

Table S1: List of genes modulated by 2g

Abbreviation	Gene name	Role in BBB	Genecard id
<i>Actn1</i>	Actinin alpha 1	Endothelial cell cytoskeleton	GC14M068874
<i>Actn2*</i>	Actinin alpha 2	Endothelial cell cytoskeleton	GC01P236686
<i>Actn4</i>	Actinin alpha 4	Endothelial cell cytoskeleton	GC19P038647
<i>Cdh2</i>	Cadherin 2	Adherens junction	GC18M028088
<i>Ctnnd1</i>	Catenin delta 1	Cadherin associated protein	GC11P058206
<i>Gja1</i>	Gap junction protein alpha 1	Gap junction	GC06P121436
<i>Gja4</i>	Gap junction protein alpha 4	Gap junction	GC01P034792
<i>Jup</i>	Junction plakoglobin	Desmosome maintenance	GC17M041754
<i>Ocln</i>	Occludin	Positive regulation	GC05P069492
<i>Tjp2</i>	Tight junction protein 2	Positive regulation	GC09P069121

* very low expression in non-neuronal cell types (database: MGI.org and genecards.org)

Table S2: Cell types expressing genes modified by 2g exposure

Effect of 2g	Genes	Relative expressions in non-neuronal cell types
↑	<i>Gja4</i>	PC>SMC>EC>FB>MG>>OL-ACØ
↑	<i>Ctnnd1</i>	EC>PC-SMC>FB-OL-AC>MG
↑	<i>Actn1</i>	SMC>PC-EC-FB>MG-OL-AC
↓	<i>Cdh2</i>	PC-AC>SMC>EC>OL-FB>MG
↓	<i>Ocln</i>	EC>>>PC-SMC>AC>FB-OL>MGØ
↓	<i>Actn2</i>	EC-PC>SMC-FB-MG-OL>ACØ
↓	<i>Jup</i>	EC-PC-OL>SMC-FB>AC-MG
↓	<i>Actn4</i>	EC-PC-SMC>OL-FB-AC>MG
↓	<i>Tjp2</i>	EC-AC-OL>PC-SMC>FB>MGØ
↓	<i>Gja1</i>	AC>>EC>FB>>PC>SMC>OL-MGØ

AC: astrocyte; EC: endothelial cell; FB: fibroblast; MG: microglia; OL: oligodendrocyte, PC: pericyte; SMC: smooth muscle cell (database: betsholtzlab.org). ↑ upregulated, ↓ downregulated.

Table S3: Comparison of gene expressions with database from Pulga et al., 2016

Gene name	2g, 24h	3g, 21 days ⁽¹⁾	Placebo ⁽¹⁾	Acute stress ⁽¹⁾	Chronic stress ⁽¹⁾
<i>Gja4</i>	↑	Ø	Ø	Ø	Ø
<i>Ctnnd1</i>	↑	Ø	Ø	Ø	Ø
<i>Actn1</i>	↑	Ø	Ø	Ø	Ø
<i>Cdh2</i>	↓	Ø	Ø	Ø	Ø
<i>Ocln</i>	↓	Ø	Ø	Ø	Ø
<i>Actn2</i>	↓	Ø	Ø	Ø	Ø
<i>Jup</i>	↓	Ø	Ø	Ø	Ø
<i>Actn4</i>	↓	Ø	Ø	Ø	Ø
<i>Tjp2</i>	↓	Ø	Ø	Ø	Ø
<i>Gja1</i>	↓	Ø	Ø	Ø	Ø
<i>Gja5</i>	Ø	Ø	Ø	Ø	Ø
<i>Actb</i>	Ø	Ø	Ø	Ø	Ø
<i>Actg1</i>	Ø	Ø	Ø	Ø	Ø
<i>Cdh5</i>	Ø	Ø	Ø	Ø	Ø
<i>Cldn1</i>	Ø	↑	Ø	↑	Ø
<i>Cldn3</i>	Ø	Ø	Ø	Ø	Ø
<i>Cldn5</i>	Ø	Ø	↓	Ø	Ø
<i>Ctnna1</i>	Ø	Ø	Ø	Ø	Ø
<i>Ctnnb1</i>	Ø	Ø	Ø	Ø	Ø
<i>Dsp</i>	Ø	Ø	Ø	Ø	Ø
<i>F11r</i>	Ø	Ø	Ø	Ø	Ø
<i>Jam2</i>	Ø	Ø	Ø	Ø	Ø
<i>Tjp1</i>	Ø	Ø	Ø	Ø	Ø
<i>Vim</i>	Ø	Ø	Ø	Ø	Ø

↑ upregulated, ↓ downregulated, Ø not changed.