Supplemental Table 2: Statistical summary of behavioral data for *Viaat-Mecp2*$^{-/y}$ mice

Behavioral Paradigm	Age (wks)	Measurement	Statistical Test	Comparison	Statistics	df, residual	*p*	Figure
Viaat-Mecp2$^{-/y}$	12	percent grooming time (%)	One-way ANOVA	Genotype	F = 26.53	3, 56	< 0.001	1f
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
Viaat-Mecp2$^{-/y}$ Holeboard	12	number of holes with 2 or more sequential nosepokes	Kruskal-Wallis		H = 20.55	3	< 0.0001	1g
			Dunn's post-hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
Viaat-Mecp2$^{-/y}$ Hot Plate	12	time to hindlimb response (sec)	One-way ANOVA	Genotype	F = 2.376	3, 60	0.0789	S4a
			Tukey's post hoc	no post tests $p > 0.05$				
Viaat-Mecp2$^{-/y}$ Tail Flick	12	time to tail flick response (sec)	One-way ANOVA	Genotype	F = 1.854	3, 60	0.1471	S4b
			Tukey's post hoc	no post tests $p > 0.05$				
Viaat-Mecp2$^{-/y}$ Open Field Assay: Exploratory Activity	12	total distance traveled (cm)	One-way ANOVA	Genotype	F = 1.034	3, 52	0.3851	2f
			Tukey's post hoc	no post tests $p > 0.05$				
	19	total distance traveled (cm)	One-way ANOVA	Genotype	F = 16.84	3, 52	< 0.0001	2f
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
Viaat-Mecp2$^{-/y}$ Footslip	5	# slips per 100 beam breaks	One-way ANOVA	Genotype	F = 39.41	3, 59	< 0.0001	2a
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
Viaat-Mecp2$^{-/y}$ Wire Hang	9	latency to fall (sec)	One-way ANOVA	Genotype	F = 42.47	3, 59	< 0.0001	2d
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
Viaat-Mecp2$^{-/y}$ Accelerating Rotarod	6	latency to fall (sec)	Two-way ANOVA Repeated measure	Genotype	F = 8.761	3	< 0.0001	S4c
				Trial	F = 79.11	7	< 0.0001	
				Interaction	F = 1.428	21	0.0999	
				Subjects	F = 8.48	60	< 0.0001	
				Residual		420		
			Bonferroni post hoc Trial 1	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
			Bonferroni post hoc Trial 2	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
			Bonferroni post hoc Trial 3	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
			Bonferroni post hoc Trial 4	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
			Bonferroni post hoc Trial 5	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
			Bonferroni post hoc Trial 6	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	

				Flox vs. CKO			> 0.05	
			Bonferroni post hoc Trial 7	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
			Bonferroni post hoc Trial 8	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
		latency to fall (sec)	One-way ANOVA Trial 1	Genotype	F = 1.291	3,60	0.2856	
			Tukey's post hoc	no post tests p > 0.05				
		latency to fall (sec)	One-way ANOVA Trial 2	Genotype	F = 4.177	3, 60	0.0094	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 < 0.05 < 0.05 > 0.05	
		latency to fall (sec)	One-way ANOVA Trial 3	Genotype	F = 5.548	3, 60	0.002	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 < 0.01 < 0.05	
		latency to fall (sec)	One-way ANOVA Trial 4	Genotype	F = 8.405	3, 60	< 0.0001	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 < 0.001 < 0.05	
		latency to fall (sec)	One-way ANOVA Trial 5	Genotype	F = 5.388	3, 60	0.0024	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 < 0.05 < 0.01 > 0.05	
		latency to fall (sec)	One-way ANOVA Trial 6	Genotype	F = 3.897	3, 60	0.013	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.05 > 0.05 < 0.05 > 0.05	
		latency to fall (sec)	One-way ANOVA Trial 7	Genotype	F = 6.199	3, 60	0.001	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.05 > 0.05 < 0.001 > 0.05	
		latency to fall (sec)	One-way ANOVA Trial 8	Genotype	F = 11.05	3, 60	< 0.0001	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.001 < 0.01	
	19	latency to fall (sec)	Two-way ANOVA Repeated measure	Genotype Trial Interaction Subjects Residual	F = 14.78 F = 11.62 F = 0.802 F = 26.35	3 7 21 44 308	< 0.0001 < 0.0001 0.7172 < 0.0001	2c
			Bonferroni post hoc Trial 1	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.001 < 0.01	
			Bonferroni post hoc Trial 2	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.001 < 0.05	
			Bonferroni post hoc Trial 3	WT vs. Cre WT vs. Flox WT vs. CKO			> 0.05 > 0.05 < 0.001	

