

APPENDIX

Complete statistical results and exact P-values for each figure.

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Appendix Table S1

FIGURE	COMPARISON	P VALUE	POST HOC TEST
1A, left panel	ctrl vs D-Asp 10 μ M ctrl vs D-Asp 100 μ M ctrl vs D-Asp 200 μ M ctrl vs PMA	ns 0.0431 < 0.0001 < 0.0001	Tukey
1A, right panel	ctrl vs D-Asp 10 μ M ctrl vs D-Asp 100 μ M ctrl vs D-Asp 200 μ M ctrl vs PMA	ns 0.0024 0.0005 < 0.0001	Tukey
1B	ctrl vs D-Asp 100 μ M ctrl vs D-Asp 200 μ M ctrl vs PMA	0.0224 0.0002 0.0043	Bonferroni
1C	ctrl vs D-Asp (3d)	0.0438	Student's <i>t</i>-tests
1F, f	ctrl vs D-Asp (Low) ctrl vs D-Asp (Medium) ctrl vs D-Asp (M-High)	0.001 0.0083 0.0001	Student's <i>t</i>-tests Student's <i>t</i>-tests Student's <i>t</i>-tests
1F, g	ctrl vs D-Asp (MAG+ cells)	0.0002	Student's <i>t</i>-tests

Appendix Table S2

FIGURE	COMPARISON	P VALUE	POST HOC TEST
2C	ctrl vs D-Asp	< 0.0001	Student's <i>t</i>-tests
2D	ctrl vs D-Asp	0.0457	Student's <i>t</i>-tests
2G	ctrl vs LPC (6dpl) LPC vs LPC + D-Asp (6dpl)	0.0248 0.0025	Bonferroni
2H	ctrl vs LPC (6dpl) LPC vs LPC + D-Asp (6dpl)	0.0033 < 0.0001	Bonferroni
2J	ctrl vs LPC (10dpl) LPC vs LPC + D-Asp (10dpl)	< 0.0001 < 0.0001	Bonferroni

Appendix Table S3

FIGURE	COMPARISON	P VALUE	POST HOC TEST
3A, left panel	ctrl vs D-Asp	0.0012	Tukey
	D-Asp vs MK-801	0.0096	
3A, right panel	ctrl vs D-Asp	0.0001	Tukey
	D-Asp vs D-Asp + BED	0.0009	
	D-Asp vs D-Asp + YM244769	0.0041	
3B, left panel	ctrl vs D-Asp	0.0002	Tukey
	D-Asp vs MK-801	0.0002	
3B, right panel	ctrl vs D-Asp	0.0006	Tukey
	D-Asp vs D-Asp + BED	0.0024	
	D-Asp vs D-Asp + YM244769	0.0104	
3C, m	D-Asp vs D-Asp + MK-801	0.0341	Bonferroni
	D-Asp vs D-Asp + BED	< 0.0001	
	D-Asp vs D-Asp + YM244769	< 0.0001	
3C, n	D-Asp vs D-Asp + MK-801	0.0054	Bonferroni
	D-Asp vs D-Asp+ BED	< 0.0001	
	D-Asp vs D-Asp + YM244769	< 0.0001	
3D	ctrl vs D-Asp 10 μ M	0.0452	Tukey
	ctrl vs D-Asp 100 μ M	0.0015	
	ctrl vs D-Asp 200 μ M	0.0003	
	ctrl vs PMA	< 0.0001	
3E	ctrl vs D-Asp	0.0107	Tukey
	D-Asp vs MK-801	0.0369	

