**Supplementary File 1. Animal information.**

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| **Animals** | **DataSet** | **Session** | **Maze** | **Target Region** | **Behaviors** | **Duration** |
| Achilles | hc-11 | Achilles\_10252013 | 1.6m linear maze | CA1 | Wake, Sleep | 9.7 hours |
| Achilles | hc-11 | Achilles\_11012013 | Circular maze | CA1 | Wake, Sleep | 10.2 hours |
| Buddy | hc-11 | Buddy\_06272013 | 1.6m linear maze | CA1 | Wake, Sleep | 5.8 hours |
| Cicero | hc-11 | Cicero\_09012014 | 1.6m linear maze | CA1 | Wake, Sleep | 9.7 hours |
| Cicero | hc-11 | Cicero\_09102014 | Circular maze | CA1 | Wake, Sleep | 10.1 hours |
| Cicero | hc-11 | Cicero\_09172014 | 2m linear maze | CA1 | Wake, Sleep | 9.3 hours |
| Gatsby | hc-11 | Gatsby\_08022013 | 1.6m linear maze | CA1 | Wake, Sleep | 8.4 hours |
| Gatsby | hc-11 | Gatsby\_08282013 | Circular maze | CA1 | Wake, Sleep | 9.8 hours |
| ec013 | hc-3 | ec013.15 | 2.5m linear maze | EC5 EC4 EC3 CA1 | Wake | 0.2 hours |
| ec013 | hc-3 | ec013.18 | 2.5m linear maze | EC5 EC4 EC3 CA1 | Wake | 0.3 hours |
| ec014 | hc-3 | ec014.42 |  | EC5 EC3 EC2 CA1 | Sleep | 0.5 hours |
| ec014 | hc-3 | ec014.n329 |  | EC5 EC3 EC2 CA1 | Sleep | 6.5 hours |
| ec014 | hc-3 | ec014.36 | 2.5m linear maze | EC5 EC3 EC2 CA1 | Wake | 1.1 hours |
| ec015 | hc-3 | ec015.03 |  | EC5 EC3 EC2 CA1 | Sleep | 0.5 hours |
| ec016 | hc-3 | ec016.19 |  | EC5 EC4 EC3 CA1 | Sleep | 1.2 hours |
| ec016 | hc-3 | ec016.17 | 2.5m linear maze | EC5 EC4 EC3 CA1 | Wake | 0.8 hours |
| ec016 | hc-3 | ec016.19 | 2.5m linear maze | EC5 EC4 EC3 CA1 | Wake | 0.9 hours |
| gor | hc-3 | gor01-6-12 | 0.5m linear maz | CA1 CA3 | Wake | 0.2 hours |
| gor | hc-3 | gor01-6-13 | 0.8m linear maze | CA1 CA3 | Wake | 0.2 hours |
| gor | hc-3 | gor01-6-7 | 0.8 and 0.5m linear maze | CA1 CA3 | Wake | 1.5 hours |
| vvp | hc-3 | vvp01-4-9 |  | CA1 CA3 | Sleep | 1.4 hours |
| vvp | hc-3 | vvp01-4-18 | 0.8 and 0.5m linear maze | CA1 CA3 | Wake | 0.5 hours |
| vvp | hc-3 | vvp01-4-9 | 0.8 and 0.5m linear maze | CA1 CA3 | Wake | 1.0 hours |