

STATISTICAL TABLES

Table 1. Description of the parameters analyzed, the statistical tests used, the F ratio and p values in Chapter 2.

Parameter	Test	Effect	Brain Region		Brain Region		Brain Region		Brain Region	
			VMH		AVPv		ARC		Thal	
MICROGLIAL MORPHOLOGY										
microglia density (ir)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 35.04	P<0.0001	F (1, 26) = 6.403	P=0.0178	F (1, 22) = 9.13	P=0.0063	F (1, 26) = 18.84	P=0.0002
microglia (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 18.78	P=0.0003	F (1, 25) = 11.05	P=0.0027	F (1, 21) = 0.6736	P=0.4210	F (1, 26) = 36.32	P<0.0001
microglia total cell body area (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 39.3	P<0.0001	F (1, 25) = 20.4	P=0.0001	F (1, 21) = 54.85	P<0.0001	F (1, 26) = 44.26	P<0.0001
microglia mean cell body area (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 38.9	P<0.0001	F (1, 25) = 26.18	P<0.0001	F (1, 21) = 55.63	P<0.0001	F (1, 26) = 30.53	P<0.0001
microglia total outgrowth (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 11.9	P=0.0023	F (1, 25) = 0.3234	P=0.5746	F (1, 21) = 17.15	P=0.0005	F (1, 26) = 21.24	P<0.0001
microglia mean outgrowth (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 24.64	P<0.0001	F (1, 25) = 11.57	P=0.0023	F (1, 21) = 21.24	P=0.0002	F (1, 26) = 1.372	P=0.2522
microglia total branches (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 16.78	P=0.0005	F (1, 25) = 4.596	P=0.0420	F (1, 21) = 17.95	P=0.0004	F (1, 26) = 9.114	P=0.0056
microglia total processes (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 12.27	P=0.0020	F (1, 25) = 10.39	P=0.0035	F (1, 21) = 0.00616	P=0.9382	F (1, 26) = 38	P<0.0001
MICROGLIAL RATIO										
microglia ratio 0-.99 (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 35.1	P<0.0001	F (1, 25) = 11.91	P=0.0020	F (1, 21) = 22.35	P=0.0001	F (1, 26) = 0.5169	P=0.4786
microglia ratio 1.00-1.99 (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 2.038	P=0.1674	F (1, 25) = 0.0104	P=0.9192	F (1, 21) = 14.62	P=0.0010	F (1, 26) = 3.876	P=0.0597
microglia ratio 2.00-2.99 (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 69.49	P<0.0001	F (1, 25) = 8.93	P=0.0062	F (1, 21) = 0.4676	P=0.5016	F (1, 26) = 12.82	P=0.0014
microglia ratio 3.00+ (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 22) = 16.13	P=0.0006	F (1, 25) = 24.32	P<0.0001	F (1, 21) = 27.89	P<0.0001	F (1, 26) = 27.39	P<0.0001
		interaction (treatment x status)	F (1, 22) = 1.384	P=0.2520	F (1, 25) = 3.855	P=0.0608	F (1, 21) = 2.988	P=0.0985	F (1, 26) = 2.118	P=0.1576
BODY WEIGHT										
body weight change (6h time point)	2-way ANOVA	treatment (sal/LPS)	F (1, 20) = 127.9	P<0.0001						
		status (sham-ovx/ovx)	F (1, 20) = 0.336	P=0.5686						
body weight change (24h time point)	2-way ANOVA	treatment (sal/LPS)	F (1, 20) = 401.5	P<0.0001						
		status (sham-ovx/ovx)	F (1, 20) = 13.26	P=0.0016						

Table 2. Description of the parameters analyzed, the statistical tests used, the F ratio and p-values in Chapter 3.

