

Supplementary Material 5. Full Statistical Summary of *Trpv1* gene expression in the inferior colliculus of GASH/Sal animals across chronic treatment, acoustic seizure stimulation and sex.

Three-way ANOVA		Ordinary			
Alpha		0.05			
Source of Variation	% of total variation	P value	P value summary	Significant?	
Sex	0.01601	0.9236	ns	No	
Treatment	0.09056	0.8196	ns	No	
Condition	14.49	0.0062	**	Yes	
Sex x Treatment	9.346	0.0253	*	Yes	
Sex x Condition	0.1326	0.7826	ns	No	
Treatment x Condition	2.321	0.2525	ns	No	
Sex x Treatment x Condition	13.89	0.0073	**	Yes	
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Sex	0.008047	1	0.008047	F (1, 36) = 0.009333	P=0.9236
Treatment	0.04552	1	0.04552	F (1, 36) = 0.05279	P=0.8196
Condition	7.283	1	7.283	F (1, 36) = 8.447	P=0.0062
Sex x Treatment	4.697	1	4.697	F (1, 36) = 5.448	P=0.0253
Sex x Condition	0.06663	1	0.06663	F (1, 36) = 0.07727	P=0.7826
Treatment x Condition	1.166	1	1.166	F (1, 36) = 1.353	P=0.2525
Sex x Treatment x Condition	6.982	1	6.982	F (1, 36) = 8.097	P=0.0073
Residual	31.04	36	0.8623		
Compare each cell mean with every other cell mean					
Number of families	1				
Number of comparisons per family	28				
Alpha	0.05				

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
Female:Sham_U vs. Female:CBD_U	1.223	-0.5853 to 3.031	No	ns	0.3901
Female:Sham_U vs. Female:Sham_S	1.204	-0.5194 to 2.928	No	ns	0.3497
Female:Sham_U vs. Female:CBD_S	1.473	-0.2512 to 3.197	No	ns	0.1414
Female:Sham_U vs. Male:Sham_U	1.363	-0.4451 to 3.171	No	ns	0.261
Female:Sham_U vs. Male:CBD_U	1.129	-0.6789 to 2.937	No	ns	0.4908
Female:Sham_U vs. Male:Sham_S	-0.371	-2.298 to 1.556	No	ns	0.9984
Female:Sham_U vs. Male:CBD_S	1.669	0.008061 to 3.330	Yes	*	0.0482
Female:CBD_U vs. Female:Sham_S	-0.0183	-1.826 to 1.790	No	ns	>0.9999
Female:CBD_U vs. Female:CBD_S	0.25	-1.558 to 2.058	No	ns	0.9998
Female:CBD_U vs. Male:Sham_U	0.1402	-1.748 to 2.029	No	ns	>0.9999
Female:CBD_U vs. Male:CBD_U	-0.09363	-1.982 to 1.795	No	ns	>0.9999
Female:CBD_U vs. Male:Sham_S	-1.594	-3.597 to 0.4093	No	ns	0.2046
Female:CBD_U vs. Male:CBD_S	0.4465	-1.302 to 2.195	No	ns	0.9907
Female:Sham_S vs. Female:CBD_S	0.2683	-1.456 to 1.992	No	ns	0.9996
Female:Sham_S vs. Male:Sham_U	0.1585	-1.650 to 1.966	No	ns	>0.9999
Female:Sham_S vs. Male:CBD_U	-0.07533	-1.883 to 1.733	No	ns	>0.9999
Female:Sham_S vs. Male:Sham_S	-1.575	-3.503 to 0.3520	No	ns	0.1791
Female:Sham_S vs. Male:CBD_S	0.4648	-1.196 to 2.126	No	ns	0.9842
Female:CBD_S vs. Male:Sham_U	-0.1098	-1.918 to 1.698	No	ns	>0.9999
Female:CBD_S vs. Male:CBD_U	-0.3436	-2.152 to 1.464	No	ns	0.9985
Female:CBD_S vs. Male:Sham_S	-1.844	-3.771 to 0.08367	No	ns	0.0693
Female:CBD_S vs. Male:CBD_S	0.1965	-1.465 to 1.858	No	ns	>0.9999
Male:Sham_U vs. Male:CBD_U	-0.2338	-2.122 to 1.655	No	ns	>0.9999
Male:Sham_U vs. Male:Sham_S	-1.734	-3.737 to 0.2691	No	ns	0.1312
Male:Sham_U vs. Male:CBD_S	0.3063	-1.442 to 2.055	No	ns	0.9991
Male:CBD_U vs. Male:Sham_S	-1.5	-3.503 to 0.5029	No	ns	0.2682
Male:CBD_U vs. Male:CBD_S	0.5401	-1.208 to 2.288	No	ns	0.9725
Male:Sham_S vs. Male:CBD_S	2.04	0.1687 to 3.912	Yes	*	0.0245

Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	N1	N2	q	DF
Female:Sham_U vs. Female:CBD_U	11.3	10.08	1.223	0.5623	6	5	3.075	36
Female:Sham_U vs. Female:Sham_S	11.3	10.1	1.204	0.5361	6	6	3.177	36
Female:Sham_U vs. Female:CBD_S	11.3	9.827	1.473	0.5361	6	6	3.885	36
Female:Sham_U vs. Male:Sham_U	11.3	9.937	1.363	0.5623	6	5	3.428	36
Female:Sham_U vs. Male:CBD_U	11.3	10.17	1.129	0.5623	6	5	2.84	36
Female:Sham_U vs. Male:Sham_S	11.3	11.67	-0.371	0.5994	6	4	0.8753	36
Female:Sham_U vs. Male:CBD_S	11.3	9.631	1.669	0.5166	6	7	4.569	36
Female:CBD_U vs. Female:Sham_S	10.08	10.1	-0.0183	0.5623	5	6	0.04603	36
Female:CBD_U vs. Female:CBD_S	10.08	9.827	0.25	0.5623	5	6	0.6287	36
Female:CBD_U vs. Male:Sham_U	10.08	9.937	0.1402	0.5873	5	5	0.3375	36
Female:CBD_U vs. Male:CBD_U	10.08	10.17	-0.09363	0.5873	5	5	0.2255	36
Female:CBD_U vs. Male:Sham_S	10.08	11.67	-1.594	0.6229	5	4	3.618	36
Female:CBD_U vs. Male:CBD_S	10.08	9.631	0.4465	0.5437	5	7	1.161	36
Female:Sham_S vs. Female:CBD_S	10.1	9.827	0.2683	0.5361	6	6	0.7077	36
Female:Sham_S vs. Male:Sham_U	10.1	9.937	0.1585	0.5623	6	5	0.3986	36
Female:Sham_S vs. Male:CBD_U	10.1	10.17	-0.07533	0.5623	6	5	0.1895	36
Female:Sham_S vs. Male:Sham_S	10.1	11.67	-1.575	0.5994	6	4	3.717	36
Female:Sham_S vs. Male:CBD_S	10.1	9.631	0.4648	0.5166	6	7	1.272	36
Female:CBD_S vs. Male:Sham_U	9.827	9.937	-0.1098	0.5623	6	5	0.2762	36
Female:CBD_S vs. Male:CBD_U	9.827	10.17	-0.3436	0.5623	6	5	0.8642	36
Female:CBD_S vs. Male:Sham_S	9.827	11.67	-1.844	0.5994	6	4	4.35	36
Female:CBD_S vs. Male:CBD_S	9.827	9.631	0.1965	0.5166	6	7	0.538	36
Male:Sham_U vs. Male:CBD_U	9.937	10.17	-0.2338	0.5873	5	5	0.563	36
Male:Sham_U vs. Male:Sham_S	9.937	11.67	-1.734	0.6229	5	4	3.936	36
Male:Sham_U vs. Male:CBD_S	9.937	9.631	0.3063	0.5437	5	7	0.7968	36
Male:CBD_U vs. Male:Sham_S	10.17	11.67	-1.5	0.6229	5	4	3.406	36
Male:CBD_U vs. Male:CBD_S	10.17	9.631	0.5401	0.5437	5	7	1.405	36
Male:Sham_S vs. Male:CBD_S	11.67	9.631	2.04	0.582	4	7	4.957	36

Supplementary Material 5. Full Statistical Summary of *5-Htr1a* gene expression in the inferior colliculus of GASH/Sal animals across chronic treatment, acoustic seizure stimulation and sex.

Three-way ANOVA		Ordinary			
Alpha		0.05			
Source of Variation	% of total variation	P value	P value summary	Significant?	
Sex	44.31	<0.0001	****	Yes	
Treatment	6.878	0.0092	**	Yes	
Condition	0.0000958	0.9919	ns	No	
Sex x Treatment	9.162	0.003	**	Yes	
Sex x Condition	1.759	0.1724	ns	No	
Treatment x Condition	4.199	0.0382	*	Yes	
Sex x Treatment x Condition	2.399	0.1127	ns	No	
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Sex	76.83	1	76.83	F (1, 36) = 48.84	P<0.0001
Treatment	11.93	1	11.93	F (1, 36) = 7.581	P=0.0092
Condition	0.0001661	1	0.0001661	F (1, 36) = 0.0001054	P=0.9919
Sex x Treatment	15.89	1	15.89	F (1, 36) = 10.10	P=0.0030
Sex x Condition	3.05	1	3.05	F (1, 36) = 1.939	P=0.1724
Treatment x Condition	7.28	1	7.28	F (1, 36) = 4.628	P=0.0382
Sex x Treatment x Condition	4.159	1	4.159	F (1, 36) = 2.644	P=0.1127
Residual	56.63	36	1.573		
Compare each cell mean with every other cell mean					
Number of families	1				
Number of comparisons per family	28				
Alpha	0.05				

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
Female:Sham_U vs. Female:CBD_U	-0.9098	-3.352 to 1.532	No	ns	0.9273
Female:Sham_U vs. Female:Sham_S	-1.285	-3.613 to 1.044	No	ns	0.6408
Female:Sham_U vs. Female:CBD_S	0.7	-1.628 to 3.028	No	ns	0.9763
Female:Sham_U vs. Male:Sham_U	3.805	1.363 to 6.247	Yes	***	0.0004
Female:Sham_U vs. Male:CBD_U	3.075	0.6327 to 5.517	Yes	**	0.0058
Female:Sham_U vs. Male:Sham_S	1.332	-1.271 to 3.935	No	ns	0.7206
Female:Sham_U vs. Male:CBD_S	1.004	-1.240 to 3.247	No	ns	0.8334
Female:CBD_U vs. Female:Sham_S	-0.3747	-2.817 to 2.067	No	ns	0.9996
Female:CBD_U vs. Female:CBD_S	1.61	-0.8323 to 4.052	No	ns	0.4223
Female:CBD_U vs. Male:Sham_U	4.715	2.165 to 7.266	Yes	****	<0.0001
Female:CBD_U vs. Male:CBD_U	3.984	1.434 to 6.535	Yes	***	0.0003
Female:CBD_U vs. Male:Sham_S	2.242	-0.4637 to 4.947	No	ns	0.1669
Female:CBD_U vs. Male:CBD_S	1.913	-0.4481 to 4.275	No	ns	0.1872
Female:Sham_S vs. Female:CBD_S	1.985	-0.3439 to 4.313	No	ns	0.1433
Female:Sham_S vs. Male:Sham_U	5.09	2.648 to 7.532	Yes	****	<0.0001
Female:Sham_S vs. Male:CBD_U	4.359	1.917 to 6.801	Yes	****	<0.0001
Female:Sham_S vs. Male:Sham_S	2.616	0.01312 to 5.220	Yes	*	0.0481
Female:Sham_S vs. Male:CBD_S	2.288	0.04438 to 4.532	Yes	*	0.0429
Female:CBD_S vs. Male:Sham_U	3.105	0.6634 to 5.547	Yes	**	0.0051
Female:CBD_S vs. Male:CBD_U	2.375	-0.06733 to 4.817	No	ns	0.0616
Female:CBD_S vs. Male:Sham_S	0.6318	-1.971 to 3.235	No	ns	0.9931
Female:CBD_S vs. Male:CBD_S	0.3036	-1.940 to 2.547	No	ns	0.9998
Male:Sham_U vs. Male:CBD_U	-0.7307	-3.281 to 1.820	No	ns	0.9819
Male:Sham_U vs. Male:Sham_S	-2.474	-5.179 to 0.2318	No	ns	0.094
Male:Sham_U vs. Male:CBD_S	-2.802	-5.163 to -0.4404	Yes	*	0.0109
Male:CBD_U vs. Male:Sham_S	-1.743	-4.448 to 0.9625	No	ns	0.4514
Male:CBD_U vs. Male:CBD_S	-2.071	-4.433 to 0.2903	No	ns	0.1215
Male:Sham_S vs. Male:CBD_S	-0.3283	-2.856 to 2.199	No	ns	0.9999

Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	N1	N2	q	DF
Female:Sham_U vs. Female:CBD_U	9.32	10.23	-0.9098	0.7595	6	5	1.694	36
Female:Sham_U vs. Female:Sham_S	9.32	10.6	-1.285	0.7241	6	6	2.509	36
Female:Sham_U vs. Female:CBD_S	9.32	8.62	0.7	0.7241	6	6	1.367	36
Female:Sham_U vs. Male:Sham_U	9.32	5.514	3.805	0.7595	6	5	7.086	36
Female:Sham_U vs. Male:CBD_U	9.32	6.245	3.075	0.7595	6	5	5.725	36
Female:Sham_U vs. Male:Sham_S	9.32	7.988	1.332	0.8096	6	4	2.326	36
Female:Sham_U vs. Male:CBD_S	9.32	8.316	1.004	0.6978	6	7	2.034	36
Female:CBD_U vs. Female:Sham_S	10.23	10.6	-0.3747	0.7595	5	6	0.6978	36
Female:CBD_U vs. Female:CBD_S	10.23	8.62	1.61	0.7595	5	6	2.998	36
Female:CBD_U vs. Male:Sham_U	10.23	5.514	4.715	0.7932	5	5	8.406	36
Female:CBD_U vs. Male:CBD_U	10.23	6.245	3.984	0.7932	5	5	7.104	36
Female:CBD_U vs. Male:Sham_S	10.23	7.988	2.242	0.8414	5	4	3.768	36
Female:CBD_U vs. Male:CBD_S	10.23	8.316	1.913	0.7344	5	7	3.684	36
Female:Sham_S vs. Female:CBD_S	10.6	8.62	1.985	0.7241	6	6	3.876	36
Female:Sham_S vs. Male:Sham_U	10.6	5.514	5.09	0.7595	6	5	9.478	36
Female:Sham_S vs. Male:CBD_U	10.6	6.245	4.359	0.7595	6	5	8.117	36
Female:Sham_S vs. Male:Sham_S	10.6	7.988	2.616	0.8096	6	4	4.57	36
Female:Sham_S vs. Male:CBD_S	10.6	8.316	2.288	0.6978	6	7	4.637	36
Female:CBD_S vs. Male:Sham_U	8.62	5.514	3.105	0.7595	6	5	5.783	36
Female:CBD_S vs. Male:CBD_U	8.62	6.245	2.375	0.7595	6	5	4.422	36
Female:CBD_S vs. Male:Sham_S	8.62	7.988	0.6318	0.8096	6	4	1.104	36
Female:CBD_S vs. Male:CBD_S	8.62	8.316	0.3036	0.6978	6	7	0.6153	36
Male:Sham_U vs. Male:CBD_U	5.514	6.245	-0.7307	0.7932	5	5	1.303	36
Male:Sham_U vs. Male:Sham_S	5.514	7.988	-2.474	0.8414	5	4	4.158	36
Male:Sham_U vs. Male:CBD_S	5.514	8.316	-2.802	0.7344	5	7	5.395	36
Male:CBD_U vs. Male:Sham_S	6.245	7.988	-1.743	0.8414	5	4	2.93	36
Male:CBD_U vs. Male:CBD_S	6.245	8.316	-2.071	0.7344	5	7	3.988	36
Male:Sham_S vs. Male:CBD_S	7.988	8.316	-0.3283	0.7861	4	7	0.5905	36

Supplementary Material 5. Full Statistical Summary of *Sigmar1* gene expression in the inferior colliculus of GASH/Sal animals across chronic treatment, acoustic seizure stimulation and sex.

Three-way ANOVA		Ordinary			
Alpha		0.05			
Source of Variation	% of total variation	P value	P value summary	Significant?	
Sex	19.89	0.0011	**	Yes	
Treatment	6.124	0.0569	ns	No	
Condition	1.565	0.3265	ns	No	
Sex x Treatment	0.5521	0.5583	ns	No	
Sex x Condition	7.203	0.0397	*	Yes	
Treatment x Condition	2.96	0.1798	ns	No	
Sex x Treatment x Condition	3.614	0.1394	ns	No	
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Sex	7.219	1	7.219	F (1, 36) = 12.57	P=0.0011
Treatment	2.223	1	2.223	F (1, 36) = 3.871	P=0.0569
Condition	0.5681	1	0.5681	F (1, 36) = 0.9895	P=0.3265
Sex x Treatment	0.2004	1	0.2004	F (1, 36) = 0.3490	P=0.5583
Sex x Condition	2.614	1	2.614	F (1, 36) = 4.554	P=0.0397
Treatment x Condition	1.074	1	1.074	F (1, 36) = 1.871	P=0.1798
Sex x Treatment x Condition	1.312	1	1.312	F (1, 36) = 2.285	P=0.1394
Residual	20.67	36	0.5741		
Number of comparisons per family	28				
Alpha	0.05				