			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.05
		Bonferroni post hoc Trial 4	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			> 0.05
		Bonferroni post hoc Trial 5	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.001
		Bonferroni post hoc Trial 6	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.01
		Bonferroni post hoc Trial 7	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.01
		Bonferroni post hoc Trial 8	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.001
	latency to fall (sec)	One-way ANOVA Trial 1	Genotype	F = 11.29	3, 44	< 0.0001
		Tukey's post hoc	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.05
	latency to fall (sec)	One-way ANOVA Trial 2	Genotype	F = 9.808	3, 44	< 0.0001
		Tukey's post hoc	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.05
	latency to fall (sec)	One-way ANOVA Trial 3	Genotype	F = 10.85	3, 44	< 0.0001
		Tukey's post hoc	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.05
	latency to fall (sec)	One-way ANOVA Trial 4	Genotype	F = 10.81	3, 44	< 0.0001
		Tukey's post hoc	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.05
	latency to fall (sec)	One-way ANOVA Trial 5	Genotype	F = 15.70	3, 44	< 0.0001
		Tukey's post hoc	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.001
	latency to fall (sec)	One-way ANOVA Trial 6	Genotype	F = 11.08	3, 44	< 0.0001
		Tukey's post hoc	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.01
	latency to fall (sec)	One-way ANOVA Trial 7	Genotype	F = 14.75	3,44	< 0.0001
		Tukey's post hoc	WT vs. Cre			> 0.05
			WT vs. Flox			> 0.05
			WT vs. CKO			< 0.001
			Cre vs. Flox			> 0.05
			Cre vs. CKO			< 0.001
			Flox vs. CKO			< 0.001
	latency to fall (sec)	One-way ANOVA Trial 8	Genotype	F = 11.68	3,44	< 0.0001
		Tukey's post hoc	WT vs. Cre			> 0.05

				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.01	
Viaat-Mecp2$^{-/y}$								
Dowel walk	9	number of side touches	One-way ANOVA	Genotype	F = 39.06	3, 59	< 0.0001	2b
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
Viaat-Mecp2$^{-/y}$								
Grip strength	9	forelimb grip strength (g)	One-way ANOVA	Genotype	F = 19.12	3, 59	< 0.0001	2e
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
Viaat-Mecp2$^{-/y}$								
Nest building	6	nesting score	Two-way ANOVA	Genotype	F = 60.18	3	< 0.0001	S6b
			Repeated measure	Time	F = 24.73	2	< 0.0001	
				Interaction	F = 2.169	6	< 0.05	
				Subjects	F = 4.384	60	< 0.0001	
				Residual		120		
			Bonferroni post hoc	WT vs. Cre			> 0.05	
			24 hours	WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
			Bonferroni post hoc	WT vs. Cre			> 0.05	
			48 hours	WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
			Bonferroni post hoc	WT vs. Cre			> 0.05	
			72 hours	WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
		nesting score	One-way ANOVA	Genotype	F = 41.53	3, 60	< 0.0001	
			24 hours					
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
		nesting score	One-way ANOVA	Genotype	F = 41.01	3, 60	< 0.0001	
			48 hours					
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
		nesting score	One-way ANOVA	Genotype	F = 44.41	3, 60	< 0.0001	
			72 hours					
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
	13	nesting score	Two-way ANOVA	Genotype	F = 80.80	3	< 0.0001	2j
			Repeated measure	Trial	F = 12.16	2	< 0.0001	
				Interaction	F = 1.233	6	0.01	
				Subjects	F = 1.684	56	0.2947	
				Residual		112		
			Bonferroni post hoc	WT vs. Cre			> 0.05	
			24 hours	WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
			Bonferroni post hoc	WT vs. Cre			> 0.05	
			48 hours	WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	
			Bonferroni post hoc	WT vs. Cre			> 0.05	
			72 hours	WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.001	

