

Changes in alpha diversity over time in naïve vs. isoflurane-exposed mice

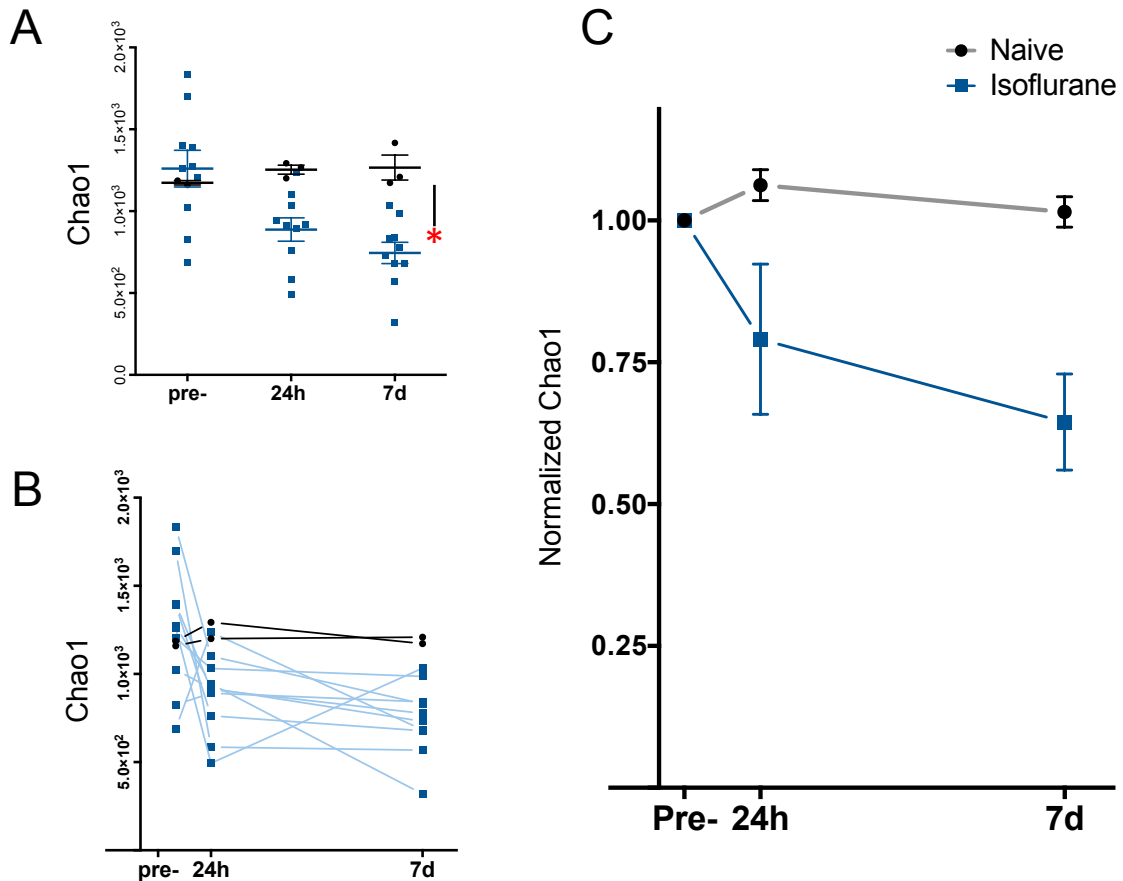


Figure S1. A) Comparison of Chao1 scores between naïve and isoflurane-exposed mice using Two-Way Anova demonstrates that isoflurane exposure, but not time, has a significant effect on microbial diversity ($p=.0128$). Additionally, post-hoc analysis using Bonferroni's correction shows that compared to naïve mice at the same time points, diversity in GA exposed mice is significantly reduced at 7d (Bonferroni adjusted $p= .0103$). Graphs represent means \pm SEM. **B)** Individual data points plotted for each mouse with data available at all 3 time points (naïve $n=2$, isoflurane $n=10$) **C)** As two-way Anova does not always accurately represent the effect of time, data from each mouse was normalized to the pre-exposure Chao1 score so that diversity at subsequent time points could be interpreted as a percentage change (fraction) from the baseline measurement. The normalized values were averaged across each group and plotted to more clearly illustrate this change (Mean \pm SEM).

