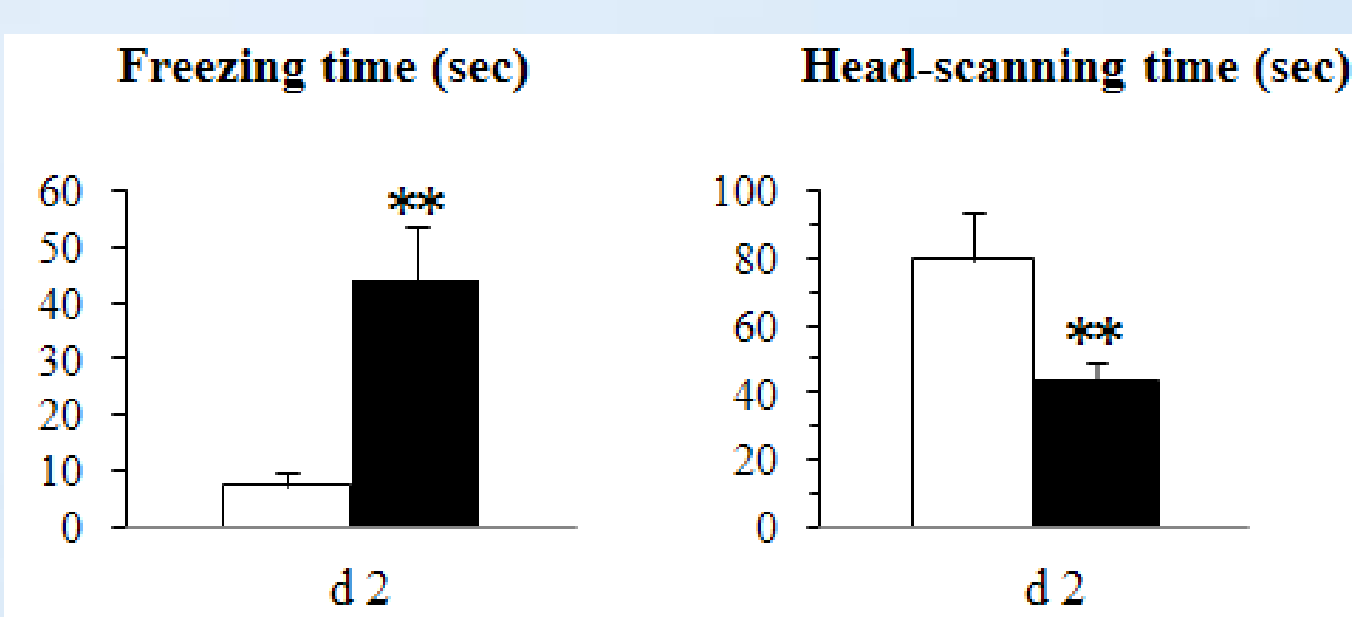
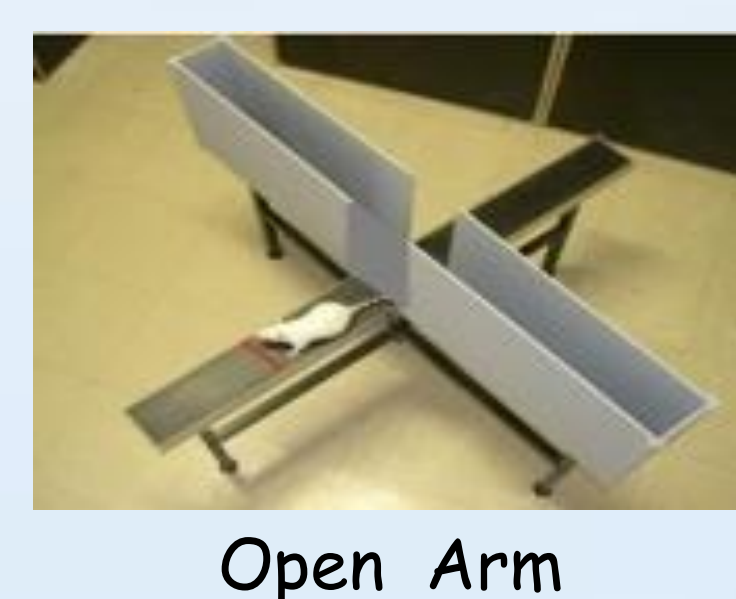
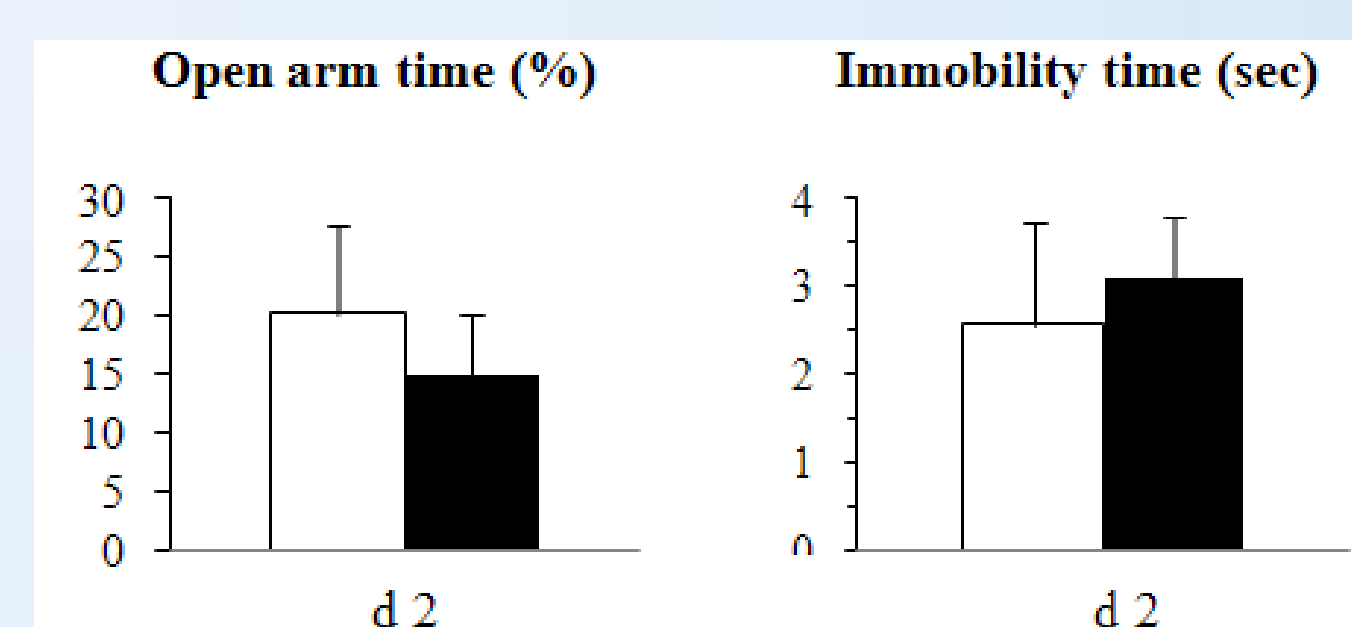
El Hage C., Morel A.L., Luppi P.H. & Béroud A.
CNRS UMR 5292, INSERM U1028, Centre de Recherche en Neurosciences de Lyon, France

