Supplementary Material for

**ThermoMaze behavioral paradigm for assessing immobility-related brain events in rodents**

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**Supplementary File 1a. Summary of animal subjects with brain implants**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Animal** | **Recording implant** | **Other implants** | **Behavioral protocol** | **# session** | **Sex** |
| Mouse\_01 | Diagnostic Biochips, 64-2 | NA | ThermoMaze, 4 corners | 1 | F |
| Mouse\_02 | Diagnostic Biochips, 64-2 | NA | ThermoMaze, 4 corners | 3 | F |
| Mouse\_03 | NeuroNexus, A5x12-16-Buz-Lin-5mm-100-200-160-177 | NA | ThermoMaze, 4 corners | 1 | F |
| Mouse\_04 | Tungsten wire | Thermistor | ThermoMaze, 4 corners | 5 | F |
| Mouse\_05 | NA | Thermistor | ThermoMaze, 4 corners | 4 | M |
| Mouse\_06 | Diagnostic Biochips, 64-2 | NA | ThermoMaze, 4 corners  Inner spots | 3  2 | F |
| Mouse\_07 | NeuroNexus A1x32-Poly3-10mm-25s-177 | NA | ThermoMaze, 4 corners  Inner spots | 3  1 | F |
| Mouse\_08 | Cambridge Neurotech 64-ch, F6 | NA | ThermoMaze, 4 corners | 2 | F |
| Mouse\_09 | NeuroNexus A1x32-Poly3-10mm-25s-177 | NA | ThermoMaze, 4 corners | 4 | M |
| Mouse\_10 | NeuroNexus A1x32-Poly3-10mm-25s-177 | NA | ThermoMaze, sleep | 2 | M |
| Mouse\_11 | NeuroNexus A1x32-Poly3-10mm-25s-177 | NA | ThermoMaze, sleep | 1 | F |
| Mouse\_12 | NeuroNexus A1x32-Poly3-10mm-25s-177 | NA | ThermoMaze, sleep | 2 | M |
| Mouse\_13 | Neuropixels 2.0 | NA | ThermoMaze, sleep | 2 | F |

**Supplementary File 1b.**

|  |  |  |
| --- | --- | --- |
| Group A | Group B | p-value |
| Pre speed | Cool speed | <0.001 |
| Pre speed | Post speed | <0.001 |
| Cool speed | Post speed | <0.001 |

**Supplementary File 1c.**

|  |  |  |
| --- | --- | --- |
| Group A | Group B | p-value |
| 1 | 2 | 0.006 |
| 1 | 3 | <0.001 |
| 1 | 4 | <0.001 |
| 2 | 3 | <0.001 |
| 2 | 4 | <0.001 |
| 3 | 4 | <0.001 |

**Supplementary File 1d**.

|  |  |  |
| --- | --- | --- |
| Group A | Group B | p-value |
| 1 | 2 | <0.001 |
| 1 | 3 | <0.001 |
| 1 | 4 | <0.001 |
| 1 | 5 | <0.001 |
| 1 | 6 | <0.001 |
| 1 | 7 | <0.001 |
| 1 | 8 | <0.001 |
| 2 | 3 | <0.001 |
| 2 | 4 | 0.596 |
| 2 | 5 | <0.001 |
| 2 | 6 | <0.001 |
| 2 | 7 | <0.001 |
| 2 | 8 | <0.001 |
| 3 | 4 | 0.003 |
| 3 | 5 | <0.001 |
| 3 | 6 | <0.001 |
| 3 | 7 | <0.001 |
| 3 | 8 | <0.001 |
| 4 | 5 | <0.001 |
| 4 | 6 | <0.001 |
| 4 | 7 | <0.001 |
| 4 | 8 | <0.001 |
| 5 | 6 | 0.969 |
| 5 | 7 | 0.9999966894 |
| 5 | 8 | 0.9822369191 |
| 6 | 7 | 0.99416517 |
| 6 | 8 | 0.9999999967 |
| 7 | 8 | 0.9973847873 |

**Supplementary File 1e**.

|  |  |  |
| --- | --- | --- |
| Group A | Group B | p-value |
| 1 | 2 | 0.213 |
| 1 | 3 | 0.76q |
| 1 | 4 | 0.454 |
| 1 | 5 | 0.658 |
| 1 | 6 | 0.663 |
| 1 | 7 | 0.604 |
| 1 | 8 | 0.694 |
| 2 | 3 | 0.988 |
| 2 | 4 | 1.000 |
| 2 | 5 | 0.997 |
| 2 | 6 | 0.996 |
| 2 | 7 | 0.998 |
| 2 | 8 | 0.995 |
| 3 | 4 | 1.000 |
| 3 | 5 | 1.000 |
| 3 | 6 | 1.000 |
| 3 | 7 | 1.000 |
| 3 | 8 | 1.000 |
| 4 | 5 | 1.000 |
| 4 | 6 | 1.000 |
| 4 | 7 | 1.000 |
| 4 | 8 | 1.000 |
| 5 | 6 | 1.000 |
| 5 | 7 | 1.000 |
| 5 | 8 | 1.000 |
| 6 | 7 | 1.000 |
| 6 | 8 | 1.000 |
| 7 | 8 | 1.000 |