



**Supplementary Figure 2. Temporal analysis of *Mus musculus* neuronal networks spontaneous activity on Microelectrode array post infection.** **A** Mouse cultures bar plots representing the average proportion of Active Electrodes (AE) and Bursting electrodes (BE) per MEA for each group at different time points post ZIKV and DENV2 infections. **B** Bar plots representing the average ratio of total spike (TS) number per electrode between 0 dpi (reference) and TS number at 1, 2, and 3 of spontaneous activity. All bar plots show mean value with  $\pm$ SEM and statistical tests  $p$ -value are indicated on top of bars when compared to uninfected value.  $T$ -test results are summarized in Supplementary Table 1. **C** Bar plots representing the average percentage of mature neurons on the culture (percentage calculated at 1, 2 and 3 dpi). All bar plots show mean value with  $\pm$ SEM and statistical tests  $p$ -value are indicated on top brackets for Mann Whitney tests. \* $P < 0.05$ ; \*\* $P < 0.01$ ; \*\*\* $P < 0.001$ .