



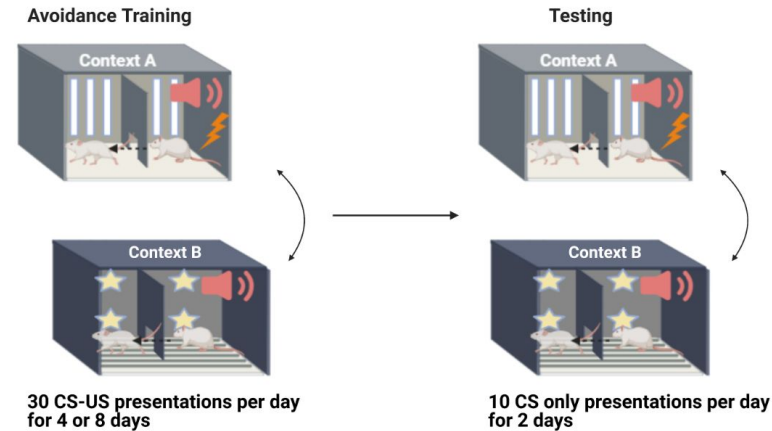
The Role of the Ventral Hippocampus on Contextual Learning in Two Way Signaled Active Avoidance (SAA)

Perry, S., Oleksiak, C.R., Ramanathan, K.R., Miles, O.W., Maren, S., & Moscarello, J.M.

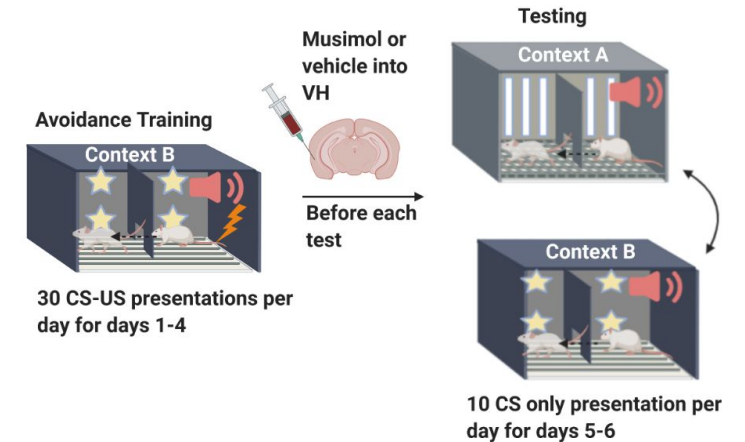
Background and Methods

- Post traumatic stress disorder (PTSD) involves avoidance of anxiogenic cues associated with the trauma.
- Avoidance is context dependent learning that may be mediated by ventral hippocampus.
- Exp. 1: Rats trained in context A/B for 4/8 days, tested in context A/B for 2 days
- Exp.2: Rats trained in context B for 4 days, given muscimol or vehicle infusions, tested in context A/B for 2 days

Two Way SAA Model for 4 vs 8 Days



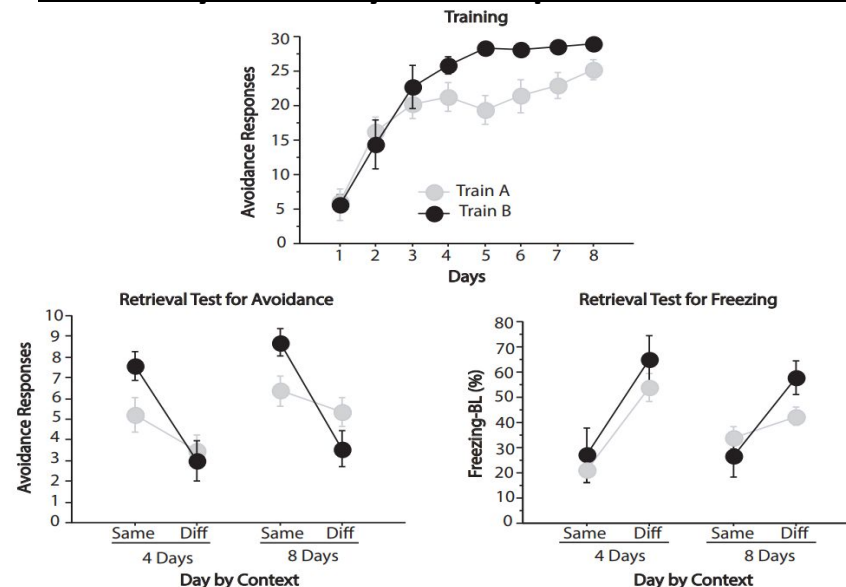
Two Way SAA Model for VH Inactivation



Results and Discussion

- Rats trained for 4 or 8 days performed more avoidance responses in the same context compared to the different one, showing a context shift deficit
- Rats with ventral hippocampus inactivation had similar avoidance responses in both contexts
- Active avoidance is mediated by context and this requires ventral hippocampus functioning
- Ventral hippocampus inactivation may modulate dysregulation of feared stimuli across contexts as found in PTSD

4 vs 8 Day Two Way SAA Acquisition and Testing



VH Inactivation Two SAA Acquisition and Testing