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
Female:Sham_U vs. Female:CBD_U	1.391	-0.08472 to 2.866	No	ns	0.0768
Female:Sham_U vs. Female:Sham_S	0.07433	-1.332 to 1.481	No	ns	>0.9999
Female:Sham_U vs. Female:CBD_S	0.132	-1.275 to 1.539	No	ns	>0.9999
Female:Sham_U vs. Male:Sham_U	1.528	0.05238 to 3.003	Yes	*	0.0379
Female:Sham_U vs. Male:CBD_U	1.231	-0.2445 to 2.706	No	ns	0.161
Female:Sham_U vs. Male:Sham_S	1.176	-0.3969 to 2.748	No	ns	0.2701
Female:Sham_U vs. Male:CBD_S	0.9454	-0.4101 to 2.301	No	ns	0.3519
Female:CBD_U vs. Female:Sham_S	-1.316	-2.792 to 0.1591	No	ns	0.1096
Female:CBD_U vs. Female:CBD_S	-1.259	-2.734 to 0.2167	No	ns	0.1426
Female:CBD_U vs. Male:Sham_U	0.1371	-1.404 to 1.678	No	ns	>0.9999
Female:CBD_U vs. Male:CBD_U	-0.1598	-1.701 to 1.381	No	ns	>0.9999
Female:CBD_U vs. Male:Sham_S	-0.2148	-1.849 to 1.420	No	ns	0.9999
Female:CBD_U vs. Male:CBD_S	-0.4452	-1.872 to 0.9814	No	ns	0.9709
Female:Sham_S vs. Female:CBD_S	0.05767	-1.349 to 1.464	No	ns	>0.9999
Female:Sham_S vs. Male:Sham_U	1.453	-0.02195 to 2.929	No	ns	0.056
Female:Sham_S vs. Male:CBD_U	1.156	-0.3189 to 2.632	No	ns	0.2195
Female:Sham_S vs. Male:Sham_S	1.101	-0.4712 to 2.674	No	ns	0.3468
Female:Sham_S vs. Male:CBD_S	0.871	-0.4845 to 2.227	No	ns	0.4546
Female:CBD_S vs. Male:Sham_U	1.396	-0.07962 to 2.871	No	ns	0.0749
Female:CBD_S vs. Male:CBD_U	1.099	-0.3765 to 2.574	No	ns	0.2744
Female:CBD_S vs. Male:Sham_S	1.044	-0.5289 to 2.616	No	ns	0.4137
Female:CBD_S vs. Male:CBD_S	0.8134	-0.5421 to 2.169	No	ns	0.5408
Male:Sham_U vs. Male:CBD_U	-0.2969	-1.838 to 1.244	No	ns	0.9984
Male:Sham_U vs. Male:Sham_S	-0.3519	-1.986 to 1.282	No	ns	0.9967
Male:Sham_U vs. Male:CBD_S	-0.5823	-2.009 to 0.8443	No	ns	0.8881
Male:CBD_U vs. Male:Sham_S	-0.05498	-1.689 to 1.579	No	ns	>0.9999
Male:CBD_U vs. Male:CBD_S	-0.2854	-1.712 to 1.141	No	ns	0.9979
Male:Sham_S vs. Male:CBD_S	-0.2304	-1.758 to 1.297	No	ns	0.9997

Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	N1	N2	q	DF
Female:Sham_U vs. Female:CBD_U	4.205	2.814	1.391	0.4588	6	5	4.286	36
Female:Sham_U vs. Female:Sham_S	4.205	4.131	0.07433	0.4375	6	6	0.2403	36
Female:Sham_U vs. Female:CBD_S	4.205	4.073	0.132	0.4375	6	6	0.4267	36
Female:Sham_U vs. Male:Sham_U	4.205	2.677	1.528	0.4588	6	5	4.709	36
Female:Sham_U vs. Male:CBD_U	4.205	2.974	1.231	0.4588	6	5	3.794	36
Female:Sham_U vs. Male:Sham_S	4.205	3.029	1.176	0.4891	6	4	3.4	36
Female:Sham_U vs. Male:CBD_S	4.205	3.26	0.9454	0.4216	6	7	3.171	36
Female:CBD_U vs. Female:Sham_S	2.814	4.131	-1.316	0.4588	5	6	4.057	36
Female:CBD_U vs. Female:CBD_S	2.814	4.073	-1.259	0.4588	5	6	3.879	36
Female:CBD_U vs. Male:Sham_U	2.814	2.677	0.1371	0.4792	5	5	0.4046	36
Female:CBD_U vs. Male:CBD_U	2.814	2.974	-0.1598	0.4792	5	5	0.4716	36
Female:CBD_U vs. Male:Sham_S	2.814	3.029	-0.2148	0.5083	5	4	0.5976	36
Female:CBD_U vs. Male:CBD_S	2.814	3.26	-0.4452	0.4437	5	7	1.419	36
Female:Sham_S vs. Female:CBD_S	4.131	4.073	0.05767	0.4375	6	6	0.1864	36
Female:Sham_S vs. Male:Sham_U	4.131	2.677	1.453	0.4588	6	5	4.48	36
Female:Sham_S vs. Male:CBD_U	4.131	2.974	1.156	0.4588	6	5	3.564	36
Female:Sham_S vs. Male:Sham_S	4.131	3.029	1.101	0.4891	6	4	3.185	36
Female:Sham_S vs. Male:CBD_S	4.131	3.26	0.871	0.4216	6	7	2.922	36
Female:CBD_S vs. Male:Sham_U	4.073	2.677	1.396	0.4588	6	5	4.302	36
Female:CBD_S vs. Male:CBD_U	4.073	2.974	1.099	0.4588	6	5	3.387	36
Female:CBD_S vs. Male:Sham_S	4.073	3.029	1.044	0.4891	6	4	3.018	36
Female:CBD_S vs. Male:CBD_S	4.073	3.26	0.8134	0.4216	6	7	2.729	36
Male:Sham_U vs. Male:CBD_U	2.677	2.974	-0.2969	0.4792	5	5	0.8762	36
Male:Sham_U vs. Male:Sham_S	2.677	3.029	-0.3519	0.5083	5	4	0.9791	36
Male:Sham_U vs. Male:CBD_S	2.677	3.26	-0.5823	0.4437	5	7	1.856	36
Male:CBD_U vs. Male:Sham_S	2.974	3.029	-0.05498	0.5083	5	4	0.153	36
Male:CBD_U vs. Male:CBD_S	2.974	3.26	-0.2854	0.4437	5	7	0.9097	36
Male:Sham_S vs. Male:CBD_S	3.029	3.26	-0.2304	0.4749	4	7	0.6862	36

Supplementary Material 5. Full Statistical Summary of *Adora1* gene expression in the inferior colliculus of GASH/Sal animals across chronic treatment, acoustic seizure stimulation and sex.