		nesting score	One-way ANOVA 24 hours	Genotype	F = 24.98	3, 56	< 0.0001	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.001 < 0.001	
		nesting score	One-way ANOVA 48 hours	Genotype	F = 24.21	3, 56	< 0.0001	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.001 < 0.001	
		nesting score	One-way ANOVA 72 hours	Genotype	F = 15.10	3, 56	< 0.0001	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.001 < 0.001	
Viaat-Mecp2$^{-/y}$ Partition test	6	interaction time (sec)	Two-way ANOVA Repeated measure	Genotype Trial Interaction Subjects Residual	F = 1.202 F = 120.6 F = 0.527 F = 3.261	3 2 6 56 120	0.3168 < 0.0001 0.7867 < 0.0001	S6c
			Bonferroni post hoc Familiar 1st encounter	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
			Bonferroni post hoc Novel	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
			Bonferroni post hoc Familiar 2nd encounter	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
		interaction time (sec)	One-way ANOVA 1st Familiar	Genotype	F = 0.8342	3, 60	0.4804	
			Tukey's post hoc	no post tests p > 0.05				
		interaction time (sec)	One-way ANOVA Novel	Genotype	F = 0.9969	3, 60	0.4006	
			Tukey's post hoc	no post tests p > 0.05				
		interaction time (sec)	One-way ANOVA 2nd Familiar	Genotype	F = 0.9724	3, 60	0.4118	
			Tukey's post hoc	no post tests p > 0.05				
	12-13	interaction time (sec)	Two-way ANOVA Repeated measure	Genotype Trial Interaction Subjects Residual	F = 17.65 F = 169.6 F = 5.017 F = 4.781	3 2 6 56 112	< 0.0001 < 0.0001 0.0001 < 0.0001	2g
			Bonferroni post hoc Familiar 1st encounter	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
			Bonferroni post hoc Novel	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.001 < 0.01	
			Bonferroni post hoc Familiar 2nd encounter	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.01 > 0.05 < 0.01 > 0.05	
		interaction time (sec)	One-way ANOVA 1st Familiar	Genotype	F = 11.68	3, 56	< 0.0001	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.001 < 0.01	
		interaction time (sec)	One-way ANOVA Novel	Genotype	F = 17.40	3, 56	< 0.0001	
			Tukey's post hoc	WT vs. Cre WT vs. Flox			> 0.05 > 0.05	

				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.01	
		interaction time (sec)	One-way ANOVA 2nd Familiar	Genotype	F = 10.09	3, 56	< 0.0001	
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.05	
Viaat-Mecp2$^{-/y}$ 3-Chamber Habituation phase	13	total time in left chamber (sec)	One-way ANOVA	Genotype	F = 0.2299	3,52	0.8752	S6d
			Tukey's post hoc	no post tests p > 0.05				
		total time in center chamber (sec)	One-way ANOVA	Genotype	F = 4.829	3, 52		S6d
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			< 0.05	
				WT vs. CKO			< 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
		total time in right chamber (sec)	One-way ANOVA	Genotype	F = 1.215	3,52	0.3135	S6d
			Tukey's post hoc	no post tests p > 0.05				
		interaction time inanimate left cage (sec)	One-way ANOVA	Genotype	F = 0.5016	3,52	0.6828	S6e
			Tukey's post hoc	no post tests p > 0.05				
		interaction time inanimate right cage (sec)	One-way ANOVA	Genotype	F = 2.393	3,52	0.0790	S6e
			Tukey's post hoc	no post tests p > 0.05				
Viaat-Mecp2$^{-/y}$ 3-Chamber Social phase	13	total time in chamber with inanimate empty cage (sec)	One-way ANOVA	Genotype	F = 1.391	3,52	0.2558	S6f
			Tukey's post hoc	no post tests p > 0.05				
		total time in center chamber (sec)	One-way ANOVA	Genotype	F = 1.486	3,52	0.2291	S6f
			Tukey's post hoc	no post tests p > 0.05				
		total time in chamber with stranger mouse (sec)	One-way ANOVA	Genotype	F = 0.7328	3,52	0.5371	S6f
			Tukey's post hoc	no post tests p > 0.05				
		interaction time with inanimate empty cage (sec)	One-way ANOVA	Genotype	F = 1.075	3,52	0.3678	2h
			Tukey's post hoc	no post tests p > 0.05				
		interaction time with stranger mouse(sec)	One-way ANOVA	Genotype	F = 8.168	3.52	< 0.0001	2h
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.01	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.05	
Viaat-Mecp2$^{-/y}$ Novel object	11-12	interaction time (sec)	One-way ANOVA	Genotype	F = 0.1147	3,52	0.9511	2i
			Tukey's post hoc	no post tests *p* > 0.05				
Viaat-Mecp2$^{-/y}$ Prepulse inhibition (PPI)	8	maximum response to 120 dB (A.U.)	One-way ANOVA	Genotype	F = 19.52	3,60	< 0.0001	2k
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			< 0.001	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			< 0.05	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			< 0.05	
		% prepulse inhibition	Two-way ANOVA	Genotype	F = 16.18	3	< 0.0001	2l
				Prepulse level	F = 49.52	2	< 0.0001	
				Interaction	F = 0.8517	6	0.5317	
				Residual		180		
			Bonferroni post hoc 74 (+4) dB	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
			Bonferroni post hoc 78 (+8) dB	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.05	
				Flox vs. CKO			< 0.01	
			Bonferroni post hoc 82 (+12) dB	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.05	
				Flox vs. CKO			< 0.05	
		% prepulse inhibition	One-way ANOVA 74 (+4) dB	Genotype	F=2.422	3,60	0.0747	
			Tukey's post hoc	no post tests *p* > 0.05				
		% prepulse inhibition	One-way ANOVA 78 (+8) dB	Genotype	F = 8.143	3, 60	< 0.0001	

