**Table 2: Conditional averaged coefficients for top models explaining variation in gene expression. Top models were selected using the ‘get.models’ function in the MuMIn package in r to select all models within 2AICc of the top model. Result presented below are the output using ‘model.avg’ function on the top selected models**

|  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **DNMT1** | | |  | **DNMT3** | | |  | **TET2** | | |
|  | **Estimate (se)** | **Z-value** | **p-value** |  | **Estimate (se)** | **Z-value** | **p-value** |  | **Estimate (se)** | **Z-value** | **p-value** |
| Intercept1 | -0.65 (0.52) | 1.25 | 0.21 |  | -0.23 (0.55) | 0.406 | 0.68 |  | -1.22 (0.50) | 2.44 | 0.015 |
| Genetic group2 | 0.85 (0.27) | 3.12 | 0.0018 |  | 1.02 (0.29) | 3.55 | 0.0004 |  | 1.13 (0.28) | 4.03 | <0.0001 |
| Temperature3 | 0.82 (0.27) | 4.41 | <0.0001 |  | 0.66 (0.20) | 3.26 | 0.0011 |  | 0.55 (0.19) | 2.82 | 0.0048 |
| Tissue |  |  |  |  |  |  |  |  |  |  |  |
| Liver | -0.72 (0.09) | 8.27 | <0.0001 |  | -0.26 (0.09) | 2.80 | 0.0051 |  | -0.38 (0.08) | 4.89 | <0.0001 |
| Spleen | -0.23 (0.09) | 2.62 | 0.0078 |  | 0.065 (0.092) | 0.71 | 0.48 |  | 0.19 (0.08) | 2.44 | 0.0145 |
| Latitude4 | 0.049 (0.009) | 5.49 | <0.001 |  | 0.049 (0.0095) | 5.14 | <0.0001 |  | 0.048 (0.008) | 5.63 | <0.0001 |
| Pop.Type5 | -0.22 (0.10) | 2.23 | 0.026 |  | -0.20 (0.11) | 1.93 | 0.054 |  | -0.18 (0.09) | 1.95 | 0.051 |
| Urban6 | -0.25 (0.17) | 1.45 | 0.15 |  | -0.25 (0.18) | 1.37 | 0.17 |  | -0.32 (0.16) | 2.04 | 0.041 |
| Conditional r2 |  | 0.36 |  |  |  | 0.46 |  |  |  | 0.48 |  |

1. Intercept estimated for gut tissue, genetic group 1, low temperature predictability, native, non-urban populations.

2. Reference category is “Genetic Group 1”. Estimate is difference for “Genetic Group 2”.

3. Reference category is Temperature predictability is “low”. Estimate here is difference associated with “high” predictability.

4. Latitude is a continuous variable, expressed in absolute degrees.

5. Reference category is “native”. Estimated effect is difference associated with being “non-native”

6. Reference category is “non-urban”. Estimated effect is difference associated with being “urban”