1 Context Aim of the study

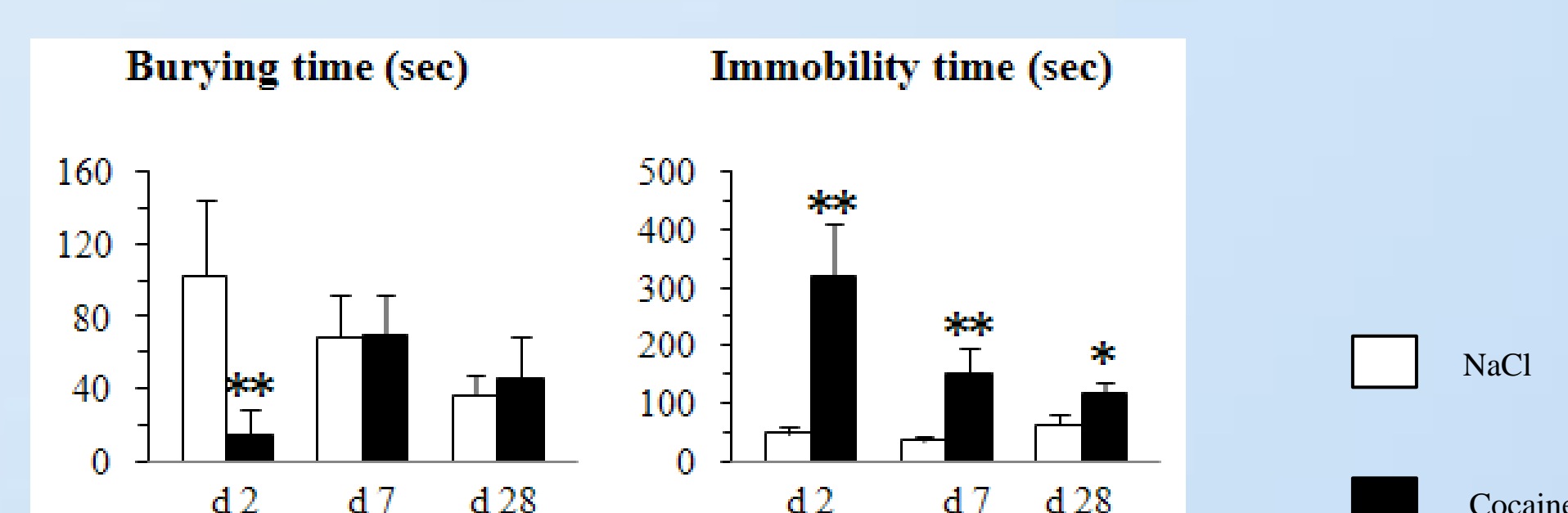


2 Behavioral study

Cocaine withdrawal increases anxiety in high anxiogenic environments



Reversed by diazepam (0.5 mg/Kg)

