

Table S1. Analysis showing the difference in behavioural response to preference/aversive odour

Behaviour	Comparison	df	Two way ANOVA	
			F	P
Feeding attempts	Between odours (a)	1,48	130.17	< 0.001
	Between days (b)	3,48	8.14	< 0.001
	Between odours X days (c)	3,48	7.73	<0.001
Feeding bouts	Between odours (d)	1,48	107.11	<0.001
	Between days	3,48	0.48	0.84
	Between odours X days	3,48	1.07	0.37

Table S2. Analysis showing the expression pattern of marker genes (*Egr-1*: *C-fos*) in different brain region responding to preference/aversive odour

Brain regions	Marker	Comparison	df	Two way ANOVA	
				F	P
OB	<i>Egr-1</i>	Between odours	1,35	200.36	< 0.001
		Between time intervals	2,35	117.9	< 0.001
		Between odours X time intervals	2,35	862.04	<0.001
	<i>C-fos</i>	Between odours	1,35	1.17	0.3
		Between time intervals	2,35	466	<0.001
		Between odours X time intervals	2,35	387.68	<0.001
HP	<i>Egr-1</i>	Between odours	1,35	18.56	< 0.01
		Between time intervals	2,35	291.45	< 0.001
		Between odours X time intervals	2,35	8.69	<0.05
	<i>C-fos</i>	Between odours	1,35	107.39	< 0.001
		Between time intervals	2,35	35.52	<0.001
		Between odours X time intervals	2,35	46.93	<0.001
AMY	<i>Egr-1</i>	Between odours	1,35	73.11	< 0.001
		Between time intervals	2,35	333.08	< 0.001
		Between odours X time intervals	2,35	116.59	<0.001
	<i>C-fos</i>	Between odours	1,35	71.25	< 0.001
		Between time intervals	2,35	242.04	<0.001
		Between odours X time intervals	2,35	774.21	<0.001

OB: olfactory bulb, HP: hippocampus, AMY: amygdala

Table S3. Analysis showing the differential expression of PP-1 in different brain region responding to preference/aversive odour

Brain regions	Marker	Comparison	df	Two way ANOVA	
				F	P
OB	PP-1	Between odours	1,35	0.31	0.58
		Between time intervals	2,35	571.8	< 0.001
		Between odours X time intervals	2,35	41.98	<0.001
HP	PP-1	Between odours	1,35	1746.64	< 0.001
		Between time intervals	2,35	1223.38	< 0.001
		Between odours X time intervals	2,35	303.81	<0.001
AMY	PP-1	Between odours	1,35	9.87	< 0.01
		Between time intervals	2,35	118.55	< 0.001
		Between odours X time intervals	2,35	42.22	<0.001

OB: olfactory bulb, HP: hippocampus, AMY: amygdala

Table S4. Differential methylated/unmethylated state of PP-1 in different brain region responding to preference/aversive odour

Brain regions	Marker	Comparison	df	One way ANOVA		
				F	P	
OB	Unmethylated PP-1	Con Vs PO 60'(a)	1,11	0.45	0.53	
		Con Vs AO 60'(b)	1,11	0.01	0.90	
		PO 60' Vs AO 60'(c)	1,11	0.50	0.51	
	Methylated PP-1	Con Vs PO 60'(a)	1,11	0.04	0.84	
		Con vs AO 60'(b)	1,11	0.45	0.53	
		PO 60' Vs AO 60'(c)	1,11	0.53	0.50	
HP	Unmethylated PP-1	Con Vs PO 60'(a)	1,11	3.95	0.11	
		Con Vs AO 60'(b)	1,11	0.66	0.45	
		PO 60' Vs AO 60'(c)	1,11	4.7	0.09	
	Methylated PP-1	Con Vs PO 60'(a)	1,11	0.33	0.59	
		Con Vs AO 60'(b)	1,11	0.03	0.59	
		PO 60' Vs AO 60'(c)	1,11	0.55	0.49	
AMY	Unmethylated PP-1	Con Vs PO 60'(a)	1,11	13.32	<0.05	
		Con Vs AO 60'(b)	1,11	2.97	0.16	
		PO 60' Vs AO 60'(c)	1,11	4.48	0.10	
	Methylated PP-1	Con Vs PO 60'(a)	1,11	21.43	<0.01	
		Con Vs AO 60'(b)	1,11	33.55	<0.01	
		PO 60' Vs AO 60'(c)	1,11	3.60	0.13	
		Con (unmethyl Vs methyl) (d)	1,11	8.54	<0.05	
		PO 60'(unmethyl Vs methyl) (e)	1,11	28.28	<0.01	
		AO 60'(unmethyl Vs methyl) (f)	1,11	18.87	<0.05	

OB: olfactory bulb, HP: hippocampus, AMY: amygdala, Con: control, PO: preference odour, AO: aversive odour

Table S5. Differential expression of *C-fos* in different brain region responding to preference/aversive odour

Tissue Sections	Marker	Comparison	df	One way ANOVA	
				F	P
OB	<i>C-fos</i>	Con Vs PO 60'(a)	1,11	11.36	<0.05
		Con Vs AO 60'(b)	1,11	0.12	0.73
		PO 60' Vs AO 60'(c)	1,11	10.04	<0.05
HP	<i>C-fos</i>	Con Vs PO 60'(a)	1,11	23.80	<0.01
		Con Vs AO 60'(b)	1,11	9.73	<0.05
		PO 60' Vs AO 60'(c)	1,11	2.38	0.19
AMY	<i>C-fos</i>	Con Vs PO 60'(a)	1,11	28.2	<0.01
		Con Vs AO 60'(b)	1,11	16.24	<0.05
		PO 60' Vs AO 60'(c)	1,11	12.74	<0.05

OB: olfactory bulb, HP: hippocampus, AMY: amygdala, Con: control, PO: preference odour, AO: aversive odour