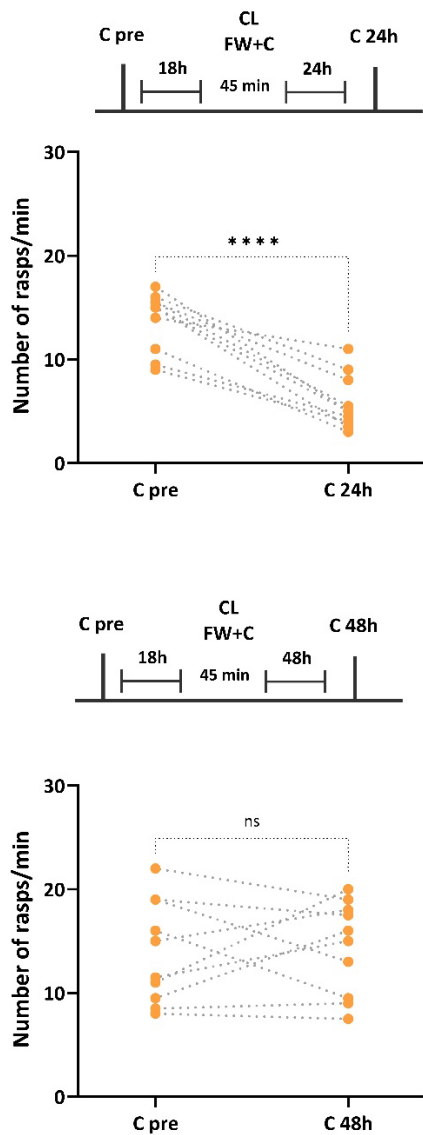
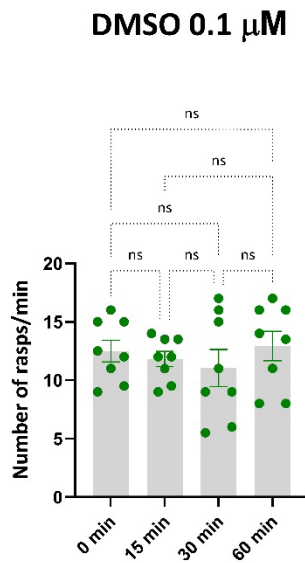
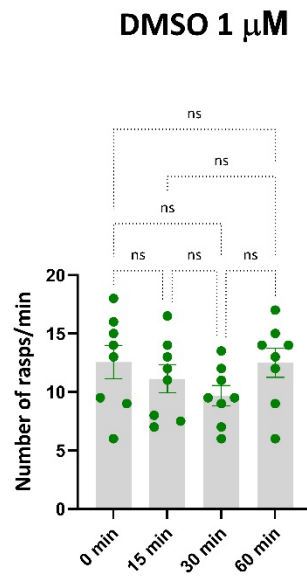
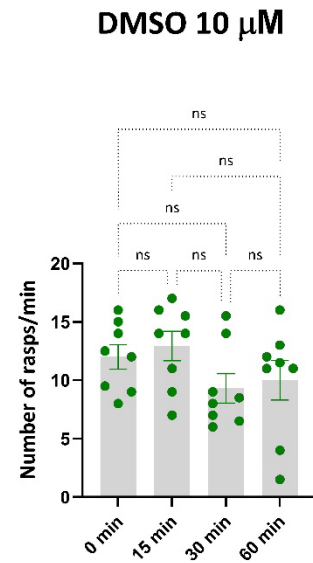


