

Supplementary Materials: Prenatal Exposure to an EDC Mixture, NeuroMix: Effects on Brain, Behavior, and Stress Responsiveness in Rats

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Table S1. Statistical analyses.

Development and Physiology		Females			
		Test	<i>p</i> -value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
P1 Body Weight	Treatment	ANOVA	0.070	0.071	F (1, 45) =1.859
P14 Body Weight	Treatment	ANOVA	0.828	13.120	F (1, 94) = 0.047
	Stress		0.124	664.900	F (1, 94) = 2.414
	TxS		0.344	249.200	F (1, 94) = 0.905
P1 AGI	Treatment	ANOVA	0.030	0.101	F (1, 45) =2.245
P14 AGI	Treatment	ANOVA	0.214	0.034	F (1, 45) =1.262

Development and Physiology		Males			
		Test	<i>p</i> -value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
P1 Body Weight	Treatment	ANOVA	0.001	0.189	F (1, 48) = 3.347
P84 Body Weight	Treatment	ANOVA	0.077	2709.000	F (1, 97) = 3.190
	Stress		0.133	1950.000	F (1, 97) = 2.296
	TxS		0.508	374.400	F (1, 97) = 0.441
P1 AGI	Treatment	ANOVA	0.207	0.033	F (1, 48) =1.280
P14 AGI	Treatment	ANOVA	0.000	0.371	F (1, 48) =5.323

Light Dark Box		Females			
		Test	<i>p</i> -value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
Distance	Treatment	ANOVA	0.373	0.008	F(1,94)=0.801
	Stress		0.853	0.000	F(1,94)=0.035
	TxS		0.754	0.001	F(1,94)=0.099
Freezing Episodes	Treatment	KW	0.806	0.001	$\chi^2(1)=0.06$
	Stress		0.095	0.029	$\chi^2(1)=2.787$
Time Freezing	Treatment	KW	0.601	0.003	$\chi^2(1)=0.274$
	Stress		0.066	0.035	$\chi^2(1)=3.386$
Light Time	Treatment	KW	0.029	0.049	$\chi^2(1)=4.776$
	Stress		0.708	0.001	$\chi^2(1)=0.14$
Light Freezing Episodes	Treatment	KW	0.037	0.045	$\chi^2(1)=4.331$
	Stress		0.316	0.010	$\chi^2(1)=1.004$
Light Freezing Time	Treatment	KW	0.177	0.019	$\chi^2(1)=1.82$
	Stress		0.399	0.007	$\chi^2(1)=0.71$
Dark Time	Treatment	KW	0.028	0.050	$\chi^2(1)=4.807$
	Stress		0.708	0.001	$\chi^2(1)=0.14$
Dark Freezing Episodes	Treatment	ANOVA	0.379	0.008	F(1,94)=0.780
	Stress		0.123	0.025	F(1,94)=2.420
	TxS		0.361	0.009	F(1,94)=0.844
Dark Freezing Time	Treatment	KW	0.284	0.012	$\chi^2(1)=1.148$
	Stress		0.211	0.016	$\chi^2(1)=1.561$

Speed	Treatment	ANOVA	0.369	0.009	F(1,94)=0.814
	Stress		0.843	0.000	F(1,94)=0.039
	TxS		0.740	0.001	F(1,94)=0.111
Line Crossing	Treatment	KW	0.643	0.002	$\chi^2(1)=0.215$
	Stress		0.977	0.000	$\chi^2(1)=0.001$

Light Dark Box		Males			
		Test	p-value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
Distance	Treatment	ANOVA	0.210	0.016	F(1,97)=1.596
	Stress		0.752	0.001	F(1,97)=0.101
	TxS		0.736	0.001	F(1,97)=0.114
Freezing Episodes	Treatment	KW	0.187	0.017	$\chi^2(1)=1.741$
	Stress		0.067	0.033	$\chi^2(1)=3.344$
Time Freezing	Treatment	KW	0.372	0.008	$\chi^2(1)=0.798$
	Stress		0.012	0.063	$\chi^2(1)=6.267$
Light Time	Treatment	KW	0.421	0.006	$\chi^2(1)=0.648$
	Stress		0.347	0.009	$\chi^2(1)=0.885$
Light Freezing Episodes	Treatment	KW	0.723	0.001	$\chi^2(1)=0.126$
	Stress		0.986	0.000	$\chi^2(1)=0.000$
Light Freezing Time	Treatment	KW	0.892	0.000	$\chi^2(1)=0.019$
	Stress		0.937	0.000	$\chi^2(1)=0.006$
Dark Time	Treatment	KW	0.455	0.006	$\chi^2(1)=0.559$
	Stress		0.313	0.010	$\chi^2(1)=1.019$
Dark Freezing Episodes	Treatment	KW	0.229	0.014	$\chi^2(1)=1.449$
	Stress		0.189	0.017	$\chi^2(1)=1.724$
Dark Freezing Time	Treatment	KW	0.557	0.003	$\chi^2(1)=0.346$
	Stress		0.035	0.044	$\chi^2(1)=4.433$
Speed	Treatment	ANOVA	0.224	0.015	F(1,97)=1.500
	Stress		0.748	0.001	F(1,97)=0.104
	TxS		0.725	0.001	F(1,97)=0.125
Line Crossing	Treatment	KW	0.349	0.009	$\chi^2(1)=0.876$
	Stress		0.051	0.038	$\chi^2(1)=3.803$