Relative abundances of bacterial species (phyla) in naïve mice

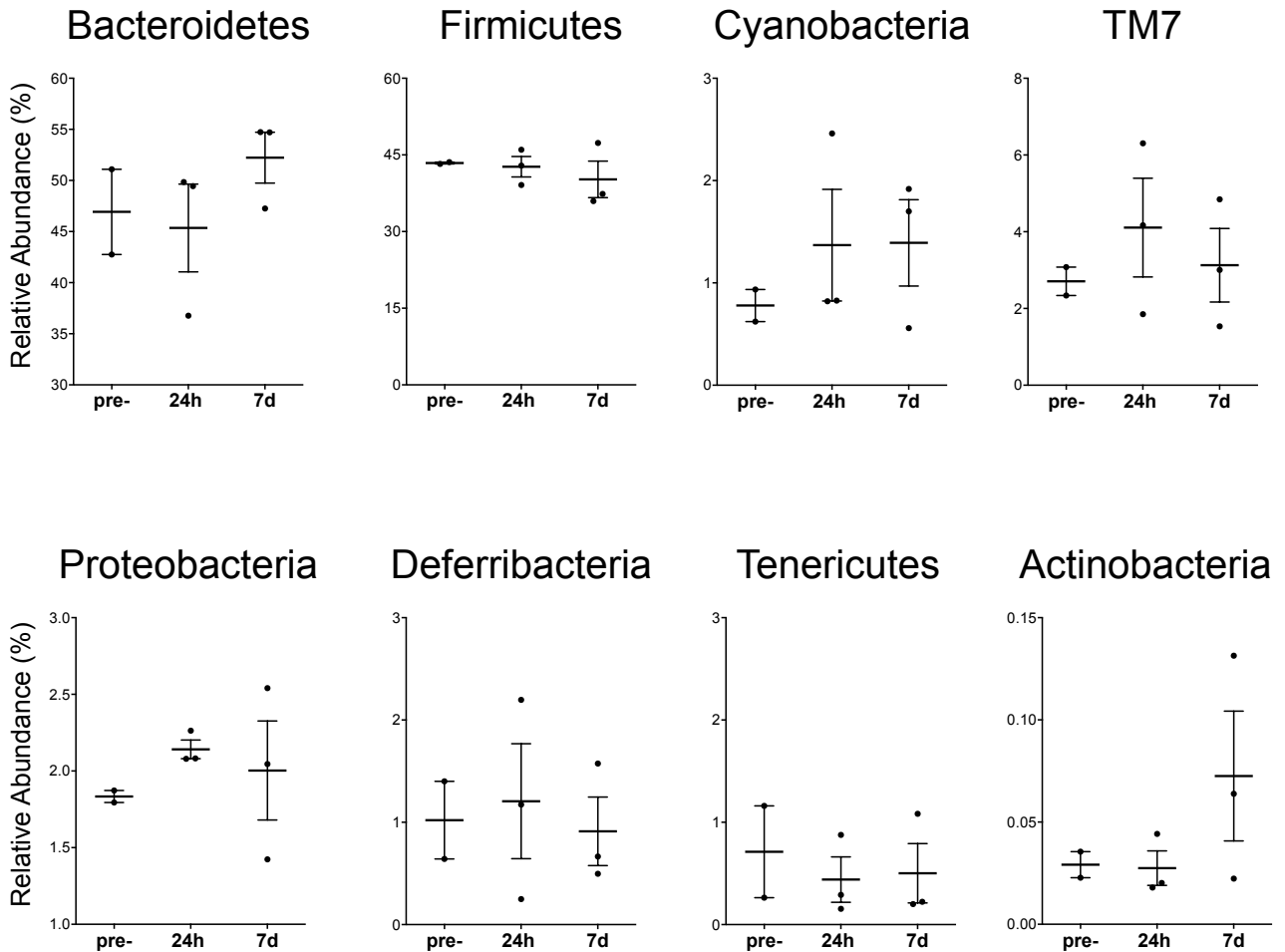


Figure S2: Relative abundances of taxa belonging to 8 most prevalent phyla do not change over time period studied in naïve cagemates (n=3, samples from 2 naïve mice were collected at time “pre”, and from all 3 naïve mice at “24h” and “7d”). Analysis by ordinary one-way Anova with Bonferroni’s post-hoc analysis to correct for multiple comparisons. Mean +/- SEM shown.

Relative abundance of *Firmicutes* and *Clostridiales* in naïve vs. isoflurane-exposed mice

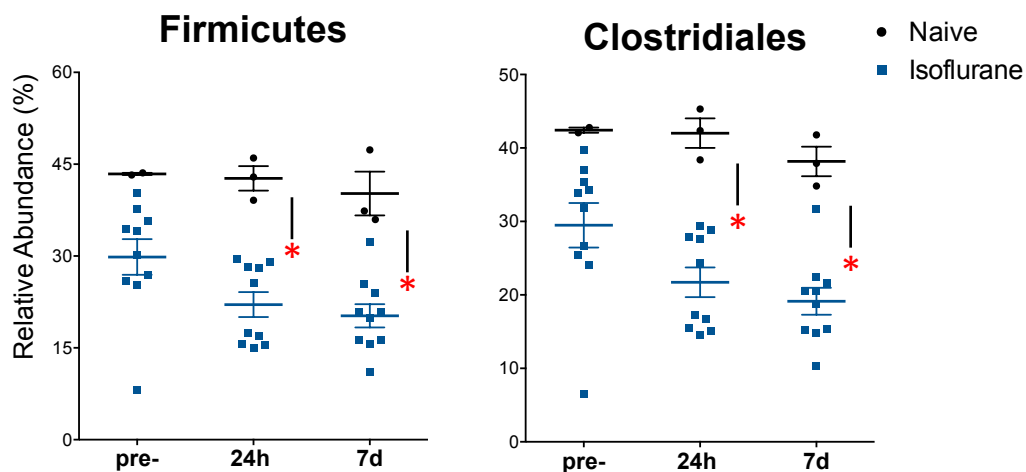


Figure S3. Two-way Anova for comparison of naïve and GA exposed mice demonstrates that isoflurane significantly affects relative abundance of *Firmicutes* and *Clostridiales* ($p < .001$ for both). Post-hoc analysis with Bonferroni's correction for multiple comparisons demonstrates significantly reduced populations of both at 24h and 7d (adjusted p-values all $< .005$.) Mean \pm SEM shown.