Parameter	Test	Effect	Brain Region		Brain Region		Brain Region		Brain Region	
			VMH		AVPv		ARC		Thal	
MICROGLIAL MORPHOLOGY										
microglia density (ir)	2-way ANOVA	treatment (sal/LPS)	F (1, 18) = 64.40	P < 0.0001	F (1, 24) = 143.4	P<0.0001	F (1, 19) = 39.68	P < 0.0001	F (1, 20) = 7.078	P=0.0150
	2-way ANOVA	hormone (oil/E2)	F (1, 18) = 12.89	P = 0.0021	F (1, 24) = 3.193	P=0.0866	F (1, 19) = 4.963	P = 0.0382	F (1, 20) = 0.1195	P=0.7332
microglia (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 87.67	P < 0.0001	F (1, 21) = 19.26	P=0.0003	F (1, 19) = 23.49	P=0.0001	F (1, 21) = 11.08	P=0.0032
		hormone (oil/E2)	F (1, 19) = 5.826	P = 0.0261	F (1, 21) = 0.2098	P=0.6516	F (1, 19) = 4.16	P=0.0555	F (1, 21) = 1.007	P=0.3271
microglia total cell body area (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 237.7	P < 0.0001	F (1, 21) = 40.1	P<0.0001	F (1, 19) = 161.2	P<0.0001	F (1, 21) = 19.98	P=0.0002
		hormone (oil/E2)	F (1, 19) = 5.922	P = 0.0250	F (1, 21) = 0.0170	P=0.8973	F (1, 19) = 4.301	P=0.0519	F (1, 21) = 0.5963	P=0.4486
microglia mean cell body area (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 172.4	P < 0.0001	F (1, 21) = 65.56	P<0.0001	F (1, 19) = 84.44	P<0.0001	F (1, 21) = 23.55	P<0.0001
microglia total outgrowth (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 48.41	P<0.0001	F (1, 21) = 18.38	P=0.0003	F (1, 19) = 59.56	P<0.0001	F (1, 21) = 2.416	P=0.1351
	2-way ANOVA	hormone (oil/E2)	F (1, 19) = 0.0178	P=0.8950	F (1, 21) = 1.05	P=0.3173	F (1, 19) = 5.696	P=0.0276	F (1, 21) = 0.7873	P=0.3850
microglia mean outgrowth (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 122.9	P < 0.0001	F (1, 21) = 52.9	P<0.0001	F (1, 19) = 92.57	P<0.0001	F (1, 21) = 3.299	P=0.0836
microglia total branches (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 64.59	P<0.0001	F (1, 21) = 51.15	P<0.0001	F (1, 19) = 68.51	P<0.0001	F (1, 21) = 0.05679	P=0.8140
	2-way ANOVA	hormone (oil/E2)	F (1, 19) = 0.2185	P=0.6455	F (1, 21) = 1.187	P=0.2883	F (1, 19) = 1.577	P=0.2244	F (1, 21) = 0.7923	P=0.3835
microglia total processes (#)	2-way ANOVA	hormone (oil/E2)	F (1, 19) = 47.34	P < 0.0001	F (1, 21) = 13.37	P=0.0015	F (1, 19) = 4.425	P=0.0490	F (1, 21) = 14.15	P=0.0011
MICROGLIAL RATIO										
microglia ratio 0-.99 (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 49.57	P<0.0001	F (1, 21) = 19.99	P=0.0002	F (1, 23) = 10.75	P=0.0033	F (1, 22) = 3.512	P=0.0743
microglia ratio 1.00-1.99 (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 1.19	P=0.2890	F (1, 21) = 11.16	P=0.0031	F (1, 23) = 0.01824	P=0.8937	F (1, 22) = 5.252	P=0.0319
microglia ratio 2.00-2.99 (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 91.07	P<0.0001	F (1, 21) = 27.1	P<0.0001	F (1, 23) = 3.158	P=0.0888	F (1, 22) = 4.534	P=0.0447
microglia ratio 3.00+ (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 110.6	P<0.0001	F (1, 21) = 23.62	P<0.0001	F (1, 23) = 35.53	P<0.0001	F (1, 22) = 18.39	P=0.0003
BODY WEIGHT										
body weight change (6h time point)	2-way ANOVA	interaction (treatment x hormone)	F (1, 19) = 5.844	P=0.0258						
body weight change (24h time point)	2-way ANOVA	treatment (sal/LPS)	F (1, 20) = 88.78	P<0.0001						
CYTOKINES: 6H POST INJECTION										
IL1-alpha at 6h (pg/mL)	2-way ANOVA	interaction (treatment x hormone)	F (1, 11) = 3.786	P=0.0777						
IL1-beta at 6h (pg/mL)	2-way ANOVA	not determined ND	ND	ND						
IL-6 at 6h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 10) = 10.69	P=0.0084						
IL10 at 6h (pg/mL)	2-way ANOVA	interaction (treatment x hormone)	F (1, 11) = 10.66	P=0.0075						
TNF-alpha at 6h (pg/mL)	2-way ANOVA	interaction (treatment x hormone)	F (1, 10) = 8.215	P=0.0168						
CYTOKINE: 24H POST INJECTION										
IL1-alpha at 24h (pg/mL)	2-way ANOVA	interaction (treatment x hormone)	F (1, 16) = 5.619	P=0.0307						
IL1-beta at 24h (pg/mL)	2-way ANOVA	not determined ND	ND	ND						
IL-6 at 24h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 14) = 23.12	P=0.0003						
IL10 at 24h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 13) = 3.479	P=0.0849						
TNF-alpha at 24h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 13) = 0.7395	P=0.4054						

Table 3. Description of the parameters analyzed, the statistical tests used, the F ratio and p values in Chapter 4.