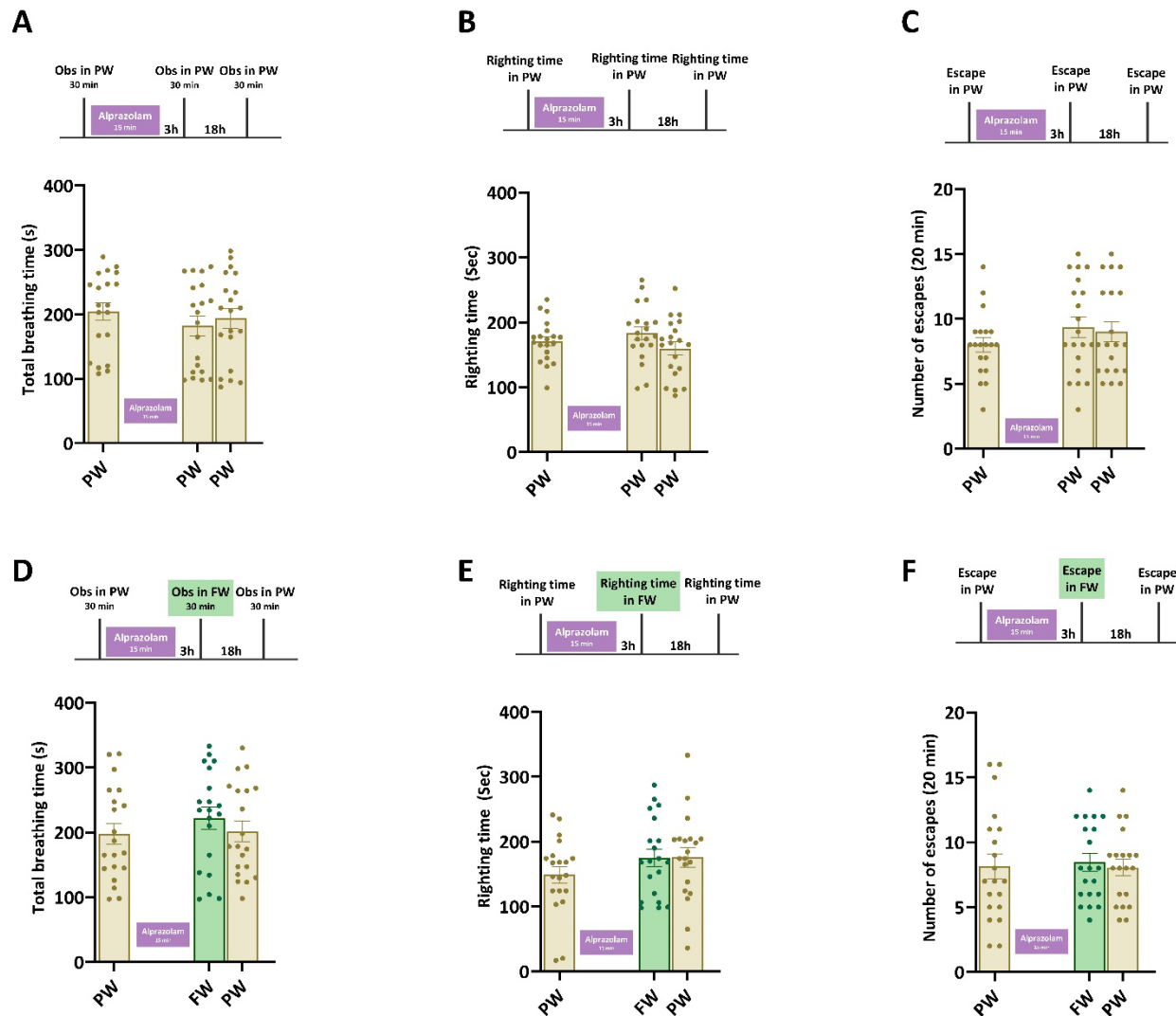
SUPPLEMENTARY FIGURES



Supplementary Figure 1 | A timeline of the experiment is presented above the data. **(A)** Ten naïve snails were first exposed to an appetitive stimulus (carrot slurry, C), and the number of rasps was recorded over 2 minutes. After 18 hours, snails were simultaneously exposed to fish water (FW) and C for 45 minutes (configural learning, CL). Rasping responses to C alone were measured 24 hours later. Long-term memory (LTM) was formed as there was a significant reduction in the number of rasps compared to C pre. **(B)** Ten naïve snails were first exposed to an appetitive stimulus (carrot slurry, C), and the number of rasps was recorded over 2 minutes. After 18 hours, snails were simultaneously exposed to fish water (FW) and C for 45 minutes (configural learning, CL). Rasping responses to C alone were measured 48 hours post-CL and no significant differences in the numbers of rasps were found. Thus, LTM for configural learning lasted for at least 24 but not 48 hours. Data are presented as means $\pm$ SEM and analyzed using paired t-tests. ns = not significant as $p > 0.05$.

A**B****C**

Supplementary Figure 2 | DMSO does not affect snails' feeding behavior. Snails (N=8) were exposed to DMSO 0.1 μ M (A), 1 μ M (B), or 10 μ M (C) for 15, 30, and 60 minutes, and the feeding behavior was tested 3 hours later in lettuce slurry. Control snails were not treated. N=8 for each dose and time. Data are represented as means $\pm$ SEM and analyzed with one-way ANOVA followed by Tukey post hoc. ns = not significant as $p > 0.05$.



Supplementary Figure 3 | The exposure to alprazolam for 15 minutes prevents the anxiety-like behaviors induced by FW. Alprazolam-PW Experiments: The Total breathing time (A), righting time (B), and exploratory behavior (C) of snails were initially recorded in artificial PW. Snails were then exposed to 0.1 μ M alprazolam for 15 minutes, and behaviors were re-assessed at 3 hours and 18 hours post-exposure in artificial PW. No significant differences were observed between time points. **Alprazolam-FW Experiments:** Total breathing time (D), righting time (E), and exploratory behavior (F) were initially recorded in artificial PW before exposing snails to 0.1 μ M alprazolam for 15 minutes. At 3 hours post-exposure, behaviors were measured in fish water (FW – green bars) and then again in artificial PW 18 hours later. No significant differences were found between time points.