Three-way ANOVA		Ordinary			
Alpha		0.05			
Source of Variation	% of total variation	P value	P value summary	Significant?	
Sex	38.34	<0.0001	****	Yes	
Treatment	0.9088	0.3316	ns	No	
Condition	0.1389	0.7027	ns	No	
Sex x Treatment	23.1	<0.0001	****	Yes	
Sex x Condition	1.746	0.181	ns	No	
Treatment x Condition	1.756	0.1798	ns	No	
Sex x Treatment x Condition	0.3699	0.534	ns	No	
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Sex	31.08	1	31.08	F (1, 36) = 40.86	P<0.0001
Treatment	0.7367	1	0.7367	F (1, 36) = 0.9686	P=0.3316
Condition	0.1126	1	0.1126	F (1, 36) = 0.1481	P=0.7027
Sex x Treatment	18.73	1	18.73	F (1, 36) = 24.62	P<0.0001
Sex x Condition	1.415	1	1.415	F (1, 36) = 1.860	P=0.1810
Treatment x Condition	1.424	1	1.424	F (1, 36) = 1.872	P=0.1798
Sex x Treatment x Condition	0.2999	1	0.2999	F (1, 36) = 0.3943	P=0.5340
Residual	27.38	36	0.7606		
Compare each cell mean with every other cell mean					
Number of families	1				
Number of comparisons per family	28				
Alpha	0.05				

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
Female:Sham_U vs. Female:CBD_U	0.9976	-0.7005 to 2.696	No	ns	0.5668
Female:Sham_U vs. Female:Sham_S	1.591	-0.02771 to 3.210	No	ns	0.0569
Female:Sham_U vs. Female:CBD_S	1.525	-0.09358 to 3.145	No	ns	0.077
Female:Sham_U vs. Male:Sham_U	3.555	1.857 to 5.253	Yes	****	<0.0001
Female:Sham_U vs. Male:CBD_U	3.492	1.794 to 5.190	Yes	****	<0.0001
Female:Sham_U vs. Male:Sham_S	2.169	0.3584 to 3.979	Yes	**	0.0098
Female:Sham_U vs. Male:CBD_S	1.711	0.1503 to 3.271	Yes	*	0.0233
Female:CBD_U vs. Female:Sham_S	0.5937	-1.104 to 2.292	No	ns	0.947
Female:CBD_U vs. Female:CBD_S	0.5279	-1.170 to 2.226	No	ns	0.9715
Female:CBD_U vs. Male:Sham_U	2.558	0.7841 to 4.331	Yes	**	0.0011
Female:CBD_U vs. Male:CBD_U	2.494	0.7205 to 4.268	Yes	**	0.0015
Female:CBD_U vs. Male:Sham_S	1.171	-0.7102 to 3.052	No	ns	0.4949
Female:CBD_U vs. Male:CBD_S	0.7129	-0.9291 to 2.355	No	ns	0.8531
Female:Sham_S vs. Female:CBD_S	-0.06587	-1.685 to 1.553	No	ns	>0.9999
Female:Sham_S vs. Male:Sham_U	1.964	0.2659 to 3.662	Yes	*	0.0141
Female:Sham_S vs. Male:CBD_U	1.9	0.2022 to 3.598	Yes	*	0.0193
Female:Sham_S vs. Male:Sham_S	0.5772	-1.233 to 2.387	No	ns	0.9673
Female:Sham_S vs. Male:CBD_S	0.1192	-1.441 to 1.679	No	ns	>0.9999
Female:CBD_S vs. Male:Sham_U	2.03	0.3318 to 3.728	Yes	*	0.0101
Female:CBD_S vs. Male:CBD_U	1.966	0.2681 to 3.664	Yes	*	0.0139
Female:CBD_S vs. Male:Sham_S	0.6431	-1.167 to 2.453	No	ns	0.9426
Female:CBD_S vs. Male:CBD_S	0.185	-1.375 to 1.745	No	ns	>0.9999
Male:Sham_U vs. Male:CBD_U	-0.06366	-1.837 to 1.710	No	ns	>0.9999
Male:Sham_U vs. Male:Sham_S	-1.387	-3.268 to 0.4944	No	ns	0.2861
Male:Sham_U vs. Male:CBD_S	-1.845	-3.487 to -0.2028	Yes	*	0.0186
Male:CBD_U vs. Male:Sham_S	-1.323	-3.204 to 0.5581	No	ns	0.3416
Male:CBD_U vs. Male:CBD_S	-1.781	-3.423 to -0.1391	Yes	*	0.0256
Male:Sham_S vs. Male:CBD_S	-0.458	-2.216 to 1.300	No	ns	0.9895

Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	N1	N2	q	DF
Female:Sham_U vs. Female:CBD_U	7.761	6.763	0.9976	0.5281	6	5	2.671	36
Female:Sham_U vs. Female:Sham_S	7.761	6.169	1.591	0.5035	6	6	4.469	36
Female:Sham_U vs. Female:CBD_S	7.761	6.235	1.525	0.5035	6	6	4.284	36
Female:Sham_U vs. Male:Sham_U	7.761	4.205	3.555	0.5281	6	5	9.521	36
Female:Sham_U vs. Male:CBD_U	7.761	4.269	3.492	0.5281	6	5	9.35	36
Female:Sham_U vs. Male:Sham_S	7.761	5.592	2.169	0.563	6	4	5.448	36
Female:Sham_U vs. Male:CBD_S	7.761	6.05	1.711	0.4852	6	7	4.986	36
Female:CBD_U vs. Female:Sham_S	6.763	6.169	0.5937	0.5281	5	6	1.59	36
Female:CBD_U vs. Female:CBD_S	6.763	6.235	0.5279	0.5281	5	6	1.414	36
Female:CBD_U vs. Male:Sham_U	6.763	4.205	2.558	0.5516	5	5	6.558	36
Female:CBD_U vs. Male:CBD_U	6.763	4.269	2.494	0.5516	5	5	6.395	36
Female:CBD_U vs. Male:Sham_S	6.763	5.592	1.171	0.585	5	4	2.831	36
Female:CBD_U vs. Male:CBD_S	6.763	6.05	0.7129	0.5107	5	7	1.974	36
Female:Sham_S vs. Female:CBD_S	6.169	6.235	-0.06587	0.5035	6	6	0.185	36
Female:Sham_S vs. Male:Sham_U	6.169	4.205	1.964	0.5281	6	5	5.259	36
Female:Sham_S vs. Male:CBD_U	6.169	4.269	1.9	0.5281	6	5	5.089	36
Female:Sham_S vs. Male:Sham_S	6.169	5.592	0.5772	0.563	6	4	1.45	36
Female:Sham_S vs. Male:CBD_S	6.169	6.05	0.1192	0.4852	6	7	0.3473	36
Female:CBD_S vs. Male:Sham_U	6.235	4.205	2.03	0.5281	6	5	5.436	36
Female:CBD_S vs. Male:CBD_U	6.235	4.269	1.966	0.5281	6	5	5.265	36
Female:CBD_S vs. Male:Sham_S	6.235	5.592	0.6431	0.563	6	4	1.615	36
Female:CBD_S vs. Male:CBD_S	6.235	6.05	0.185	0.4852	6	7	0.5393	36
Male:Sham_U vs. Male:CBD_U	4.205	4.269	-0.06366	0.5516	5	5	0.1632	36
Male:Sham_U vs. Male:Sham_S	4.205	5.592	-1.387	0.585	5	4	3.352	36
Male:Sham_U vs. Male:CBD_S	4.205	6.05	-1.845	0.5107	5	7	5.109	36
Male:CBD_U vs. Male:Sham_S	4.269	5.592	-1.323	0.585	5	4	3.198	36
Male:CBD_U vs. Male:CBD_S	4.269	6.05	-1.781	0.5107	5	7	4.933	36
Male:Sham_S vs. Male:CBD_S	5.592	6.05	-0.458	0.5466	4	7	1.185	36

Supplementary Material 5. Full Statistical Summary of *Slc29a1* gene expression in the inferior colliculus of GASH/Sal animals across chronic treatment, acoustic seizure stimulation and sex.

Three-way ANOVA		Ordinary			
Alpha		0.05			
Source of Variation	% of total variation	P value	P value summary	Significant?	
Sex	51.05	<0.0001	****	Yes	
Treatment	0.01494	0.8978	ns	No	
Condition	14.81	0.0002	***	Yes	
Sex x Treatment	1.882	0.1551	ns	No	
Sex x Condition	6.016	0.0135	*	Yes	
Treatment x Condition	0.02683	0.8633	ns	No	
Sex x Treatment x Condition	0.02196	0.8762	ns	No	
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Sex	23.02	1	23.02	F (1, 36) = 57.23	P<0.0001
Treatment	0.006736	1	0.006736	F (1, 36) = 0.01674	P=0.8978
Condition	6.677	1	6.677	F (1, 36) = 16.60	P=0.0002
Sex x Treatment	0.8485	1	0.8485	F (1, 36) = 2.109	P=0.1551
Sex x Condition	2.713	1	2.713	F (1, 36) = 6.744	P=0.0135
Treatment x Condition	0.0121	1	0.0121	F (1, 36) = 0.03008	P=0.8633
Sex x Treatment x Condition	0.009901	1	0.009901	F (1, 36) = 0.02461	P=0.8762
Residual	14.48	36	0.4023		
Compare each cell mean with every other cell mean					
Number of families	1				
Number of comparisons per family	28				
Alpha	0.05				

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
Female:Sham_U vs. Female:CBD_U	-0.2894	-1.524 to 0.9455	No	ns	0.9945
Female:Sham_U vs. Female:Sham_S	0.3032	-0.8742 to 1.481	No	ns	0.9902
Female:Sham_U vs. Female:CBD_S	0.02022	-1.157 to 1.198	No	ns	>0.9999
Female:Sham_U vs. Male:Sham_U	2.28	1.046 to 3.515	Yes	****	<0.0001
Female:Sham_U vs. Male:CBD_U	0.924	-0.3109 to 2.159	No	ns	0.2692
Female:Sham_U vs. Male:Sham_S	1.96	0.6437 to 3.277	Yes	***	0.0007
Female:Sham_U vs. Male:CBD_S	0.7317	-0.4029 to 1.866	No	ns	0.4501
Female:CBD_U vs. Female:Sham_S	0.5926	-0.6423 to 1.828	No	ns	0.7793
Female:CBD_U vs. Female:CBD_S	0.3096	-0.9253 to 1.545	No	ns	0.9917
Female:CBD_U vs. Male:Sham_U	2.57	1.280 to 3.860	Yes	****	<0.0001
Female:CBD_U vs. Male:CBD_U	1.213	-0.07639 to 2.503	No	ns	0.0778
Female:CBD_U vs. Male:Sham_S	2.25	0.8815 to 3.618	Yes	***	0.0002
Female:CBD_U vs. Male:CBD_S	1.021	-0.1730 to 2.215	No	ns	0.1407
Female:Sham_S vs. Female:CBD_S	-0.283	-1.460 to 0.8945	No	ns	0.9935
Female:Sham_S vs. Male:Sham_U	1.977	0.7423 to 3.212	Yes	***	0.0002
Female:Sham_S vs. Male:CBD_U	0.6208	-0.6141 to 1.856	No	ns	0.7376
Female:Sham_S vs. Male:Sham_S	1.657	0.3405 to 2.973	Yes	**	0.0058
Female:Sham_S vs. Male:CBD_S	0.4285	-0.7061 to 1.563	No	ns	0.9223
Female:CBD_S vs. Male:Sham_U	2.26	1.025 to 3.495	Yes	****	<0.0001
Female:CBD_S vs. Male:CBD_U	0.9038	-0.3311 to 2.139	No	ns	0.2944
Female:CBD_S vs. Male:Sham_S	1.94	0.6235 to 3.256	Yes	***	0.0008
Female:CBD_S vs. Male:CBD_S	0.7115	-0.4231 to 1.846	No	ns	0.4856
Male:Sham_U vs. Male:CBD_U	-1.356	-2.646 to -0.06657	Yes	*	0.0334
Male:Sham_U vs. Male:Sham_S	-0.3203	-1.688 to 1.048	No	ns	0.9945
Male:Sham_U vs. Male:CBD_S	-1.549	-2.743 to -0.3545	Yes	**	0.0041
Male:CBD_U vs. Male:Sham_S	1.036	-0.3320 to 2.404	No	ns	0.2559
Male:CBD_U vs. Male:CBD_S	-0.1923	-1.386 to 1.002	No	ns	0.9995
Male:Sham_S vs. Male:CBD_S	-1.228	-2.507 to 0.04985	No	ns	0.0671

Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	N1	N2	q	DF
Female:Sham_U vs. Female:CBD_U	6.701	6.991	-0.2894	0.3841	6	5	1.066	36
Female:Sham_U vs. Female:Sham_S	6.701	6.398	0.3032	0.3662	6	6	1.171	36
Female:Sham_U vs. Female:CBD_S	6.701	6.681	0.02022	0.3662	6	6	0.07811	36
Female:Sham_U vs. Male:Sham_U	6.701	4.421	2.28	0.3841	6	5	8.397	36
Female:Sham_U vs. Male:CBD_U	6.701	5.777	0.924	0.3841	6	5	3.403	36
Female:Sham_U vs. Male:Sham_S	6.701	4.741	1.96	0.4094	6	4	6.771	36
Female:Sham_U vs. Male:CBD_S	6.701	5.97	0.7317	0.3529	6	7	2.933	36
Female:CBD_U vs. Female:Sham_S	6.991	6.398	0.5926	0.3841	5	6	2.182	36
Female:CBD_U vs. Female:CBD_S	6.991	6.681	0.3096	0.3841	5	6	1.14	36
Female:CBD_U vs. Male:Sham_U	6.991	4.421	2.57	0.4011	5	5	9.06	36
Female:CBD_U vs. Male:CBD_U	6.991	5.777	1.213	0.4011	5	5	4.278	36
Female:CBD_U vs. Male:Sham_S	6.991	4.741	2.25	0.4255	5	4	7.477	36
Female:CBD_U vs. Male:CBD_S	6.991	5.97	1.021	0.3714	5	7	3.889	36
Female:Sham_S vs. Female:CBD_S	6.398	6.681	-0.283	0.3662	6	6	1.093	36
Female:Sham_S vs. Male:Sham_U	6.398	4.421	1.977	0.3841	6	5	7.281	36
Female:Sham_S vs. Male:CBD_U	6.398	5.777	0.6208	0.3841	6	5	2.286	36
Female:Sham_S vs. Male:Sham_S	6.398	4.741	1.657	0.4094	6	4	5.723	36
Female:Sham_S vs. Male:CBD_S	6.398	5.97	0.4285	0.3529	6	7	1.717	36
Female:CBD_S vs. Male:Sham_U	6.681	4.421	2.26	0.3841	6	5	8.323	36
Female:CBD_S vs. Male:CBD_U	6.681	5.777	0.9038	0.3841	6	5	3.328	36
Female:CBD_S vs. Male:Sham_S	6.681	4.741	1.94	0.4094	6	4	6.701	36
Female:CBD_S vs. Male:CBD_S	6.681	5.97	0.7115	0.3529	6	7	2.852	36
Male:Sham_U vs. Male:CBD_U	4.421	5.777	-1.356	0.4011	5	5	4.782	36
Male:Sham_U vs. Male:Sham_S	4.421	4.741	-0.3203	0.4255	5	4	1.065	36
Male:Sham_U vs. Male:CBD_S	4.421	5.97	-1.549	0.3714	5	7	5.897	36
Male:CBD_U vs. Male:Sham_S	5.777	4.741	1.036	0.4255	5	4	3.444	36
Male:CBD_U vs. Male:CBD_S	5.777	5.97	-0.1923	0.3714	5	7	0.7323	36
Male:Sham_S vs. Male:CBD_S	4.741	5.97	-1.228	0.3975	4	7	4.37	36

Supplementary Material 5. Full Statistical Summary of *Cnr1* gene expression in the inferior colliculus of GASH/Sal animals across chronic treatment, acoustic seizure stimulation and sex.

Three-way ANOVA		Ordinary			
Alpha		0.05			
Source of Variation	% of total variation	P value	P value summary	Significant?	
Sex	43.69	<0.0001	****	Yes	
Treatment	2.199	0.0668	ns	No	
Condition	1.069	0.1955	ns	No	
Sex x Treatment	29.33	<0.0001	****	Yes	
Sex x Condition	2.065	0.0753	ns	No	
Treatment x Condition	0.8107	0.2582	ns	No	
Sex x Treatment x Condition	0.3707	0.4422	ns	No	
ANOVA table	SS	DF	MS	F (DFn, DFd)	P value
Sex	40.01	1	40.01	F (1, 34) = 71.26	P<0.0001
Treatment	2.014	1	2.014	F (1, 34) = 3.587	P=0.0668
Condition	0.9789	1	0.9789	F (1, 34) = 1.743	P=0.1955
Sex x Treatment	26.86	1	26.86	F (1, 34) = 47.83	P<0.0001
Sex x Condition	1.891	1	1.891	F (1, 34) = 3.367	P=0.0753
Treatment x Condition	0.7425	1	0.7425	F (1, 34) = 1.322	P=0.2582
Sex x Treatment x Condition	0.3395	1	0.3395	F (1, 34) = 0.6046	P=0.4422
Residual	19.09	34	0.5615		
Number of comparisons per family	28				
Alpha	0.05				