Appendix Table S4

FIGURE	COMPARISON	P VALUE	POST HOC TEST
4A	ctrl vs D-Asp	< 0.0001	Bonferroni
	D-Asp vs D-Asp + MK-801	< 0.0001	
	D-Asp vs D-Asp + APV	< 0.0001	
	D-Asp + MK-801 vs D-Asp + APV	ns	
4a	ctrl vs D-Asp	< 0.0001	Bonferroni
	D-Asp vs D-Asp + MK-801	< 0.0001	
	D-Asp vs D-Asp + APV	< 0.0001	
	D-Asp + MK-801 vs D-Asp + APV	ns	
4B	ctrl vs D-Asp	< 0.0001	Bonferroni
	D-Asp vs D-Asp + MK-801	< 0.0001	
	D-Asp vs D-Asp + APV	< 0.0001	
	D-Asp + MK vs D-Asp + APV	ns	
4b	ctrl vs D-Asp	< 0.0001	Bonferroni
	D-Asp vs D-Asp + MK-801	< 0.0001	
	D-Asp vs D-Asp + APV	< 0.0001	
	D-Asp + MK-801 vs D-Asp + APV	ns	
4C	ctrl vs D-Asp	< 0.0001	Bonferroni
	D-Asp vs D-Asp + BED	< 0.0001	
	D-Asp vs D-Asp + YM244769	< 0.0001	
4c	ctrl vs D-Asp	< 0.0001	Bonferroni
	D-Asp vs D-Asp + BED	< 0.0001	
	D-Asp vs D-Asp + YM244769	< 0.0001	
	D-Asp + BED vs D-Asp + YM244769	ns	
4D	ctrl vs D-Asp	< 0.0001	Bonferroni
	D-Asp vs D-Asp + BED	< 0.0001	
	D-Asp vs D-Asp + YM244769	< 0.0001	
	D-Asp + BED vs D-Asp + YM244769	ns	
4d	ctrl vs D-Asp	< 0.0001	Bonferroni
	D-Asp vs D-Asp + BED	< 0.0001	
	D-Asp vs D-Asp + YM244769	< 0.0001	
	D-Asp + BED vs D-Asp + YM244769	ns	
4E	ctrl vs siCtl	ns	Bonferroni
	ctrl + siCtl vs D-Asp + siCtl	< 0.0001	
	D-Asp + siCtl vs D-Asp + siNCX3	< 0.0001	
4e	ctrl vs siCtl	ns	Bonferroni
	ctrl + siCtl vs D-Asp + siCtl	< 0.0001	
	D-Asp + siCtl vs D-Asp + siNCX3	< 0.0001	
4F	ctrl vs nex3+/+	< 0.0001	Bonferroni
	nex3+/+ vs nex3+/-	< 0.0001	
	nex3+/+ vs nex3-/-	0.006	
4f	ctrl vs nex3+/+	< 0.0001	Bonferroni
	nex3+/+ vs nex3+/-	ns	
	nex3+/+ vs nex3-/-	0.006	

Appendix Table S5

FIGURE	COMPARISON	P VALUE	POST HOC TEST
5A	1μM AMPA vs 10μM AMPA	<0.001	Bonferroni
	1μM AMPA vs 100μM AMPA	<0.001	
	10μM AMPA vs 100μM AMPA	<0.001	
5C	AMPA (I) vs AMPA + DNQX	<0.001	Bonferroni
	AMPA (II) vs AMPA + DNQX	<0.001	
	AMPA (IV) vs AMPA + DNQX	<0.001	
5D	D-Asp (I) vs D-Asp + DNQX	<0.001	Bonferroni
	D-Asp (II) vs D-Asp + DNQX	<0.001	
	D-Asp (IV) vs D-Asp + DNQX	<0.001	
5G	AMPA (I) vs AMPA + DNQX	<0.001	Bonferroni
	AMPA (II) vs AMPA (IV)	<0.001	
	AMPA (II) vs AMPA + DNQX	0.002	
	AMPA (IV) vs AMPA + DNQX	<0.001	
	AMPA (IV) vs AMPA (I)	0.044	
5H	D-Asp (I) vs D-Asp + DNQX	<0.001	Bonferroni
	D-Asp (I) vs D-Asp + DNQX + MK-801	<0.001	
	D-Asp (I) vs D-Asp + DNQX + MK-801 + PDC	<0.001	
	D-Asp (II) vs D-Asp + DNQX	<0.001	
	D-Asp (II) vs D-Asp + DNQX + MK-801	<0.001	
	D-Asp (II) vs D-Asp + DNQX + MK-801 + PDC	<0.001	
	D-Asp + DNQX vs D-Asp (VI)	<0.001	
	D-Asp+DNQX+MK-801 vs D-Asp+DNQX+MK-801+PDC	0.023	
	D-Asp + DNQX + MK-801 + PDC vs D-Asp (VI)	<0.001	
	D-Asp (VI) vs D-Asp (I)	0.001	
	D-Asp (VI) vs D-Asp (II)	<0.001	
	D-Asp + DNQX + MK-801 vs D-Asp (II)	<0.001	

