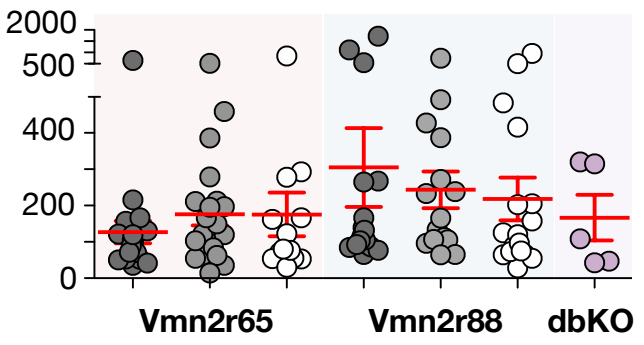
A Analysis of pup-directed behaviors ● WT♂ ● +/-♂ ○ -/-♂ ● double KO♂

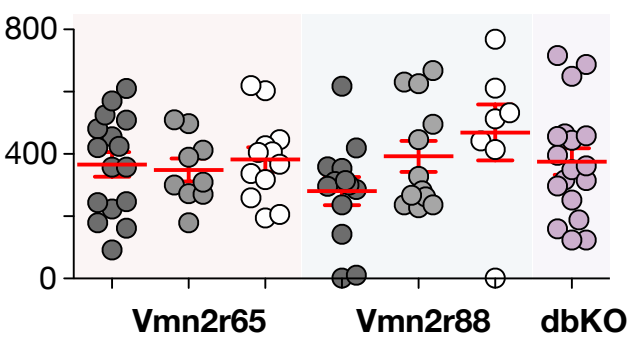
Aggressive animals

Attack latency (sec)

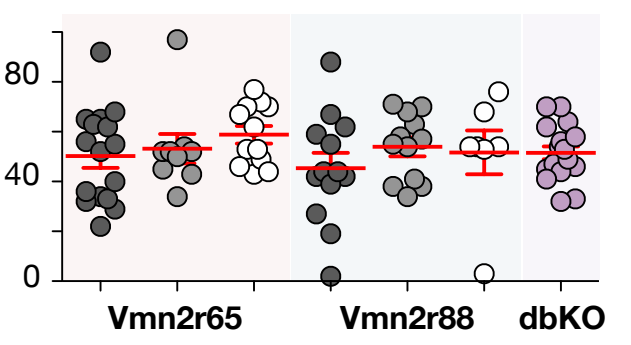


Ignoring animals

Chemoinvestigation duration (sec)

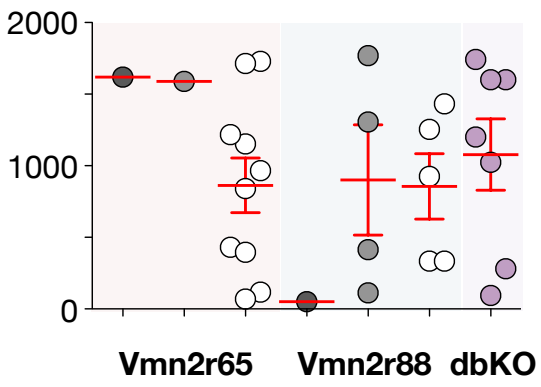


Chemoinvestigation events (number)

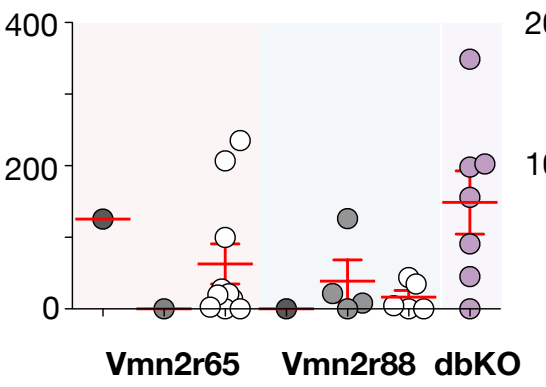


Parental animals

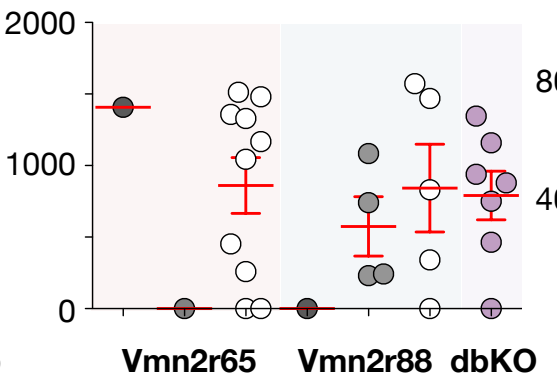
Pup retrieval latency (sec)



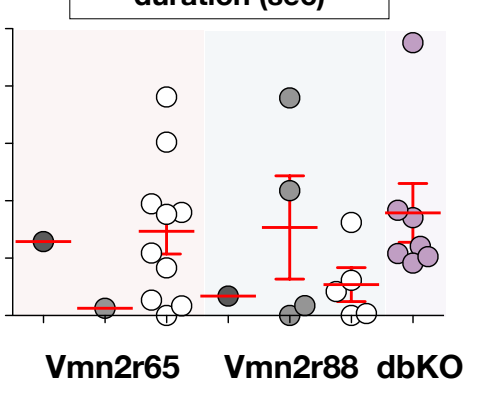
Nest building duration (sec)