			Tukey's post hoc 78 (+8) dB	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.05 < 0.01	
		% prepulse inhibition	One-way ANOVA 82 (+12) dB	Genotype	F = 8.733	3, 60	< 0.0001	
			Tukey's post hoc 82 (+12) dB	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.01 < 0.01	
Viaat-Mecp2$^{-/y}$ Morris water maze	10-11	training trials, normalized distance	Two-way ANOVA Repeated measure	Genotype Training day Interaction Subjects Residual	F = 0.7207 F = 96.64 F = 1.082 F = 2.609	3 3 9 52 156	0.5441 < 0.0001 0.3792 < 0.0001	2m
			Bonferroni post hoc Training day 1	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
			Bonferroni post hoc Training day 2	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
			Bonferroni post hoc Training day 3	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
			Bonferroni post hoc Training day 4	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
		training trials, normalized distance	One-way ANOVA Training day 2	Genotype	F = 2.511	3, 52	0.0688	
			Tukey's post hoc	no post tests p > 0.05				
		training trials, normalized distance	One-way ANOVA Training day 3	Genotype	F = 0.1485	3, 52	0.9302	
			Tukey's post hoc	no post tests p > 0.05				
		training trials, normalized distance	One-way ANOVA Training day 4	Genotype	F = 0.8396	3, 52	0.4783	
			Tukey's post hoc	no post tests p > 0.05				
	10-11	probe test, % platform crossings	Two-way ANOVA	Genotype Platform Interaction Residual	F = 1.447 F = 12.00 F = 4.735	3 3 9 208	0.2303 < 0.0001 < 0.0001	2n
			Bonferroni post hoc Left	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.01 > 0.05 > 0.05 < 0.01	
			Bonferroni post hoc Opposite	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
			Bonferroni post hoc Right	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
			Bonferroni post hoc Target	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 < 0.05 < 0.05 > 0.05 < 0.05 < 0.001	
		probe test, % platform crossings	One-way ANOVA Left	Genotype	F = 3.243	3, 52	< 0.05	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox			> 0.05 > 0.05 > 0.05 > 0.05	

