



Table S1. Amplicon primer sequences and annealing temperatures for *BDNF* and *COMT* genes. In grey shade are Illumina universal sequences that are followed by the sequence-specific primers aligning on the target bisulfite converted DNA sequence.

| Am- plicon | Forward or re- verse primer | Primer Sequence | Annealing temperature / °C |
|---------------|--------------------------------------|--|----------------------------------|
| COMT_1 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGA- CAGGTTTTTAATTTGTATAGGTAAGAT | 54 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG- TACCCTCCCTACCCACAAC | |
| COMT_2 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGA- CAGGGTTATTTGTGGTTAGAAGTAGTT | 54 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGA- CAGACTACCCCAAAAACCCAC | |
| COMT_4 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGA- CAGNNTGTAGGAGGAGTATAGAGTATTGG | 62 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGA- CAGNNTCATAACCCACTCCTTCTACT | |
| BDNF_1 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG- TGAGGGTAGGTAAAGGGTAGT | 55.3 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGA- CAACTCTCCCAAAAACCCCTAC | |
| BDNF_2 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG- TTATATAGGTTTTGTGGTAATTAG | 55 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGA- CAGAAAAAAAAAAAACTTCTTAAAAAAT | |
| BDNF_3 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG- TTTTTAGTTATGATGGGGGAGG | 58 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG- CAAATCACACCTAAAACCTCC | |
| BDNF_4 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG- GAGTTTATTAGTATTTTGGATAGA | 55.3 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGA- CAGAAAAATCTATTCCAACCTACACC | |
| BDNF_5 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGACAG- TTTTTTAAGGGAAGGGGAGTT | 54 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGA- CAGAACTAAAAATATTCTTCTCCACC | |
| BDNF_6 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGACAGA- TAGAGTTATTAATTAGTTGGA | 55 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGACAG- TAAATCCCTAAACTCCCTAAAA | |
| BDNF_7 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGA- CAGGGTTTTAATGAGATATTTAT | 58 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGA- CAGAAAATCCCCCAATCAACTCTCT | |
| BDNF_8 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGA- CAGAAATGTTGTTATTATTTGATTGAATT | 54 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGA- CAGAACACCCAAATTCTCTAAAAA | |
| BDNF_9 | Forward primer | TCGTCGGCAGCGTCAGATGTGTATAAGAGA- CAGNNTTTTTTAGAGAATTTGGGTGT | 56.7 |
| | Reverse primer | GTCTCGTGGGCTCGGAGATGTGTATAAGAGA- CAGNNAACCTATCCTACCTCCT | |

Table S2. Correlation of *BDNF* expression with demographic and clinical characteristics of subjects divided by diagnosis into subjects with MCI and subjects with AD.

| Characteristics | MCI | | AD | |
|----------------------------|----------------------|----------|----------------------|----------|
| | <i>r_s</i> | <i>p</i> | <i>r_s</i> | <i>p</i> |
| Age (years) | -0.014 | 0.897 | 0.089 | 0.450 |
| BMI (kg/m ²) | 0.028 | 0.798 | -0.071 | 0.548 |
| Waist circumference (cm) | -0.009 | 0.935 | -0.134 | 0.256 |
| Total cholesterol (mmol/l) | 0.079 | 0.470 | -0.063 | 0.592 |
| HDL-cholesterol (mmol/l) | 0.255 | 0.018 | -0.168 | 0.152 |
| LDL-cholesterol (mmol/l) | -0.023 | 0.834 | -0.056 | 0.634 |
| Triglycerides | -0.010 | 0.930 | 0.099 | 0.401 |
| Blood glucose (mmol/l) | 0.036 | 0.742 | 0.121 | 0.306 |

AD, Alzheimer's Disease; HDL, High-Density Lipoproteins; BMI, Body Mass Index; LDL, Low-Density Lipoproteins; MCI, Mild Cognitive Impairment; *r_s*, Spearman's Rank Correlation Coefficient

Table S3. Correlation of *COMT* expression with demographic and clinical characteristics of subjects divided by diagnosis into subjects with MCI and subjects with AD.

| Characteristics | MCI | | AD | |
|----------------------------|----------------------|----------|----------------------|----------|
| | <i>r_s</i> | <i>p</i> | <i>r_s</i> | <i>p</i> |
| Age (years) | 0.073 | 0.507 | -0.151 | 0.057 |
| BMI (kg/m ²) | -0.012 | 0.915 | 0.184 | 0.117 |
| Waist circumference (cm) | -0.082 | 0.451 | 0.176 | 0.134 |
| Total cholesterol (mmol/l) | -0.096 | 0.379 | 0.036 | 0.760 |
| HDL-cholesterol (mmol/l) | -0.031 | 0.775 | -0.118 | 0.317 |
| LDL-cholesterol (mmol/l) | -0.013 | 0.905 | 0.062 | 0.597 |
| Triglycerides | -0.205 | 0.058 | 0.102 | 0.386 |
| Blood glucose (mmol/l) | -0.138 | 0.204 | -0.058 | 0.626 |

AD, Alzheimer's Disease; HDL, High-Density Lipoproteins; BMI, Body Mass Index; LDL, Low-Density Lipoproteins; MCI, Mild Cognitive Impairment; *r_s*, Spearman's Rank Correlation Coefficient