

Additional File 2. Pearson's correlation analyses for possible relationships between gene expression levels in BA24 neurons and age, RNA quality (RIN) and postmortem interval (PMI).

| Gene ^a (protein ^b) | Statistic | Age | RIN | PMI |
|---|---------------------|-------|-------------------|-------|
| <i>RNA18S1 / GAPDH</i> ^c | Pearson Correlation | -.309 | .043 | -.250 |
| | Sig. (2-tailed) | .243 | .875 | .350 |
| | N | 16 | 16 | 16 |
| <i>GRIN1</i> (NR1) | Pearson Correlation | .050 | .318 | -.226 |
| | Sig. (2-tailed) | .855 | .231 | .400 |
| | N | 16 | 16 | 16 |
| <i>GRIN2A</i> (NR2A) | Pearson Correlation | -.055 | .531 | .176 |
| | Sig. (2-tailed) | .851 | .051 | .548 |
| | N | 14 | 14 | 14 |
| <i>GRIN2B</i> (NR2B) | Pearson Correlation | .109 | .579 | -.250 |
| | Sig. (2-tailed) | .687 | .019 | .351 |
| | N | 16 | 16 | 16 |
| <i>GRIN2C</i> (NR2C) | Pearson Correlation | .229 | .642 ^d | -.091 |
| | Sig. (2-tailed) | .394 | .007 | .737 |
| | N | 16 | 16 | 16 |
| <i>GRIN2D</i> (NR2D) | Pearson Correlation | .322 | .082 | .203 |
| | Sig. (2-tailed) | .224 | .763 | .452 |
| | N | 16 | 16 | 16 |
| <i>GRIA1</i> (GluR-1) | Pearson Correlation | -.374 | .213 | -.012 |
| | Sig. (2-tailed) | .154 | .429 | .966 |
| | N | 16 | 16 | 16 |
| <i>GRIK2</i> (GRIK2, GluK2) | Pearson Correlation | -.316 | .250 | -.346 |
| | Sig. (2-tailed) | .233 | .350 | .189 |
| | N | 16 | 16 | 16 |
| <i>GRM5</i> (mGluR5) | Pearson Correlation | -.017 | -.117 | -.435 |
| | Sig. (2-tailed) | .953 | .677 | .105 |
| | N | 15 | 15 | 15 |
| <i>GRM8</i> (mGluR8) | Pearson Correlation | .131 | .140 | .029 |
| | Sig. (2-tailed) | .684 | .664 | .929 |
| | N | 12 | 12 | 12 |
| <i>SLC1A1</i> (EAAT3) | Pearson Correlation | -.191 | .285 | -.591 |
| | Sig. (2-tailed) | .478 | .284 | .016 |

| | N | 16 | 16 | 16 |
|---------------------------|---------------------|-------|-------|-------|
| <i>SLC17A7</i> (VGlut1) | Pearson Correlation | .003 | .312 | -.358 |
| | Sig. (2-tailed) | .991 | .240 | .173 |
| | N | 16 | 16 | 16 |
| <i>GRIP1</i> (GRIP1) | Pearson Correlation | -.128 | .265 | -.030 |
| | Sig. (2-tailed) | .638 | .320 | .913 |
| | N | 16 | 16 | 16 |
| <i>BDNF</i> (BDNF) | Pearson Correlation | .005 | -.084 | -.212 |
| | Sig. (2-tailed) | .985 | .757 | .430 |
| | N | 16 | 16 | 16 |
| <i>NTRK2</i> (NTRK2,TrkB) | Pearson Correlation | .522 | .271 | -.076 |
| | Sig. (2-tailed) | .038 | .310 | .780 |
| | N | 16 | 16 | 16 |

^a Derived from the HUGO gene nomenclature committee responsible for designating unique gene names (Wain et al., 2002).

^b Official protein nomenclature showing both the recommended and alternative protein names (Uniprot, 2008).

^c Ratio of the two reference genes; all other expression data are normalized to the average of these two reference genes.

^d Correlation is significant at $p < 0.01$ (2-tailed).