Tukey's multiple comparisons test	Mean Diff.	95.00% CI of diff.	Significant?	Summary	Adjusted P Value
Female:Sham_U vs. Female:CBD_U	-0.3295	-1.794 to 1.135	No	ns	0.9955
Female:Sham_U vs. Female:Sham_S	0.7217	-0.7424 to 2.186	No	ns	0.7524
Female:Sham_U vs. Female:CBD_S	1.291	-0.1046 to 2.687	No	ns	0.0867
Female:Sham_U vs. Male:Sham_U	3.828	2.364 to 5.293	Yes	****	<0.0001
Female:Sham_U vs. Male:CBD_U	3.006	1.542 to 4.470	Yes	****	<0.0001
Female:Sham_U vs. Male:Sham_S	1.687	0.1262 to 3.248	Yes	*	0.0266
Female:Sham_U vs. Male:CBD_S	1.038	-0.3582 to 2.434	No	ns	0.2742
Female:CBD_U vs. Female:Sham_S	1.051	-0.4780 to 2.580	No	ns	0.3667
Female:CBD_U vs. Female:CBD_S	1.621	0.1567 to 3.085	Yes	*	0.0215
Female:CBD_U vs. Male:Sham_U	4.158	2.629 to 5.687	Yes	****	<0.0001
Female:CBD_U vs. Male:CBD_U	3.335	1.806 to 4.864	Yes	****	<0.0001
Female:CBD_U vs. Male:Sham_S	2.016	0.3944 to 3.638	Yes	**	0.0068
Female:CBD_U vs. Male:CBD_S	1.367	-0.09679 to 2.831	No	ns	0.0814
Female:Sham_S vs. Female:CBD_S	0.5696	-0.8945 to 2.034	No	ns	0.9087
Female:Sham_S vs. Male:Sham_U	3.107	1.578 to 4.636	Yes	****	<0.0001
Female:Sham_S vs. Male:CBD_U	2.284	0.7547 to 3.813	Yes	***	0.0007
Female:Sham_S vs. Male:Sham_S	0.9651	-0.6568 to 2.587	No	ns	0.5474
Female:Sham_S vs. Male:CBD_S	0.3161	-1.148 to 1.780	No	ns	0.9965
Female:CBD_S vs. Male:Sham_U	2.537	1.073 to 4.001	Yes	****	<0.0001
Female:CBD_S vs. Male:CBD_U	1.714	0.2502 to 3.178	Yes	*	0.0126
Female:CBD_S vs. Male:Sham_S	0.3956	-1.165 to 1.956	No	ns	0.9909
Female:CBD_S vs. Male:CBD_S	-0.2535	-1.649 to 1.142	No	ns	0.9988
Male:Sham_U vs. Male:CBD_U	-0.8228	-2.352 to 0.7064	No	ns	0.6647
Male:Sham_U vs. Male:Sham_S	-2.142	-3.764 to -0.5196	Yes	**	0.0034
Male:Sham_U vs. Male:CBD_S	-2.791	-4.255 to -1.327	Yes	****	<0.0001
Male:CBD_U vs. Male:Sham_S	-1.319	-2.941 to 0.3032	No	ns	0.1826
Male:CBD_U vs. Male:CBD_S	-1.968	-3.432 to -0.5038	Yes	**	0.0028
Male:Sham_S vs. Male:CBD_S	-0.6491	-2.210 to 0.9116	No	ns	0.8761

Test details	Mean 1	Mean 2	Mean Diff.	SE of diff.	N1	N2	q	DF
Female:Sham_U vs. Female:CBD_U	8.022	8.352	-0.3295	0.4538	6	5	1.027	34
Female:Sham_U vs. Female:Sham_S	8.022	7.3	0.7217	0.4538	6	5	2.249	34
Female:Sham_U vs. Female:CBD_S	8.022	6.731	1.291	0.4326	6	6	4.221	34
Female:Sham_U vs. Male:Sham_U	8.022	4.194	3.828	0.4538	6	5	11.93	34
Female:Sham_U vs. Male:CBD_U	8.022	5.016	3.006	0.4538	6	5	9.368	34
Female:Sham_U vs. Male:Sham_S	8.022	6.335	1.687	0.4837	6	4	4.932	34
Female:Sham_U vs. Male:CBD_S	8.022	6.984	1.038	0.4326	6	6	3.392	34
Female:CBD_U vs. Female:Sham_S	8.352	7.3	1.051	0.4739	5	5	3.137	34
Female:CBD_U vs. Female:CBD_S	8.352	6.731	1.621	0.4538	5	6	5.052	34
Female:CBD_U vs. Male:Sham_U	8.352	4.194	4.158	0.4739	5	5	12.41	34
Female:CBD_U vs. Male:CBD_U	8.352	5.016	3.335	0.4739	5	5	9.952	34
Female:CBD_U vs. Male:Sham_S	8.352	6.335	2.016	0.5027	5	4	5.673	34
Female:CBD_U vs. Male:CBD_S	8.352	6.984	1.367	0.4538	5	6	4.262	34
Female:Sham_S vs. Female:CBD_S	7.3	6.731	0.5696	0.4538	5	6	1.775	34
Female:Sham_S vs. Male:Sham_U	7.3	4.194	3.107	0.4739	5	5	9.27	34
Female:Sham_S vs. Male:CBD_U	7.3	5.016	2.284	0.4739	5	5	6.815	34
Female:Sham_S vs. Male:Sham_S	7.3	6.335	0.9651	0.5027	5	4	2.715	34
Female:Sham_S vs. Male:CBD_S	7.3	6.984	0.3161	0.4538	5	6	0.9851	34
Female:CBD_S vs. Male:Sham_U	6.731	4.194	2.537	0.4538	6	5	7.907	34
Female:CBD_S vs. Male:CBD_U	6.731	5.016	1.714	0.4538	6	5	5.343	34
Female:CBD_S vs. Male:Sham_S	6.731	6.335	0.3956	0.4837	6	4	1.157	34
Female:CBD_S vs. Male:CBD_S	6.731	6.984	-0.2535	0.4326	6	6	0.8287	34
Male:Sham_U vs. Male:CBD_U	4.194	5.016	-0.8228	0.4739	5	5	2.455	34
Male:Sham_U vs. Male:Sham_S	4.194	6.335	-2.142	0.5027	5	4	6.025	34
Male:Sham_U vs. Male:CBD_S	4.194	6.984	-2.791	0.4538	5	6	8.698	34
Male:CBD_U vs. Male:Sham_S	5.016	6.335	-1.319	0.5027	5	4	3.71	34
Male:CBD_U vs. Male:CBD_S	5.016	6.984	-1.968	0.4538	5	6	6.133	34
Male:Sham_S vs. Male:CBD_S	6.335	6.984	-0.6491	0.4837	4	6	1.898	34