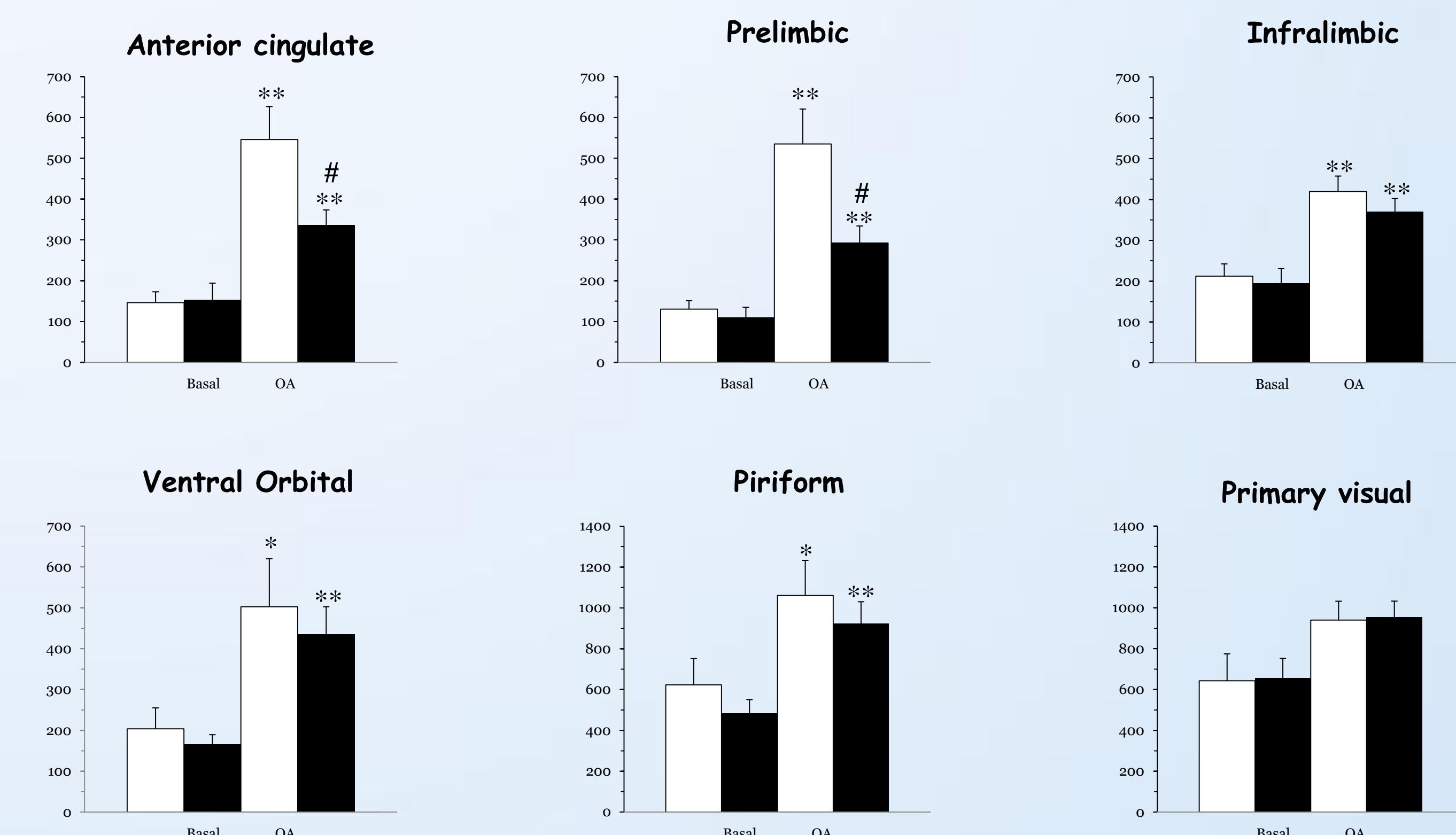


Effects of cocaine withdrawal on anxiety-related behaviors assessed in the elevated plus-maze, open arm and shock-probe burying tests in cocaine-treated rats (black bars) compared to saline-treated rats (white bars). Behaviors were assessed at day 2, 7 and 28 of withdrawal. Data are expressed as mean + SEM, * $p < 0.05$, ** $p < 0.01$ versus saline-treated rats.