Appendix Table S6

FIGURE	COMPARISON	P VALUE	POST HOC TEST
6B, left panel	ctrl vs cpz (1d)	0.0018	Bonferroni
	cpz vs D-Asp (1d)	0.0399	
6B, right panel	ctrl vs cpz	0.0002	Bonferroni
	cpz vs cpz + D-Asp	0.0281	
6C, left panel	ctrl vs cpz (1d)	0.0026	Bonferroni
	cpz vs D-Asp (1d)	0.0371	
6C, right panel	ctrl vs cpz	< 0.0001	Bonferroni
	cpz vs cpz + D-Asp	0.0018	
6D, left panel	ctrl vs vehicle (3d)	0.0038	Bonferroni
	cpz vs D-Asp (II) (3d)	0.0303	
6D, middle panel	ctrl vs vehicle	< 0.0001	Bonferroni
	ctrl vs cpz+D-Asp (I)	< 0.0001	
6D, right panel	ctrl vs vehicle	< 0.0001	Bonferroni
	cpz vs cpz+D-Asp (II)	< 0.0001	
6E, left panel	cpz vs cpz + D-Asp (2d)	0.0035	Bonferroni
	ctrl vs cpz (3d)	< 0.0001	Bonferroni
	cpz vs cpz + D-Asp (3d)	0.0006	
6E, right panel	ctrl vs cpz	0.0005	Bonferroni
	ctrl vs cpz + D-Asp	0.0172	
6F, left panel	ctrl vs cpz (3d)	0.0178	Bonferroni
	cpz vs cpz + D-Asp (3d)	0.039	
6F, right panel	ctrl vs cpz	< 0.0001	Bonferroni
	ctrl vs cpz + D-Asp	0.0132	
6G, left panel	ctrl vs vehicle (1d)	< 0.0001	Bonferroni
	ctrl vs D-Asp (II) (1d)	0.0153	
	vehicle vs D-Asp (II) (1d)	0.0045	
	ctrl vs vehicle (2d)	0.0356	Bonferroni
	vehicle vs D-Asp (II) (2d)	0.0079	
	ctrl vs vehicle (3d)	0.0061	Bonferroni
vehicle vs D-Asp (II) (3d)	0.0394		
6G, right panel	ctrl vs vehicle	< 0.0001	Bonferroni
	vehicle vs D-Asp (II)	< 0.0001	

Appendix Table S7

FIGURE	COMPARISON	P VALUE	POST HOC TEST
7A, j	ctrl vs cpz cpz vs cpz + D-Asp	< 0.0001 < 0.0001	Bonferroni
7A, k	ctrl vs cpz cpz vs cpz + D-Asp	<0.05 <0.05	Newman-Keuls
7B	ctrl vs cpz ctrl vs D-Asp cpz vs D-Asp	< 0.0001 0.0303 < 0.0001	Bonferroni
7C, j	ctrl vs cpz cpz vs cpz + D-Asp	< 0.0001 0.0002	Bonferroni
7C, k	ctrl vs cpz cpz vs cpz + D-Asp	< 0.0001 0.0062	Bonferroni
7D, middle panel	ctrl vs cpz ctrl vs cpz + D-Asp	0.028 0.0365	Bonferroni
7D, right panel	ctrl vs cpz cpz vs cpz + D-Asp	0.0045 0.0107	Bonferroni