				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
		probe test, % platform crossings	One-way ANOVA Opposite	Genotype	F = 1.002	3, 52	0.3996	
			Tukey's post hoc	no post tests p > 0.05				
		probe test, % platform crossings	One-way ANOVA Right	Genotype	F = 0.9695	3, 52	0.4142	
			Tukey's post hoc	no post tests p > 0.05				
		probe test, % platform crossings	One-way ANOVA Target	Genotype	F = 11.93	3, 52	< 0.0001	
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.05	
				Flox vs. CKO			< 0.001	
Viaat-Mecp2$^{-/y}$ Light-dark	5	time in light side (sec)	One-way ANOVA	Genotype	F = 2.301	3, 60	0.0862	S5a
			Tukey's post hoc	no post tests *p* > 0.05				
		number of entries into light side	One-way ANOVA	Genotype	F = 3.095	3,60	< 0.05	S5b
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
Viaat-Mecp2$^{-/y}$ Open field assay	5	center distance (cm)	One-way ANOVA	Genotype	F = 2.301	3, 84	< 0.0001	S5c
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			< 0.01	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
		ratio center to total distance	One-way ANOVA	Genotype	F = 6.245	3, 84	0.0007	S5d
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			< 0.01	
				WT vs. CKO			< 0.01	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
Viaat-Mecp2$^{-/y}$ Elevated plus maze	5	protected time (sec)	One-way ANOVA	Genotype	F = 4.142	3, 60	0.0098	S5e
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.05	
				Flox vs. CKO			> 0.05	
		unprotected time (sec)	One-way ANOVA	Genotype	F = 4.142	3, 60	0.0098	S5f
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.05	
				Flox vs. CKO			> 0.05	
		number protected rears	One-way ANOVA	Genotype	F = 14.97	3, 60	< 0.0001	S5g
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			< 0.01	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			< 0.001	
				Cre vs. CKO			< 0.001	
				Flox vs. CKO			> 0.05	
		number unprotected rears	One-way ANOVA	Genotype	F = 6.568	3, 60	0.0006	S5h
			Tukey's post hoc	WT vs. Cre			> 0.05	
				WT vs. Flox			< 0.05	
				WT vs. CKO			< 0.01	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.01	
				Flox vs. CKO			< 0.01	
Viaat-Mecp2$^{-/y}$ Olfactory recognition	11	sniffing time (s)	Two-way ANOVA Repeated measure	Genotype	F = 4.91	3	0.0033	S7a
				Trial	F = 97.01	2	< 0.0001	
				Interaction	F = 3.402	6	0.0033	
				Subjects	F = 1.086	92	0.3163	
				Residual		184		
			Bonferroni post hoc Mock	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			> 0.05	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			> 0.05	
				Flox vs. CKO			> 0.05	
			Bonferroni post hoc Vanilla	WT vs. Cre			> 0.05	
				WT vs. Flox			> 0.05	
				WT vs. CKO			< 0.001	
				Cre vs. Flox			> 0.05	
				Cre vs. CKO			< 0.001	

				Flox vs. CKO			< 0.001	
			Bonferroni post hoc Water	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
		sniffing time (s)	One-way ANOVA Mock	Genotype	F = 0.9237	3, 92	0.4326	
			Tukey's post hoc	no post tests p > 0.05				
		sniffing time (s)	One-way ANOVA Vanilla	Genotype	F = 4.204	3, 92	0.0078	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.05 > 0.05 < 0.05 < 0.05	
		sniffing time (s)	One-way ANOVA Water	Genotype	F = 2.424	3, 92	0.0708	
			Tukey's post hoc	no post tests p > 0.05				
Viaat-Mecp2$^{-/y}$ Olfactory habituation	11	sniffing time (s)	Two-way ANOVA Repeated measure	Genotype Trial Interaction Subjects Residual	F = 4.894 F = 122.7 F = 3.791 F = 0.9632	3 1 3 92 92	0.0033 < 0.0001 0.0130 0.5711	S7b
			Bonferroni post hoc Day 1	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.001 > 0.05 < 0.001 < 0.01	
			Bonferroni post hoc Day 2	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 > 0.05 > 0.05 > 0.05 > 0.05	
		sniffing time (s)	One-way ANOVA Day 1	Genotype	F = 4.204	3, 92	0.0078	
			Tukey's post hoc	WT vs. Cre WT vs. Flox WT vs. CKO Cre vs. Flox Cre vs. CKO Flox vs. CKO			> 0.05 > 0.05 < 0.05 > 0.05 < 0.05 < 0.05	
		sniffing time (s)	One-way ANOVA Day 2	Genotype	F = 1.656	3, 92	0.1990	
			Tukey's post hoc	no post tests p > 0.05				