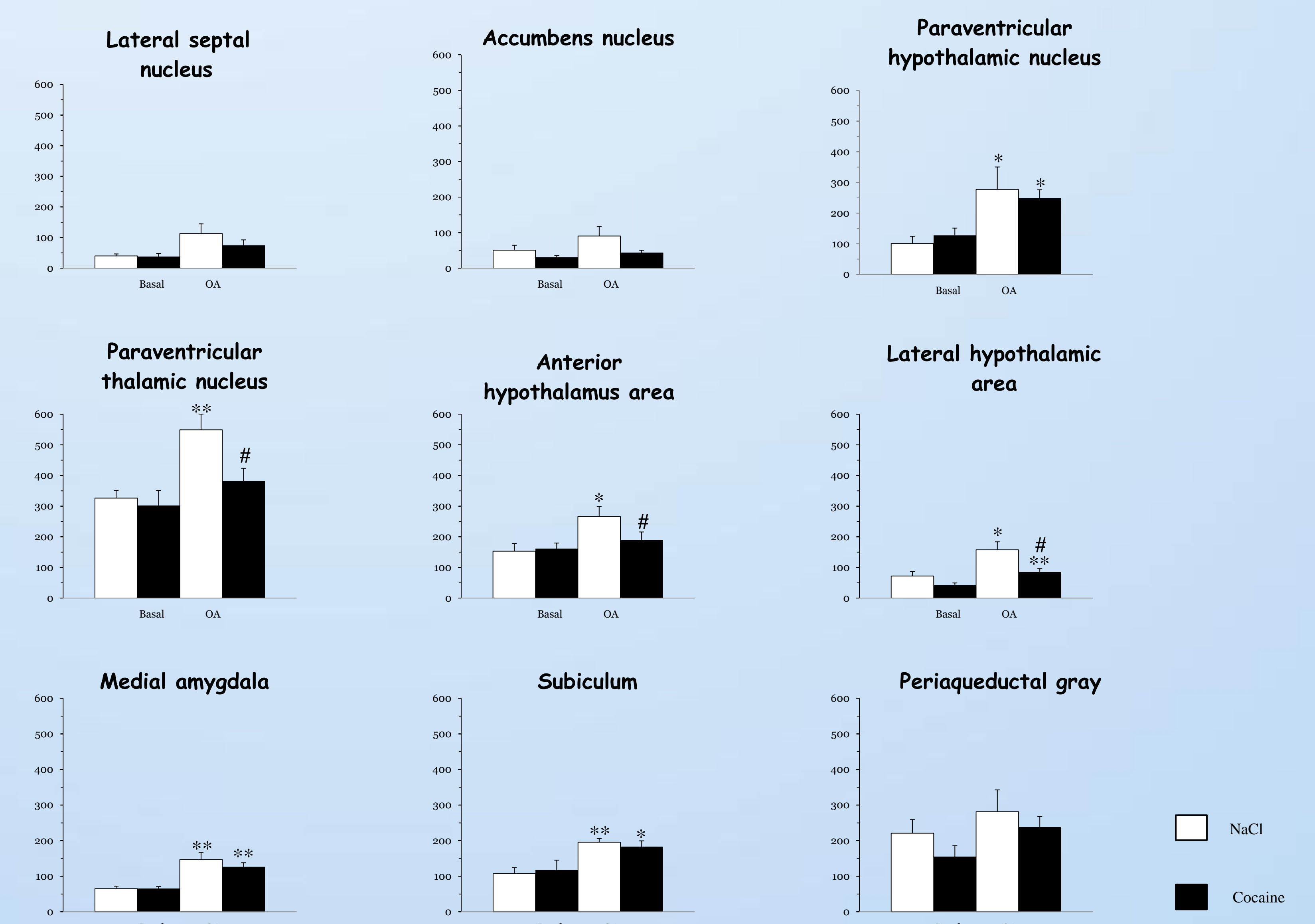
Cocaine withdrawal does not affect depression-like behavior in forced-swim and sucrose preference tests

3 Neuroanatomical study

Cortical region reactivity after OA exposure



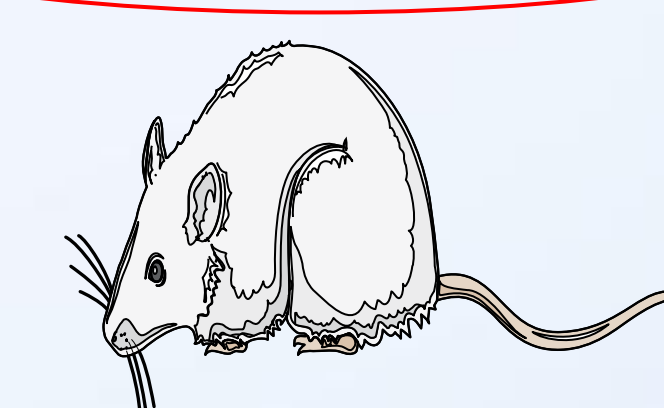
Sub-cortical region reactivity after OA exposure