Parameter	Test	Effect	Brain Region		Brain Region		Brain Region		Brain Region	
			VMH		AVPv		ARC		Thal	
MICROGLIAL MORPHOLOGY										
microglia density (ir)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 164.7	P<0.0001	F (1, 27) = 76.6	p<0.0001	F (1, 26) = 70.38	P<0.0001	F (1, 26) = 2.397	P=0.1337
	2-way ANOVA	drug (oil/4OHA)	F (1, 26) = 3.376	P=0.0776	F (1, 27) = 1.241	P=0.2751	F (1, 26) = 3.174	P=0.0865	F (1, 26) = 8.467	P=0.0073
microglia (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 100.5	p<0.0001	F (1, 27) = 64.29	P<0.0001	F (1, 26) = 52.0	p<0.0001	F (1, 26) = 17.7	P=0.0003
microglia total cell body area (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 183.3	p<0.0001	F (1, 27) = 95.66	P<0.0001	F (1, 26) = 153.4	p<0.0001	F (1, 26) = 22.39	P<0.0001
microglia mean cell body area (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 329.7	p<0.0001	F (1, 27) = 118.8	P<0.0001	F (1, 26) = 213.7	p<0.0001	F (1, 26) = 18.89	P=0.0002
microglia total outgrowth (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 8.99	p=0.006	F (1, 27) = 7.498	P=0.0108	F (1, 26)=24.1	p<0.0001	F (1, 26) = 7.069	P=0.0132
	2-way ANOVA	drug (oil/4OHA)	F (1, 26) = 4.88	p=0.04	F (1, 27) = 1.229	P=0.2775	F (1, 26) = 2.739	P=0.1100	F (1, 26) = 0.08119	P=0.7779
microglia mean outgrowth (um)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 75.9	p<0.0001	F (1, 27) = 0.7987	P=0.3794	F (1, 26) = 211.4	p<0.0001	F (1, 26) = 0.6664	P=0.4217
microglia total branches (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 32.2	p<0.0001	F (1, 27) = 1.158	P=0.2914	F (1, 26) = 57.4	p<0.0001	F (1, 26) = 3.727	P=0.0645
	2-way ANOVA	drug (oil/4OHA)	F (1, 26) = 7.07	p=0.01	F (1, 27) = 1.507	P=0.2302	F (1, 26) = 5.56	p=0.03	F (1, 26) = 0.2296	P=0.6358
microglia total processes (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 89.3	p<0.0001	F (1, 27) = 40	P<0.0001	F (1, 26) = 32.1	p<0.0001	F (1, 26) = 16.08	P=0.0005
MICROGLIAL RATIO										
microglia ratio 0-.99 (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 93.25	P<0.0001	F (1, 27) = 1.591	P=0.2180	F (1, 26) = 61.3	P<0.0001	F (1, 26) = 1.109	P=0.3019
microglia ratio 1.00-1.99 (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 102.6	P<0.0001	F (1, 27) = 27.18	P<0.0001	F (1, 26) = 0.02095	P=0.8860	F (1, 26) = 10.79	P=0.0029
	2-way ANOVA	drug (oil/4OHA)	F (1, 26) = 1.857	P=0.1847	F (1, 27) = 0.5838	P=0.4514	F (1, 26) = 6.054	P=0.0208	F (1, 26) = 2.678	P=0.1138
microglia ratio 2.00-2.99 (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 90.43	P<0.0001	F (1, 27) = 11.18	P=0.0024	F (1, 26) = 17.65	P=0.0003	F (1, 26) = 0.9111	P=0.3486
microglia ratio 3.00+ (#)	2-way ANOVA	treatment (sal/LPS)	F (1, 26) = 120.2	P<0.0001	F (1, 27) = 30.77	P<0.0001	F (1, 26) = 71.81	P<0.0001	F (1, 26) = 8.211	P=0.0081
BODY WEIGHT										
body weight change (6h time point)	2-way ANOVA	treatment (sal/LPS)	F (1, 19) = 223	P<0.0001						
body weight change (24h time point)	2-way ANOVA	treatment (sal/LPS)	F (1, 20) = 72.82	P<0.0001						
CYTOKINES: 6H POST INJECTION										
IL1-alpha at 6h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 18) = 0.4338	P=0.5185						
IL1-beta at 6h (pg/mL)	2-way ANOVA	interaction (treatment)	F (1, 17) = 8.462	P=0.0098						
IL-6 at 6h (pg/mL)	2-way ANOVA	interaction (treatment)	F (1, 18) = 4.881	P=0.0403						
IL10 at 6h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 16) = 44.98	P<0.0001						
TNFn-alpha at 6h (pg/mL)	2-way ANOVA	interaction (treatment)	F (1, 19) = 6.115	P=0.0230						
CYTOKINE: 24H POST INJECTION										
IL1-alpha at 24h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 17) = 4.891	P=0.0410						
IL1-beta at 24h (pg/mL)	2-way ANOVA	x	x	x						
IL-6 at 24h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 11) = 14.97	P=0.0026						
IL10 at 24h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 14) = 12.41	P=0.0034						
TNF-alpha at 24h (pg/mL)	2-way ANOVA	treatment (sal/LPS)	F (1, 17) = 1.962	P=0.1793						