Supplementary Material related to the manuscript:

Short- and long-term social recognition memory are differentially modulated by neuronal histamine

Barbara Rani, Bruna Silva-Marques, Rob Leus, Maria Beatrice Passani, Patrizio Blandina and Gustavo Provensi

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Table S1: Critical values obtained in the statistical analysis of the raw data regarding the time spent exploring the cups during the training session (Table 1)

Figure	n	Analysis (post hoc reported in Table 1)	Factors Analyzed		F ratios	P values
1B	6	two-way ANOVA (Bonferroni)	Genotype *(Hdc$^{+/+}$ vs Hdc$^{-/-}$)* Cups (Non social *vs* Social)	Interaction	F (1, 20) = 0,4975	P = 0,4887
				Genotype	F (1, 20) = 2,088e-014	P > 0,9999
				Cups	F (1, 20) = 89,18	P < 0,0001
1C	6-7	two-way ANOVA (Bonferroni)	Genotype *(Hdc$^{+/+}$ vs Hdc$^{-/-}$)* Cups (Non social *vs* Social)	Interaction	F (1, 22) = 2,964	P = 0,0992
				Genotype	F (1, 22) = 4,493e-013	P > 0,9999
				Cups	F (1, 22) = 365,1	P < 0,0001
2B	8-10	two-way ANOVA (Bonferroni)	Treatments (α-FMH *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (1, 32) = 3,234	P = 0,0816
				Treatments	F (1, 32) = 0,0	P > 0,9999
				Cups	F (1, 32) = 199,9	P < 0,0001
2C	7-9	two-way ANOVA (Bonferroni)	Treatments (α-FMH *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (1, 28) = 10,79	P < 0,01
				Treatments	F (1, 28) = 1,484e-014	P > 0,9999
				Cups	F (1, 28) = 267,3	P < 0,0001
3B	8-10	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (1, 32) = 7,617	P < 0,01
				Treatments	F (1, 32) = 0,0	P > 0,9999
				Cups	F (1, 32) = 180,4	P < 0,0001
3C	7-9	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (1, 28) = 2,965	P = 0,0961
				Treatments	F (1, 28) = 8,807e-014	P > 0,9999
				Cups	F (1, 28) = 100,0	P < 0,0001
4B	7-10	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (1, 30) = 5,947	P < 0,05
				Treatments	F (1, 30) = 1,690e-013	P > 0,9999
				Cups	F (1, 30) = 196,1	P < 0,0001
4C	6-8	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (1, 26) = 5,024	P < 0,05
				Treatments	F (1, 26) = 3,676e-013	P > 0,9999
				Cups	F (1, 26) = 183,0	P < 0,0001
5B	8-10	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (1, 32) = 1,192	P = 0,2830
				Genotype	F (1, 32) = 6,855e-014	P > 0,9999
				Cups	F (1, 32) = 212,8	P < 0,0001
5C	10	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (1, 36) = 0,9587	P = 0,3340
				Genotype	F (1, 36) = 0,0	P > 0,9999
				Cups	F (1, 36) = 110,0	P < 0,0001

6B	10	two-way ANOVA (Bonferroni	Treatments (Donepezil+Vuf16839 *vs* Vehicle+VUF16839) Cups (Non social *vs* Social)	Interaction	F (1, 36) = 8,891	P < 0,01
				Genotype	F (1, 36) = 9,346e-015	P > 0,9999
				Cups	F (1, 36) = 131,5	P < 0,0001
7B	7-10	two-way ANOVA (Bonferroni	Genotype *(Hdc$^{+/+}$ vs Hdc$^{-/-}$)* /Treatments (Ciproxifan *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (3, 58) = 6,379	P < 0,001
				Groups	F (3, 58) = -1,461e-013	P > 0,9999
				Cups	F (1, 58) = 714,3	P < 0,0001
7C	6-8	two-way ANOVA (Bonferroni	Injection *(α*-FMH *vs* Vehicle*)* /Treatments (Ciproxifan *vs* Vehicle) Cups (Non social *vs* Social)	Interaction	F (3, 44) = 1,498	P = 0,2282
				Groups	F (3, 44) = 3,535e-014	P > 0,9999
				Cups	F (1, 44) = 238,5	P < 0,0001

Table S2: Critical values obtained from the statistical analysis of the raw data regarding the Sociability index (Table 1)

Figure	"n"	Analysis (post hoc reported in table 1)	t	P values
1B	6	t-Test	0.4988	P = 0,6287
1C	6-7	t-Test	1.237	P = 0,2417
2B	8-10	t-Test	1.286	P = 0,2166
2C	7-9	t-Test	1.371	P = 0,1920
3B	8-10	t-Test	2.002	P = 0,0625
3C	7-9	t-Test	1.195	P = 0,2520
4B	7-10	t-Test	1.724	P = 0,1052
4C	6-8	t-Test	1.593	P = 0,1352
5B	8-10	t-Test	0.7684	P = 0,4535
5C	10	t-Test	0.6774	P = 0,5068
6B	10	t-Test	1.883	P = 0,0759
7B	7-10	One-way ANOVA (Bonferroni)	F (3, 29) = 2,574	P = 0,0732
7C	6-8	One-way ANOVA (Bonferroni)	F (3, 22) = 0,7486	P = 0,5348