Sociability		Females			
		Test	p-value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
Distance Traveled	Treatment	ANOVA	0.038	0.046	F(1,92)=4.441
	Stress		0.541	0.004	F(1,92)=0.376
	TxS		0.769	0.001	F(1,92)=0.087
Time in Center	Treatment	KW	0.015	0.062	$\chi^2(1)=5.875$
	Stress		0.362	0.009	$\chi^2(1)=0.830$
Time Near Social	Treatment	KW	0.059	0.037	$\chi^2(1)=3.553$
	Stress		0.725	0.001	$\chi^2(1)=0.124$
Avg Visit Time to Social	Treatment	KW	0.029	0.050	$\chi^2(1)=4.794$
	Stress		0.956	0.000	$\chi^2(1)=0.003$
Time Near Empty	Treatment	KW	0.214	0.016	$\chi^2(1)=1.545$
	Stress		0.468	0.006	$\chi^2(1)=0.527$
Avg Visit Time to Empty	Treatment	KW	0.912	0.000	$\chi^2(1)=0.012$
	Stress		0.662	0.002	$\chi^2(1)=0.191$
Social Pref Score	Treatment	KW	0.061	0.037	$\chi^2(1)=3.498$
	Stress		0.706	0.002	$\chi^2(1)=0.143$

Sociability		Males			
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		Test	<i>p</i> -value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
Distance Traveled	Treatment	KW	0.373	0.008	$\chi^2(1)=0.792$
	Stress		0.096	0.028	$\chi^2(1)=2.763$
Time in Center	Treatment	KW	0.216	0.015	$\chi^2(1)=1.534$
	Stress		0.463	0.005	$\chi^2(1)=0.538$
Time Near Social	Treatment	ANOVA	0.781	0.001	F(1,96)=0.078
	Stress		0.564	0.004	F(1,96)=0.336
	Treatment:Stress		0.516	0.004	F(1,96)=0.426
Avg Visit Time to Social	Treatment	KW	0.532	0.004	$\chi^2(1)=0.390$
	Stress		0.021	0.053	$\chi^2(1)=5.296$
Time Near Empty	Treatment	KW	0.796	0.677	$\chi^2(1)=67.0$
	Stress		0.050	0.039	$\chi^2(1)=3.838$
Avg Visit Time to Empty	Treatment	KW	0.405	0.007	$\chi^2(1)=0.694$
	Stress		0.006	0.075	$\chi^2(1)=7.471$
Social Pref Score	Treatment	KW	0.709	0.001	$\chi^2(1)=0.139$
	Stress		0.670	0.002	$\chi^2(1)=0.181$

Social Novelty		Females			
		Test	<i>p</i> -value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
Distance Traveled	Treatment	ANOVA	0.247	0.015	F(1,92)=1.360
	Stress		0.629	0.003	F(1,92)=0.236
	Treatment:Stress		0.906	0.000	F(1,92)=0.014
Time in Center	Treatment	ANOVA	0.219	0.016	F(1,92)=1.532
	Stress		0.113	0.027	F(1,92)=2.561
	Treatment:Stress		0.556	0.004	F(1,92)=0.350
Time Near Familiar	Treatment	KW	0.883	0.009	$\chi^2(1)=0.022$
	Stress		0.097	0.001	$\chi^2(1)=2.753$
Avg Visit Time to Familiar	Treatment	KW	0.161	0.002	$\chi^2(1)=1.963$
	Stress		0.252	0.003	$\chi^2(1)=1.310$
Time Near Novel	Treatment	KW	0.974	0.010	$\chi^2(1)=0.001$
	Stress		0.196	0.002	$\chi^2(1)=1.671$
Avg Visit Time to Novel	Treatment	KW	0.953	0.010	$\chi^2(1)=0.003$
	Stress		0.019	0.000	$\chi^2(1)=2.865$
Social Novelty Score	Treatment	ANOVA	0.331	0.010	F(1,92)=0.956
	Stress		0.026	0.053	F(1,92)=5.105
	Treatment:Stress		0.098	0.029	F(1,92)=2.791

