

CENTRAL NERVOUS SYSTEM

Rota Rod

This test is an crucial tool to evaluate the motor coordination of the animals. Motor proprieties are mainly important in the investigation of the general drug effects, mainly central nervous system depressant drugs. Rota rod allows the automatized measurement of neurological deficits in rodents and it is widely used due to its easy method procedure and sensitivity. Mice could be tested with a fixed and accelerated rotation speed. In the accelerated version, rota rod rotations goes from 0-40 RPM in a 5 min trial¹.

Species: *Mus musculus* (C57Bl/6)
Number of animals/group: 8-10 animals
Route of administration: upon request
Treatment mode: upon request

Main read-outs: Latency to fall, fall rotation speed

Validation Data

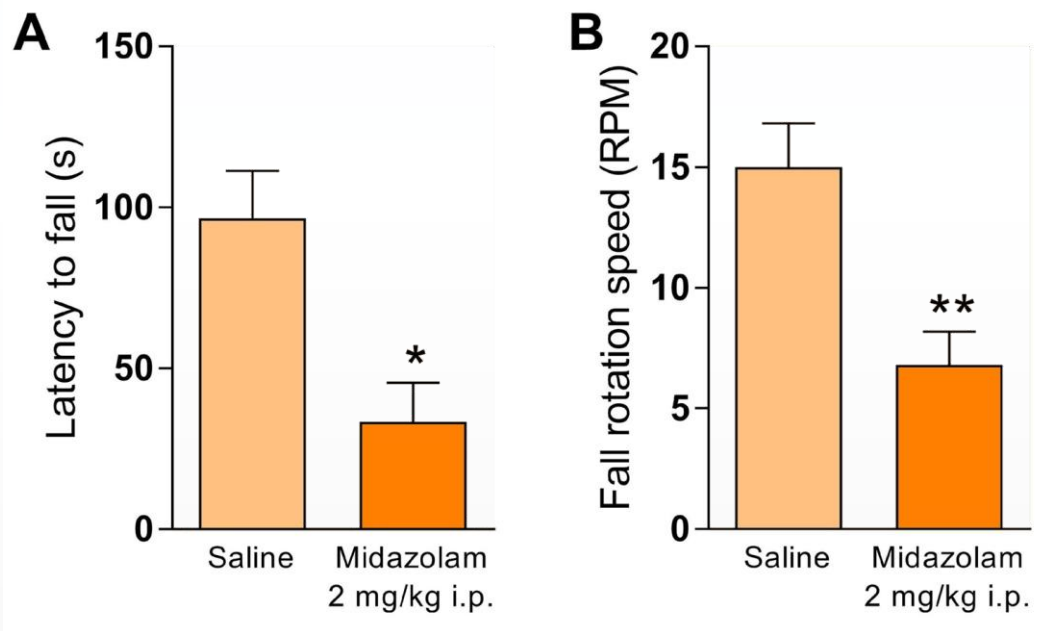


Figure: Effects of midazolam (2 mg/kg, i.p.) in the Rota Rod test. Midazolam was used as reference item (positive control). Each column represents the mean ± SEM. Non-paired t-Student test was used for statistical analysis *, P < 0.05, versus saline group.

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:

- ¹Brooks SP, Dunnett SB. Tests to assess motor phenotype in mice: a user’s guide. Nature Reviews Neuroscience, 10: 519-529, 2009.
- 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.