Appendix Table S8

FIGURE	COMPARISON	P VALUE	POST HOC TEST
8A, k, left panel	ctrl vs cpz (Olig2+ cells)	≤ 0.0001	Newman-Keuls
	ctrl vs cpz + D-Asp (Olig2+ cells)	≤ 0.0001	
	cpz vs cpz + D-Asp (Olig2+ cells)	≤ 0.05	
	ctrl vs cpz (Olig2+/CC1+ cells)	≤ 0.0001	Newman-Keuls
	ctrl vs cpz + D-Asp (Olig2+/CC1+ cells)	≤ 0.0001	
	cpz vs cpz + D-Asp (Olig2+/CC1+ cells)	≤ 0.05	
8A, k, right panel	ctrl vs vehicle (Olig2+cells)	≤ 0.0001	Newman-Keuls
	ctrl vs cpz + D-Asp (Olig2+ cells)	≤ 0.001	
	vehicle vs cpz + D-Asp (Olig2+ cells)	≤ 0.01	
	ctrl vs vehicle (Olig2+/CC1+ cells)	≤ 0.0001	Newman-Keuls
	ctrl vs cpz + D-Asp (Olig2+/CC1+ cells)	≤ 0.0001	
	vehicle vs cpz + D-Asp (Olig2+/CC1+ cells)	≤ 0.01	
8C	cpz vs cpz + D-Asp	0.0004	Student's <i>t</i>-tests
8E	vehicle vs D-Asp (0.2 μm axons)	0.0097	Student's <i>t</i>-tests
	vehicle vs D-Asp (0.3 μm axons)	0.0005	Student's <i>t</i>-tests
	vehicle vs D-Asp (0.4 μm axons)	< 0.0001	Student's <i>t</i>-tests
	vehicle vs D-Asp (0.5 μm axons)	< 0.0001	Student's <i>t</i>-tests
	vehicle vs D-Asp (0.6 μm axons)	0.0157	Student's <i>t</i>-tests
	vehicle vs D-Asp (0.7 μm axons)	< 0.0001	Student's <i>t</i>-tests
8F	vehicle vs D-Asp (0.2 μm axons)	0.0347	Student's <i>t</i>-tests
	vehicle vs D-Asp (0.3 μm axons)	0.0289	Student's <i>t</i>-tests
	vehicle vs D-Asp (0.4 μm axons)	0.0457	Student's <i>t</i>-tests

Appendix Table S9

FIGURE	COMPARISON	P VALUE	POST HOC TEST
EV1A	ctrl vs AMPA AMPA vs AMPA + DNQX	< 0.0001 < 0.0001	Bonferroni
EV1B	ctrl vs D-Asp D-Asp vs D-Asp + DNQX	< 0.0001 < 0.0001	Bonferroni
EV1B, b	ctrl vs D-Asp D-Asp vs D-Asp + DNQX	< 0.0001 < 0.0001	Bonferroni
EV1C	ctrl vs D-Asp D-Asp vs D-Asp + CNQX	< 0.0001 < 0.0001	Bonferroni
EV1C, c	ctrl vs D-Asp D-Asp vs D-Asp + CNQX	< 0.0001 < 0.0001	Bonferroni
EV1D	ctrl vs D-Asp D-Asp vs D-Asp + PDC	< 0.0001 < 0.0001	Bonferroni
EV1D, d	ctrl vs D-Asp D-Asp vs D-Asp + PDC	< 0.0001 < 0.0001	Bonferroni

Appendix Table S10

FIGURE	COMPARISON	P VALUE	POST HOC TEST
EV2A, left panel	ctrl vs cpz (3d)	0.0226	Bonferroni
	cpz vs cpz + D-Asp (3d)	0.031	
EV2A, right panel	ctrl vs cpz	0.0181	Bonferroni
EV2B, right panel	ctrl vs cpz	0.0058	Bonferroni
	cpz vs D-Asp	0.0414	
EV2C, left panel	ctrl vs cpz (2d)	0.03	Bonferroni
	cpz vs D-Asp (II) (2d)	0.0409	
	ctrl vs cpz (3d)	0.0114	Bonferroni
	cpz vs D-Asp (II) (3d)	0.01	
EV2C, right panel	ctrl vs cpz	0.0005	Bonferroni
	cpz vs D-Asp (II)	0.0182	