

CENTRAL NERVOUS SYSTEM

Open Field

This model is used to evaluate the exploratory activity of the animals. The natural rodent tendency is to explore a new environment despite of the stress and the conflict promoted by the new situation¹. This model allows us to measure the central nervous system excitability. Thus, compounds that decrease the locomotor activity could be related to sedative properties while those ones which increase the locomotor activity could be related to stimulant properties¹.

Species: *Mus musculus* (Swiss)
Number of animals/group: 8-10 animals
Route of administration: upon request
Treatment mode: upon request

Main read-outs: Total number of crossing, central crossing.
Facultative read-outs: Freezing time, defecation and urination number.

Validation Data

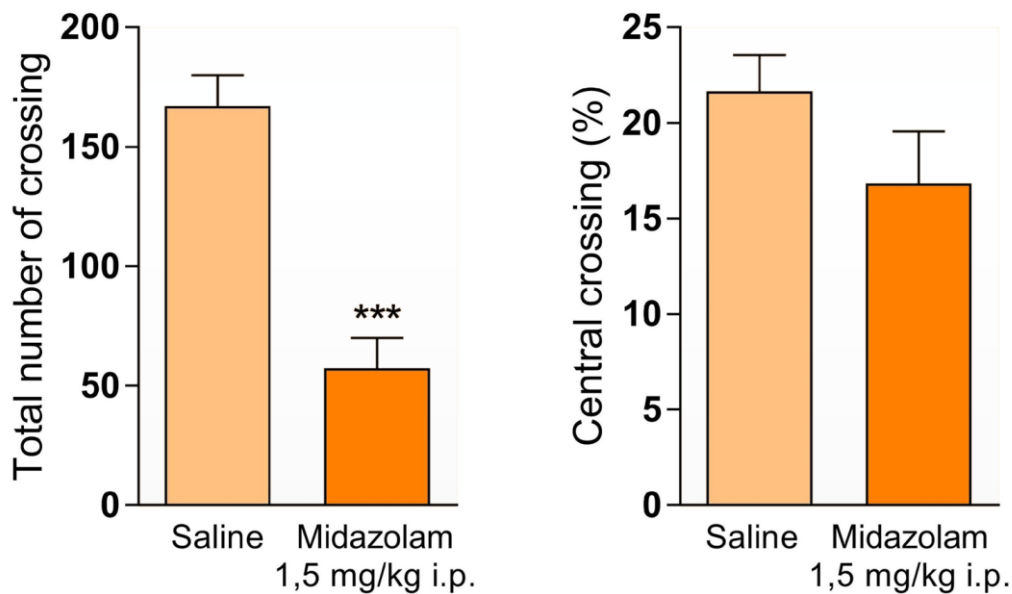


Figure: Effects of midazolam (1.5 mg/kg, i.p.) in the Open Field test. Midazolam was used as reference item (positive control). Each column represents the mean ± SEM. Non-paired t-Student test was used for statistical analysis *, P < 0.05, versus saline group.

To avoid bias and to allow reproducibility all in vivo experiments follow the ARRIVE guidances². Mouse colony from Charles River Laboratories is breed and maintained in SPF conditions. The project includes study plan and final report. Raw data are inspected by quality assurance unity. The experimental procedures was previously approved by the CIEnP Committee on the Ethical Use of Animals.

References:

- ¹Prut L, Belzung C. The open field as a paradigm to measure the effects of drugs on anxiety-like behaviors: a review. *Eur J Pharmacol* 2003, 463: 3-33.
- ²Kilkenny C, Browne WJ, Cuthill IC, Emerson M, Altman DG. Animal research: reporting in vivo experiments: The ARRIVE guidelines. *PLoS Biol.* 8 (6): e1000412, 2010.