

| Freely-behaving |    |    |    |       | Anesthetized |    |    |       |
|-----------------|----|----|----|-------|--------------|----|----|-------|
| Rat             | HP | S1 | V1 | Total | Rat          | S1 | V1 | Total |
| FB1             | 14 | 42 | 0  | 56    | AN1          | 0  | 55 | 55    |
| FB2             | 4  | 23 | 38 | 65    | AN2          | 0  | 33 | 33    |
| FB3             | 4  | 13 | 28 | 45    | AN3          | 0  | 45 | 45    |
| FB4             | 13 | 16 | 22 | 51    | AN4          | 59 | 29 | 88    |
| FB5             | 22 | 28 | 7  | 57    | AN5          | 31 | 44 | 75    |
| FB6             | 34 | 25 | 23 | 82    | AN6          | 15 | 17 | 32    |
| FB7             | 45 | 39 | 42 | 126   | AN7          | 27 | 11 | 38    |

**Table S2:** Number of neurons sampled by the MEA per brain region for FB and AN rats.