Social Novelty		Males			
		Test	<i>p</i> -value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
Distance Traveled	Treatment	ANOVA	0.796	0.001	F(1,96)=0.067
	Stress		0.582	0.003	F(1,96)=0.305
	Treatment:Stress		0.317	0.010	F(1,96)=1.012
Time in Center	Treatment	KW	0.612	0.003	$\chi^2(1)=0.257$
	Stress		0.917	0.000	$\chi^2(1)=0.011$
Time Near Familiar	Treatment	KW	0.379	0.008	$\chi^2(1)=0.774$
	Stress		0.198	0.017	$\chi^2(1)=1.660$
Avg Visit Time to Familiar	Treatment	KW	0.939	0.000	$\chi^2(1)=0.006$
	Stress		0.557	0.003	$\chi^2(1)=0.344$
Time Near Novel	Treatment	KW	0.769	0.001	$\chi^2(1)=0.086$

Avg Visit Time to Novel	Stress	KW	0.161	0.020	$\chi^2(1)=1.961$
	Treatment		0.301	0.011	$\chi^2(1)=1.071$
Social Novelty Score	Stress	ANOVA	0.579	0.003	$\chi^2(1)=0.308$
	Treatment		0.470	0.005	$F(1,96)=0.527$
	Stress		0.104	0.027	$F(1,96)=2.696$
	Treatment:Stress		0.528	0.004	$F(1,96)=0.401$

Mate Preference		Females			
		Test	<i>p</i> -value	η_p^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
Distance	Treatment	ANOVA	0.003	0.092	$F(1,94)=9.542$
	Stress		0.170	0.020	$F(1,94)=1.911$
	Treatment:Stress		0.083	0.032	$F(1,94)=3.066$
Time Near Hormone	Treatment	ANOVA	0.049	0.041	$F(1,94)=3.964$
	Stress		0.674	0.002	$F(1,94)=0.179$
	Treatment:Stress		0.291	0.012	$F(1,94)=1.130$
Time Near NH	Treatment	ANOVA	0.629	0.003	$F(1,94)=0.235$
	Stress		0.066	0.036	$F(1,94)=3.463$
	Treatment:Stress		0.276	0.013	$F(1,94)=1.20$
Stim Explore Time Hormone	Treatment	KW	0.036	0.045	$\chi^2(1)=4.410$
	Stress		0.362	0.009	$\chi^2(1)=0.830$
Nose Touch Number Hormone	Treatment	KW	0.672	0.002	$\chi^2(1)=0.180$
	Stress		0.057	0.037	$\chi^2(1)=3.637$
Nose Touch Time Hormone	Treatment	KW	0.722	0.001	$\chi^2(1)=0.127$
	Stress		0.070	0.034	$\chi^2(1)=3.294$
Stim Explore Time NH	Treatment	KW	0.409	0.007	$\chi^2(1)=0.682$
	Stress		0.266	0.013	$\chi^2(1)=1.238$
Nose Touch Number NH	Treatment	KW	0.926	0.000	$\chi^2(1)=0.009$
	Stress		0.090	0.030	$\chi^2(1)=2.879$
Nose Touch Time NH	Treatment	KW	0.822	0.001	$\chi^2(1)=0.050$
	Stress		0.126	0.024	$\chi^2(1)=2.336$
Time Near Both Rats	Treatment	ANOVA	0.025	0.053	$F(1,94)=5.216$
	Stress		0.500	0.005	$F(1,94)=0.459$
	Treatment:Stress		0.677	0.002	$F(1,94)=0.175$
Mate Pref Score	Treatment	ANOVA	0.438	0.006	$F(1,94)=0.605$
	Stress		0.154	0.022	$F(1,94)=2.069$
	Treatment:Stress		0.170	0.020	$F(1,94)=1.908$
Mate Preference		Males			
		Test	<i>p</i> -value	η_p^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
Distance	Treatment	KW	0.081	0.031	$\chi^2(1)=3.052$
	Stress		0.763	0.001	$\chi^2(1)=0.091$
Time Near Hormone	Treatment	ANOVA	0.738	0.001	$F(1,95)=0.113$
	Stress		0.098	0.029	$F(1,95)=2.802$
	Treatment:Stress		0.553	0.004	$F(1,95)=0.354$
Time Near NH	Treatment	KW	0.307	0.011	$\chi^2(1)=1.054$
	Stress		0.591	0.003	$\chi^2(1)=0.290$
Stim Explore Time Hormone	Treatment	ANOVA	0.989	0.000	$F(1,95)=0.000$
	Stress		0.011	0.067	$F(1,95)=6.764$
	Treatment:Stress		0.606	0.003	$F(1,95)=0.269$
Nose Touch Number Hormone	Treatment	KW	0.441	0.006	$\chi^2(1)=0.594$
	Stress		0.039	0.044	$\chi^2(1)=4.266$
Nose Touch Time Hormone	Treatment	KW	0.355	0.009	$\chi^2(1)=0.854$

