

Fig.	Figure experiment	Number of animals per group (F-females, M-males)	Is data distribution normal? (Shapiro-Wilk test, alpha=0.05)	Analysis	Analysis results (post-hoc results reported in figures)	P value
Figure 1						
1c	Effects of social interaction (SI) with a familiar partner on stress-induced increase in latency to retrieve rewards.	n=13-16 F=7-9 M=6-9	yes	2-way ANOVA (stress x SI)	Interaction: $F(1, 54) = 6.257$	P=0.0154
1d	Effects of SI with a familiar partner on stress-induced decrease in anticipatory licks.	n=13-16 F=7-9 M=6-9	no	Kruskall-Wallis	$H(4,58)=15.67$	P=0.0013
1e	Effects of SI with a familiar partner on postconsumption licks.	n=13-16 F=7-9 M=6-9	yes	2-way ANOVA (stress x SI)	Interaction: $F(1, 54) = 0.03647$ SI: $F(1, 54) = 3.339$ stress: $F(1, 54) = 0.04718$	P=0.8493 P=0.0732 P=0.8289
1g	Effects of interaction with a familiar object on stress-induced increase in latency to retrieve rewards.	n=15 F=6 M=9	yes	Mixed-effects model (REML)	$F(1.625, 22.76) = 4.635$	P=0.0264
				One sample t-test vs baseline	control obj: $t=1.951, df=14$ restraint: $t=3.964, df=14$ restraint obj: $t=3.137, df=14$	P=0.0713 P=0.0014 P=0.0073
1h	Effects of interaction with an unknown partner on stress-induced increase in latency to retrieve rewards.	n=13 F=6 M=7	yes	Mixed-effects model (REML)	$F(1.870, 22.44) = 3.372$	P=0.0552
				One sample t-test vs baseline	control SI: $t=1.696, df=12$ restraint: $t=3.964, df=12$ restraint SI: $t=3.110, df=12$	P=0.1156 P=0.0019 P=0.0090
1j	Subject mouse social behaviors with familiar and novel partners under control and stress conditions.	n=13-16 F=7-9 M=6-9	yes	2-way ANOVA (familiarity x stress)	Interaction: $F(1, 51) = 1.242$ familiarity: $F(1, 51) = 1.638$ stress: $F(1, 51) = 25.23$	P=0.2704 P=0.2064 P<0.0001
1k	Partner mouse social behaviors with familiar and novel subjects under control and stress conditions.	n=13-16 F=7-9 M=6-9	yes	2-way ANOVA (familiarity x stress)	Interaction: $F(1, 51) = 2.549$ familiarity: $F(1, 51) = 3.737$ stress: $F(1, 51) = 17.85$	P=0.1165 P=0.0588 P<0.0001
1l	Neural network machine learning model predicting social buffering in familiar mice.	n=16 F=8 M=8	n/a	leave-one-mouse-out model validation	$R^2 = 0.668$ RMSE = 26.771 MAE = 20.267 Pearson $r = 0.817$	P<0.0001
	Neural network machine learning model predicting social buffering on shuffled data	n=16 F=8 M=8	n/a	leave-one-mouse-out model validation	$R^2 = 0.064$ RMSE = 62.939 MAE = 52.918 Pearson $r = -0.253$	P=0.3441
1m	Random forest machine learning model	n=16 F=8 M=8	n/a	random forest training	$R^2 = 0.918$ RMSE = 20.776 MAE = 16.410 Pearson $r = 0.958$	P<0.0001
Figure 2						
2c	Effects of interaction with a familiar partner on stress-induced increase in latency to retrieve rewards -fiber photometry mice	n=16 F=8 M=8	control SI: yes restraint: yes restraint SI: no	Mixed-effects model (REML)	$F(1.739, 25.21) = 6.294$	P=0.0080
				One sample t-test vs baseline/ Wilcoxon test	control SI: $t=2.199, df=15$ restraint: $t=5.603, df=14$ restraint SI: Wilcoxon test	P=0.0440 P<0.0001 P=0.0290
2d	Linear regression between body sniffing behavior in stressed subjects interacting with familiar unstressed partners.	n=16 F=8 M=8	n/a	Linear regression	R square = 0.3780 Slope: $F(1, 14) = 8.506$	P=0.0113
2e	Area under curve (AUC) during body sniffing of a familiar partner- average per mouse in DA cells	n=7 F=3 M=4	yes	Paired t-test	$t=0.8932, df=6$	P=0.4062
2f	AUC during body sniffing of a familiar partner- average per mouse in GABA cells	n=9 F=5 M=4	no	Wilcoxon test		P=0.0078

2g	AUC during body sniffing of a novel partner-average per mouse in DA cells	n=6 F=3 M=3	yes	Paired t-test	t=1.938, df=5	P=0.1104
2h	AUC during body sniffing of a novel partner-average per mouse in GABA cells	n=6 F=3 M=3	yes	Paired t-test	t=0.8644, df=5	P=0.4269
Figure 3						
3b	Effects of 10 min post-stress VTA DA activation on stress-induced increase in latency to retrieve rewards.	n=14 F=6 M=8	control ON:yes restraint OFF:yes restraint ON:no	Mixed-effects model (REML)	F (1.482, 17.78) = 3.395	P=0.0682
				One sample t-test vs baseline/ Wilcoxon test	control ON: t=2.019, df=12 restraint OFF: t=3.334, df=13 restraint ON: Wilcoxon test	P=0.0664 P=0.0054 P=0.0005
3d	Effects of 10 min post-stress VTA GABA inhibition on stress-induced increase in latency to retrieve rewards.	n=14 F=4 M=9	control ON:yes restraint OFF:no restraint ON:no	Mixed-effects model (REML)	F (1.719, 21.49) = 11.49	P=0.0006
				One sample t-test vs baseline/ Wilcoxon test	control ON:t=0.8547, df=12 restraint OFF: Wilcoxon test restraint ON: Wilcoxon test	P=0.4095 P=0.0002 P=0.0002
3h	Effect of closed-loop VTA GABA inhibition on stress-induced latency to retrieve rewards	n=14 F=6 M=8	no	Wilcoxon test		P=0.0040
3j	Effect of yoked VTA GABA inhibition on stress-induced latency to retrieve rewards	n=14 F=6 M=8	no	Wilcoxon test		P=0.4631