

CENTRAL NERVOUS SYSTEM

Mice Forced Swim Test

A set of combined symptoms are required to diagnose depression, as irritability, weight changes, guilt feeling, low concentration, sleep problems, etc. In this regard, measures related to resignation (commonly called as learned helplessness) are used as one of the main parameters in the screening depressive tests. In the forced swim test¹ the animals are forced to swim inside a place where it is impossible to escape. Initially, there is a desperate attempt to escape that is followed by immobility periods. The immobility reflects a “desperate state” considering that they give up to try to escape. The reduction in the immobility time is observed after several antidepressant drug administration¹.

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

Main read-outs: Immobility time.

Validation Data

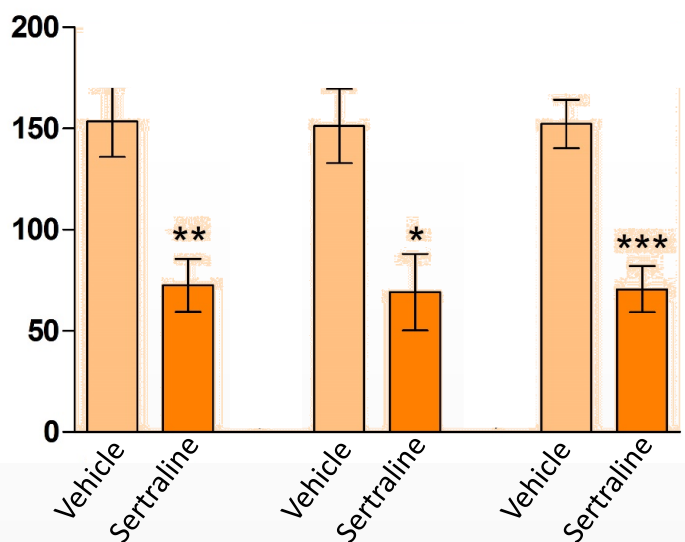


Figure: Effects of sertraline (20 mg/kg, i.p.) in the mice Forced Swim Test. Sertraline was used as reference item (positive control). Each column represents the mean ± SEM. Non-paired t-Student test was used for statistical analysis *, P < 0.05, versus vehicle group.

To avoid bias and to allow reproducibility all in vivo experiments follow the ARRIVE guidances². Mouse colony from Charles River Laboratories is bred 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:

- ¹Porsolt RD, Anton NB, Jalfre M. Behavioural despair in mice: a primary screening test for antidepressants. Arch Int Pharmacodyn, 229: 327-36, 1997.
- 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.