Inside nest duration (sec)

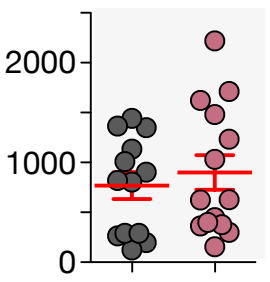


Crouching over pups duration (sec)

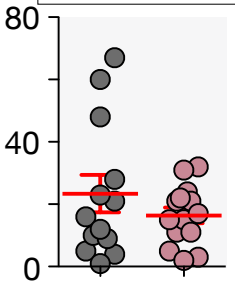


B Analysis of male mating behavior ● WT or Vmn2r65$^{+/-}$♂ ● Vmn2r65$^{-/-}$♂

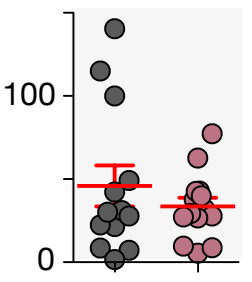
Latency to mount (sec)



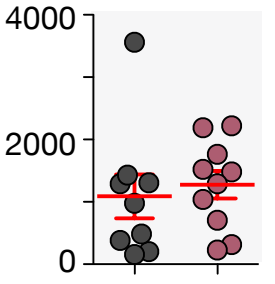
Number of mounts



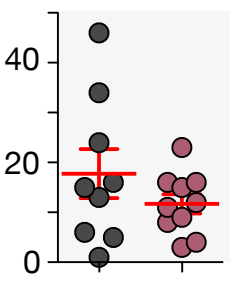
Mounting duration (sec)



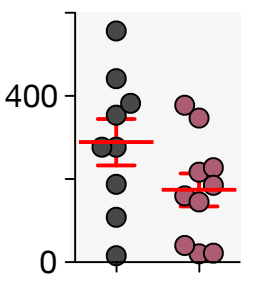
Intromission latency (sec)



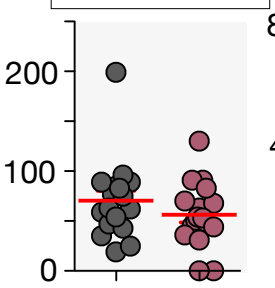
Number of intromission



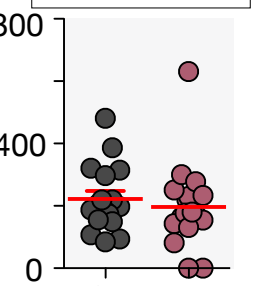
Intromission duration (sec)



Number of chemoinvesti-gative events



Chemoinvesti-gation duration (sec)



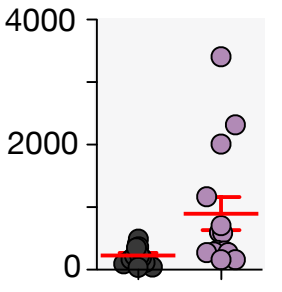
C Analysis of inter-male aggression ● WT♂ ● double KO♂

Total number of attacking animals

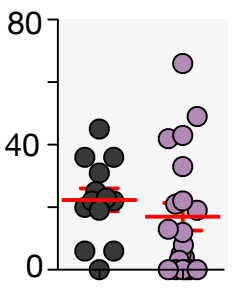
Genotype	N	# Attacking	% Attacking
WT	13	12	92.3
Vmn2r65$^{-/-}$; Vmn2r88$^{-/-}$	20	14	70

p = 0.20

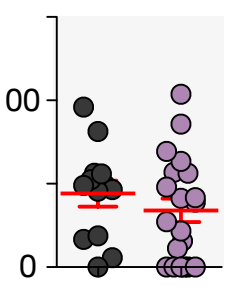
Latency to attack (sec)



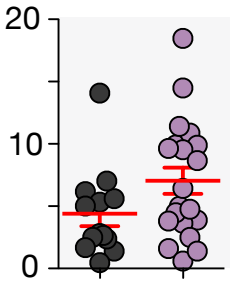
Number of attacks



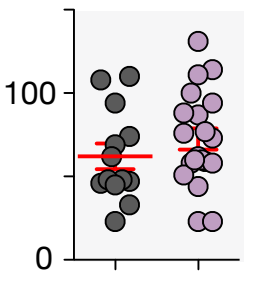
Attack duration (sec)



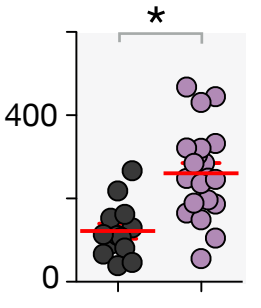
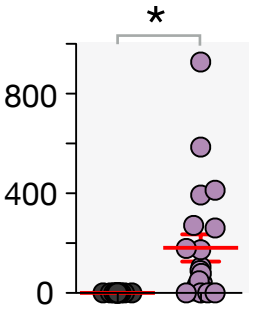
Latency to chemoinvestigate (sec)



Number of chemoinvestigative events



Chemoinvestigation duration (sec)



Grooming duration (sec)