Table S3: Critical values obtained in the statistical analysis of the raw data regarding the time spent exploring the cups containing the social stimuli in the retention test session (Figures 1-7)

Figure	n	Analysis (post hoc reported in figures)	Factors Analyzed	F ratios		P values
1B	6	two-way ANOVA (Bonferroni)	Genotype *(Hdc$^{+/+}$ vs Hdc$^{-/-}$)* Stimuli (Familiar *vs* Novel)	Interaction	F (1, 20) = 0,5395	P = 0,4712
				Genotype	F (1, 20) = 4,035e-014	P > 0,9999
				Stimuli	F (1, 20) = 33,16	P < 0,0001
1C	6-7	two-way ANOVA (Bonferroni)	Genotype *(Hdc$^{+/+}$ vs Hdc$^{-/-}$)* Stimuli (Familiar *vs* Novel)	Interaction	F (1, 22) = 12,18	P = 0,0021
				Genotype	F (1, 22) = -6,488e-015	P > 0,9999
				Stimuli	F (1, 22) = 6,335	P < 0,01
2B	8-10	two-way ANOVA (Bonferroni)	Treatments (α-FMH *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (1, 32) = 0,4536	P = 0,5055
				Treatments	F (1, 32) = 1,348e-014	P > 0,9999
				Cups	F (1, 32) = 29,43	P < 0,0001
2C	7-9	two-way ANOVA (Bonferroni)	Treatments (α-FMH *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (1, 28) = 19,88	P = 0,0001
				Treatments	F (1, 28) = 9,711e-014	P > 0,9999
				Stimuli	F (1, 28) = 14,17	P < 0,001
3B	8-10	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (1, 32) = 12,42	P < 0,01
				Treatments	F (1, 32) = 0,0	P > 0,9999
				Stimuli	F (1, 32) = 3,630	P = 0,0658
3C	7-9	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (1, 28) = 19,33	P < 0.001
				Treatments	F (1, 28) = 0,1120	P = 0,7404
				Stimuli	F (1, 28) = 18,60	P < 0,001
4B	7-10	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (1, 30) = 9,508	P < 0,01
				Treatments	F (1, 30) = -4,259e-014	P > 0,9999
				Stimuli	F (1, 30) = 7,725	P < 0,01
4C	6-8	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (1, 26) = 61,25	P < 0,0001
				Treatments	F (1, 26) = 1,104e-013	P > 0,9999
				Stimuli	F (1, 26) = 63,62	P < 0,0001
5B	8-10	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (1, 32) = 13,76	P < 0,001
				Genotype	F (1, 32) = 8,032e-015	P > 0,9999
				Cups	F (1, 32) = 6,287	P < 0,05
5C	10	two-way ANOVA (Bonferroni)	Treatments (VUF16839 *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (1, 36) = 9,248	P < 0,01
				Genotype	F (1, 36) = 0,0	P > 0,9999
				Stimuli	F (1, 36) = 9,405	P < 0,01

6B	10	two-way ANOVA (Bonferroni	Treatments (Donepezil+VUF16839 *vs* Vehicle+VUF16839) Stimuli (Familiar *vs* Novel)	Interaction	F (1, 36) = 23,58	P < 0,0001
				Genotype	F (1, 36) = 0,0	P > 0,9999
				Stimuli	F (1, 36) = 7,162	P < 0,05
7B	7-10	two-way ANOVA (Bonferroni	Genotype *($Hdc^{+/+}$ vs $Hdc^{-/-}$)* + Treatments (Ciproxifan *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (3, 56) = 10,05	P < 0,0001
				Groups	F (3, 56) = 4,784e-014	P > 0,9999
				Stimuli	F (1, 56) = 20,66	P < 0,0001
7C	6-8	two-way ANOVA (Bonferroni	Injection *(α*-FMH *vs* Vehicle*)* + Treatments (Ciproxifan *vs* Vehicle) Stimuli (Familiar *vs* Novel)	Interaction	F (3, 44) = 25,32	P < 0,0001
				Groups	F (3, 44) = 5,769e-014	P > 0,9999
				Stimuli	F (1, 44) = 4,571	P < 0,05

Table S4: Critical values obtained from the statistical analysis of the raw data regarding the Discrimination index (Figures 1-7)

Figure	n	Analysis (post hoc reported in figures)	t	P values
1B	6	t-Test	0.6345	P = 0,5400
1C	6-7	t-Test	2.492	P < 0.05
2B	8-10	t-Test	0.4786	P = 0,6387
2C	7-9	t-Test	4.299	P < 0,001
3B	8-10	t-Test	2.480	P < 0,05
3C	7-9	t-Test	2.732	P < 0,05
4B	7-10	t-Test	2.166	P < 0,05
4C	6-8	t-Test	5.512	P < 0,001
5B	8-10	t-Test	2.777	P < 0,001
5C	10	t-Test	2.153	P < 0,05
6B	10	t-Test	3.454	P < 0,01
7B	7-10	One-way ANOVA (Bonferroni)	F (3, 29) = 4,438	P < 0,05
7C	6-8	One-way ANOVA (Bonferroni)	F (3, 22) = 12,82	P < 0,0001