

Immature oligodendrocyte		treatment				F-statistics	p-value derived from one way ANOVA	p-value derived from Bonferroni post hoc test				
Analysis, unit	Figure	Control (ct) Mean \pm SD	Caffeine (caf) Mean \pm SD	Taurine (ta) Mean \pm SD	caffeine + taurine (caf + ta) Mean \pm SD			ct vs. caf	ct vs. ta	ct vs. caf + ta	caf vs. caf + ta	ta vs. cat + ta
Olig2 cells/mm ²	1B	314.2 \pm 40.12	192.2 \pm 60.26	188.6 \pm 59.62	188.1 \pm 68.08	F _{3,56} = 17.33	<0.0001	<0.0001	<0.0001	<0.0001	>0.9999	>0.9999
A2B5 area/mm ²	1C	0.210814 \pm 0.039544	0.137515 \pm 0.046613	0.105316 \pm 0.039983	0.111146 \pm 0.048131	F _{3,56} = 18.43	<0.0001	0.0001	<0.0001	<0.0001	0.5215	>0.9999
PCNA ⁺ cells of Olig2 [%]	2B	40.15 \pm 10.8	8.674 \pm 7.024	19.71 \pm 8.266	15.97 \pm 6.151	F _{3,56} = 40.10	<0.0001	<0.0001	<0.0001	<0.0001	0.0932	>0.9999
ratio cCaspase-3/ GAPDH	2C	1.00 \pm 0.1721	1.874 \pm 0.2655	1.208 \pm 0.4440	3.054 \pm 1.301	F _{3,12} = 6.886	0.0060	0.5253	>0.9999	0.0071	0.1780	0.0151
Differentiated Oligodendrocytes												
Olig2 cells/mm ²	3B	368.9 \pm 61.30	300.3 \pm 56.29	278.1 \pm 40.82	248.3 \pm 60.34	F _{3,56} = 12.91	<0.0001	0.0063	0.0002	<0.0001	0.0635	0.7314
% MBP cells	3C	93.29 \pm 2.708	85.29 \pm 4.673	85.98 \pm 3.219	84.69 \pm 4.034	F _{3,56} = 17.43	<0.0001	<0.0001	<0.0001	<0.0001	>0.9999	>0.9999

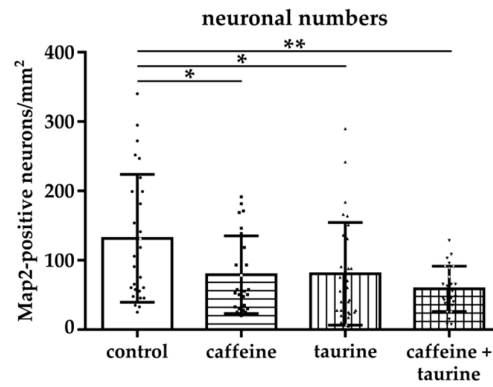
Supplementary table 1: Detailed results of statistical analyses for effects on oligodendrocytes.

Neurons 4d		treatment				F-statistics	p-value derived from one way ANOVA	p-value derived from Bonferroni post hoc test				
Analysis, unit	Figure	Control (ct) Mean \pm SD	Caffeine (caf) Mean \pm SD	Taurine (ta) Mean \pm SD	caffeine + taurine (caf + ta) Mean \pm SD			ct vs. caf	ct vs. ta	ct vs. caf + ta	caf vs. caf + ta	ta vs. cat + ta
Number total dendrites/cell	4B	5.758 \pm 2.865	3.944 \pm 1.818	3.313 \pm 1.361	3.825 \pm 1.855	$F_{3,370} = 25.07$	<0.0001	<0.0001	<0.0001	<0.0001	>0.9999	0.4784
Number primary dendrites/cell	4C	3.141 \pm 1.161	2.899 \pm 1.001	2.759 \pm 0.9317	2.864 \pm 1.048	$F_{3,370} = 2.251$	0.0820	0.5632	0.0716	0.2996	>0.9999	>0.9999
Number higher dendrites/cell	4D	3.866 \pm 2.322	2.514 \pm 0.9316	2.087 \pm 0.5146	2.622 \pm 1.320	$F_{3,160} = 9.699$	<0.0001	0.0007	0.0002	0.0016	>0.9999	>0.9999
Total dendrite length/cell [μ m]	4E	240.6 \pm 98.65	170.0 \pm 83.77	154.3 \pm 76.92	187.4 \pm 82.16	$F_{3,370} = 17.76$	<0.0001	<0.0001	<0.0001	<0.0001	0.8219	0.0483
Primary dendrite length/cell [μ m]	4F	140.7 \pm 75.17	132.9 \pm 65.83	133.1 \pm 70.10	154.5 \pm 75.70	$F_{3,370} = 1.921$	0.1258	>0.9999	>0.9999	0.8654	0.1922	0.2231
Higher dendrite length/cell [μ m]	4G	147.6 \pm 87.25	89.34 \pm 41.79	80.03 \pm 38.16	89.00 \pm 56.11	$F_{3,160} = 10.97$	<0.0001	<0.0002	0.0003	0.0001	>0.9999	>0.9999
Map2 cells/mm ²	Supplementary	131.6 \pm 92.21	79.21 \pm 55.96	80.45 \pm 73.89	58.86 \pm 32.59	$F_{3,102} = 5.451$	0.0016	0.0337	0.0303	0.0011	>0.9999	>0.9999

Neurons d8												
Number total dendrites/cell	5B	9.560 ±4.595	5.293 ±2.669	5.603 ±2.645	5.062 ±2.315	F _{3, 312} = 34.89	<0.0001	<0.0001	<0.0001	<0.0001	>0.9999	>0.9999
Number primary dendrites/cell	5C	3.547 ±1.482	3.207 ±1.141	3.167 ±0.9989	3.123 ±1.100	F _{3, 312} = 2.020	0.1111	0.3761	0.2458	0.1358	>0.9999	>0.9999
Number higher dendrites/cell	5D	6.731 ±3.800	3.353 ±2.217	3.725 ±2.011	3.413 ±1.939	F _{3, 211} = 21.75	<0.0001	<0.0001	<0.0001	<0.0001	>0.9999	>0.9999
Total dendrite length/cell [µm]	5E	401.9 ±161.5	288.8 ±198.5	269.9 ±115.0	257.1 ±92.21	F _{3, 312} = 15.35	<0.0001	<0.0001	<0.0001	<0.0001	>0.9999	>0.9999
Primary dendrite length/cell [µm]	5F	152.0 ±85.47	184.7 ±111.7	164.7 ±78.91	180.6 ±89.43	F _{3, 312} = 2.061	0.1053	0.1390	>0.9999	0.2730	>0.9999	>0.9999
Higher dendrite length/cell [µm]	5G	279.8 ±165.8	167.5 ±148.2	160.8 ±94.24	134.7 ±76.62	F _{3, 211} = 14.50	<0.0001	<0.0001	<0.0001	<0.0001	>0.9999	>0.9999

Supplementary table 2: Detailed results of statistical analyses for effects on hippocampal neurons.

Supplementary Figure S1



Supplementary Figure S1: Caffeine and taurine reduce the number of hippocampal neurons. After a culture-period of three days hippocampal neurons were treated with 0.3 mg/ml caffeine and 4 mg/ml taurine alone or in combination for 24 h. The density of hippocampal neurons was quantified by counting Map2/DAPI-double-positive cells. Data are derived from 24-30 images of three independent experiments. * $p < 0.05$, ** $p < 0.01$, one-way ANOVA followed by a Bonferroni post hoc test.