

Supplementary Materials: Resorcinol and Related Simple Phenolic Compounds Increase Astrocyte Survival in a Glutamate-Induced Excitotoxicity Model

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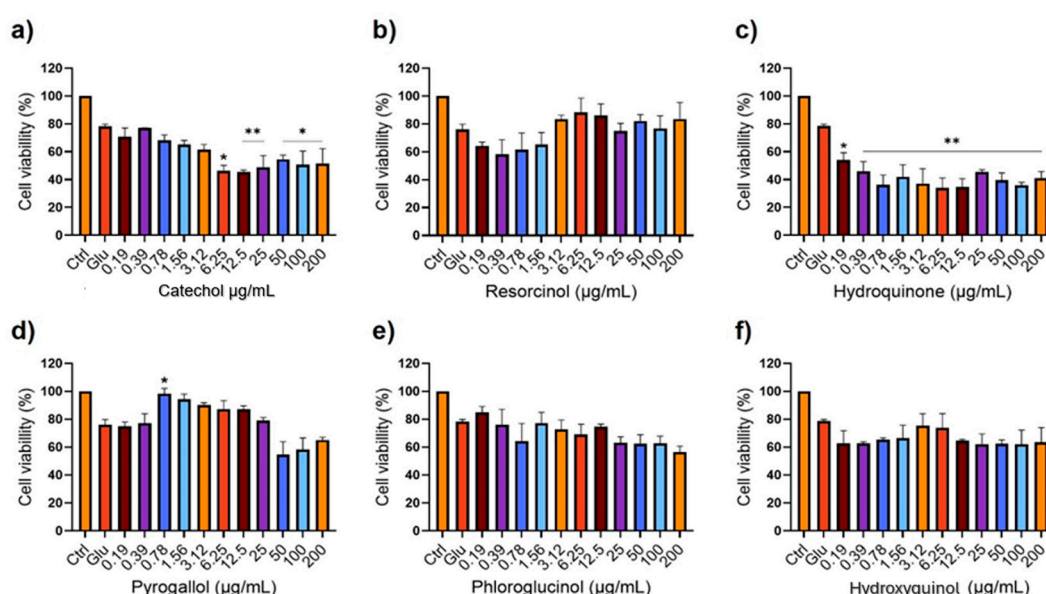


Figure S1. Effects of pre-treatment with simple phenolic compounds on the cell viability of Glu-treated C8-D1A astrocytes. Cells were pre-treated with increasing concentrations (0.19–200 μg/mL) of each phenolic compound for 24 h, then 20 Glu was added for an additional 24 h, and finally the MTT assay was performed. Cell viability of (a) catechol, (b) resorcinol, (c) hydroquinone, (d) pyrogallol, (e) phloroglucinol, and (f) hydroxyquinol. Data are presented as mean ± SE of three independent replicates. Comparisons were made vs. the cell viability of untreated control cells (Ctrl). Significance (*p<0.05, **p<0.001) was assessed by one-way ANOVA with Dunnett's post hoc test.

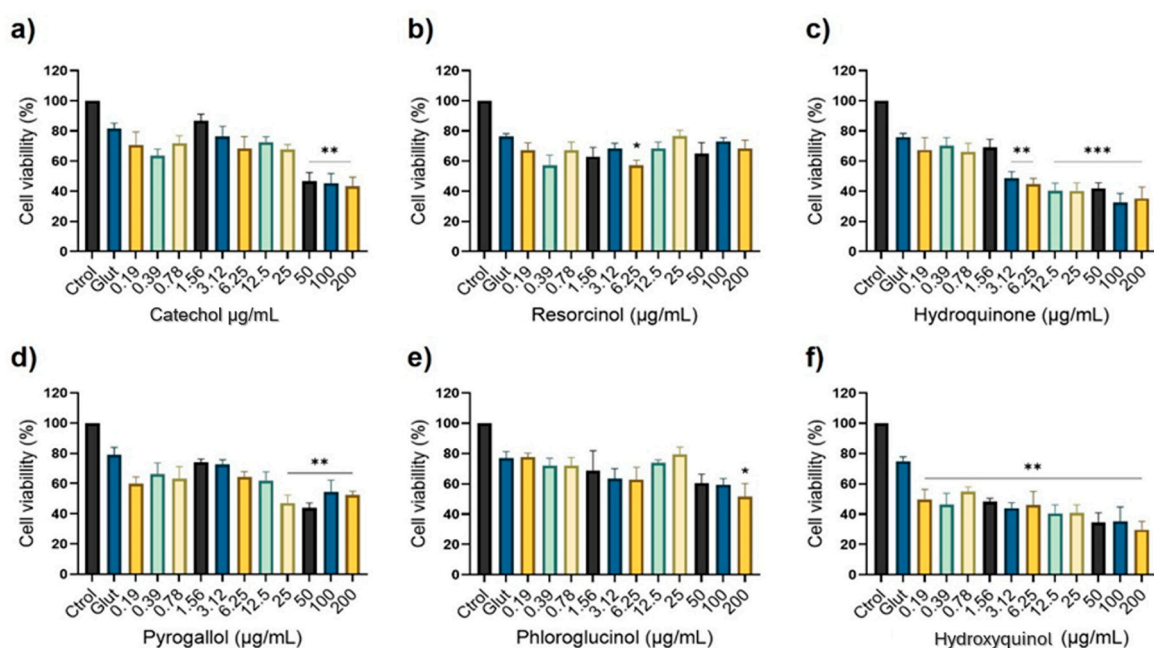


Figure S2. Effects of post-treatment with simple phenolic compounds on the cell viability of Glu-treated C8-D1A astrocytes. Cells were exposed to 20 mM Glu, then increasing concentrations (0.19–200 µg/mL) of each phenolic compound were added as post-treatments for an additional 24 h, and finally the MTT assay was performed. Cell viability of (a) catechol, (b) resorcinol, (c) hydroquinone, (d) pyrogallol, (e) phloroglucinol, and (f) hydroxyquinol. Data are presented as mean ± SE of three independent replicates. Comparisons were made vs. the cell viability of untreated control cells (Ctrl). Significance (*p<0.05, **p<0.001, ***p<0.0001) was assessed by one-way ANOVA with Dunnett's post hoc test.

Table S1. IC₅₀ of simple phenols scavenging DPPH and ABTS synthetic radicals.

Compound	IC ₅₀ (µg/mL)	
	DPPH	ABTS
Catechol	>200	4.27
Resorcinol	203	7.56
Hydroquinone	206	<12.5
Pyrogallol	221	<3.12
Phloroglucinol	9.98	11.22
Hydroxyquinol	208	24.36

IC₅₀ value (mean inhibitory concentration).

Table S2. Primer sets for RT-qPCR.

Gene	Primer sets
NGF	Forward: CAGTGTCACTGTGTGGTTG

	Reverse:
	TGTGAGTCGTGGTGCAGTAT
	PRODUCT: 206 pb
	Forward:
<i>BDNF</i>	TGCAGGGGCATAGACAAAAGG
	Reverse:
	CTTATGAATCGCCAGCCAATTCTC
	PRODUCT: 154 pb
	Forward:
<i>TNF-α</i>	AGCCGATGGGTGTACCTTG
	Reverse:
	ATAGCAAATCGGCTGACGGT
	PRODUCT: 99 pb
	Forward:
<i>IL-6</i>	ATCCAGTTGCCTTCTTGGGACTGA
	Reverse:
	TAAGCCTCCGACTTGTGAAGTGGT
	PRODUCT: 134 pb