Stim Explore Time NH	Stress	KW	0.010	0.069	$\chi^2(1)=6.715$
	Treatment		0.092	0.029	$\chi^2(1)=2.835$
Nose Touch Number NH	Stress	KW	0.492	0.005	$\chi^2(1)=0.472$
	Treatment		0.466	0.005	$\chi^2(1)=0.532$
Nose Touch Time NH	Stress	KW	0.058	0.037	$\chi^2(1)=3.600$
	Treatment		0.964	0.000	$\chi^2(1)=0.002$
Time Near Both Rats	Stress	ANOVA	0.032	0.047	$\chi^2(1)=4.605$
	Treatment		0.758	0.001	$F(1,94)=0.095$
Mate Pref Score	Stress	ANOVA	0.072	0.034	$F(1,94)=3.307$
	Treatment:Stress		0.855	0.000	$F(1,94)=0.034$
	Treatment		0.461	0.006	$F(1,94)=0.548$
	Stress		0.343	0.009	$F(1,94)=0.909$
	Treatment:Stress		0.300	0.011	$F(1,94)=1.084$

Gene Expression		Females			
		Test	<i>p</i> -value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
MeA <i>Ar</i>	Treatment	ANOVA	0.760	0.003	$F(1, 43) = 0.094$
	Stress		0.474	0.016	$F(1, 43) = 0.521$
	Treatment:Stress		0.793	0.002	$F(1, 43) = 0.067$
MeA <i>Esr2</i>	Treatment	ANOVA	0.624	0.050	$F(1, 43) = 0.244$
	Stress		0.775	0.017	$F(1, 43) = 0.086$
	Treatment:Stress		0.854	0.007	$F(1, 43) = 0.034$
PVN <i>Ar</i>	Treatment	ANOVA	0.436	0.031	$F(1, 42) = 0.620$
	Stress		0.144	0.110	$F(1, 42) = 2.212$
	Treatment:Stress		0.020	0.290	$F(1, 42) = 5.811$
PVN <i>Esr2</i>	Treatment	ANOVA	0.616	0.034	$F(1, 42) = 0.256$
	Stress		0.991	0.000	$F(1, 42) = 0.000$
	Treatment:Stress		0.290	0.155	$F(1, 42) = 1.151$

Gene Expression		Males			
		Test	<i>p</i> -value	η^2 for ANOVA ϵ^2 for KW	F(df) for ANOVA χ^2 for KW
MeA <i>Ar</i>	Treatment	ANOVA	0.815	0.001	$F(1, 43) = 0.055$
	Stress		0.114	0.054	$F(1, 43) = 2.598$
	Treatment:Stress		0.027	0.109	$F(1, 43) = 5.267$
MeA <i>Esr2</i>	Treatment	ANOVA	0.012	1.247	$F(1, 44) = 6.848$
	Stress		0.657	0.037	$F(1, 44) = 0.201$
	Treatment:Stress		0.357	0.158	$F(1, 44) = 0.867$
PVN <i>Ar</i>	Treatment	ANOVA	0.054	0.340	$F(1, 44) = 3.938$
	Stress		0.158	0.179	$F(1, 44) = 2.067$
	Treatment:Stress		0.167	0.170	$F(1, 44) = 1.972$
PVN <i>Esr2</i>	Treatment	ANOVA	0.319	0.179	$F(1, 44) = 1.015$
	Stress		0.515	0.076	$F(1, 44) = 0.432$
	Treatment:Stress		0.340	0.164	$F(1, 44) = 0.932$

Note: P, postnatal day; NH, no hormone treatment; PVN, paraventricular nucleus; MeA, medial amygdala; AGI, anogenital index; Avg, average; KW, Kruskal-Wallis test.