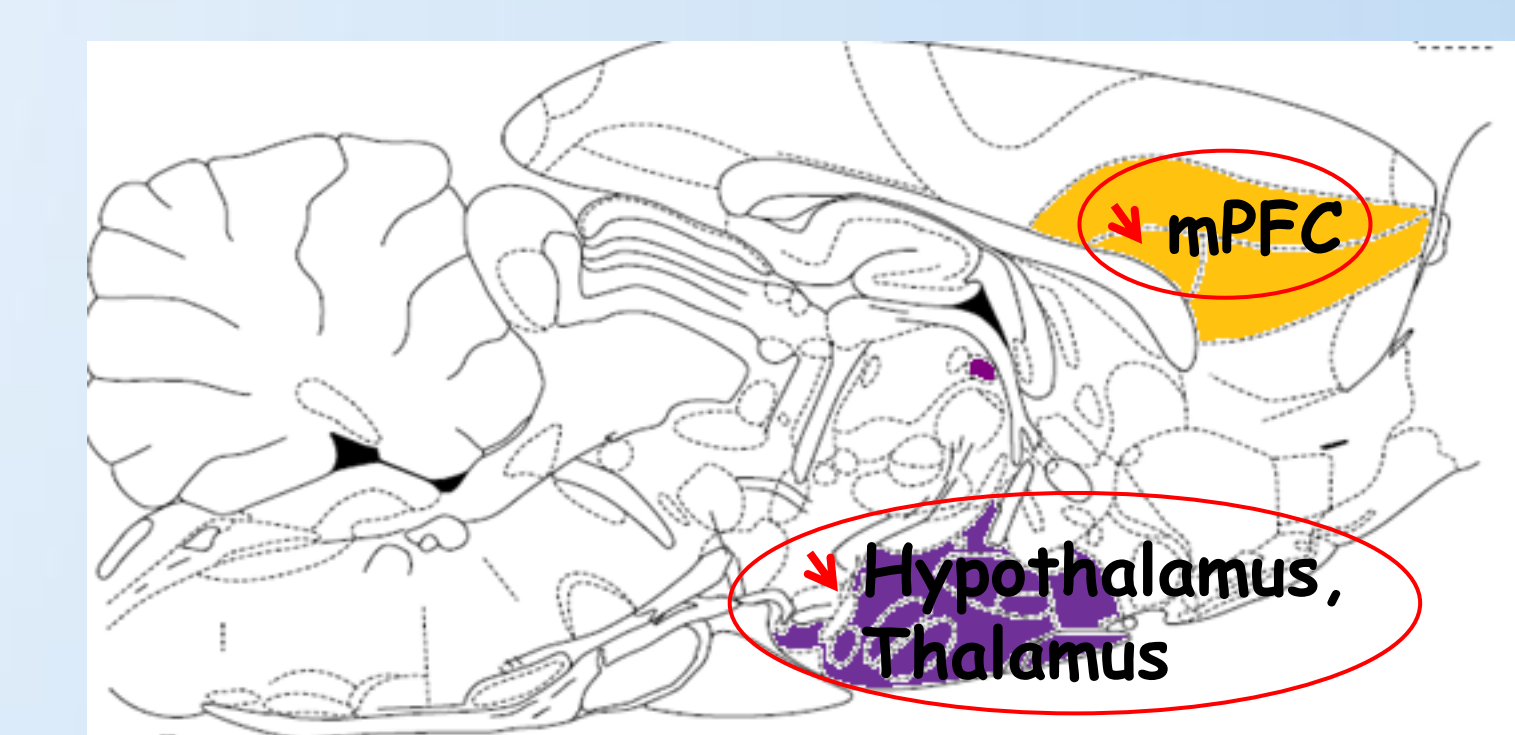
Number of Fos positive cells/mm² in different brain regions in saline- and cocaine-treated rats before and after OA exposure. Data are expressed as mean ± SEM, * $p < 0.05$, ** $p < 0.01$ versus the corresponding group of rats in basal conditions. # $p < 0.05$, ## $p < 0.01$ versus saline-treated rats placed in the open arm.

4 Conclusion

Cocaine withdrawal



Difficulty to cope with high anxiogenic environments



→ Role of the mPFC in the expression of anxiety-related behaviors during withdrawal? (Muscimol/Picrotoxin microinjections in the mPFC)