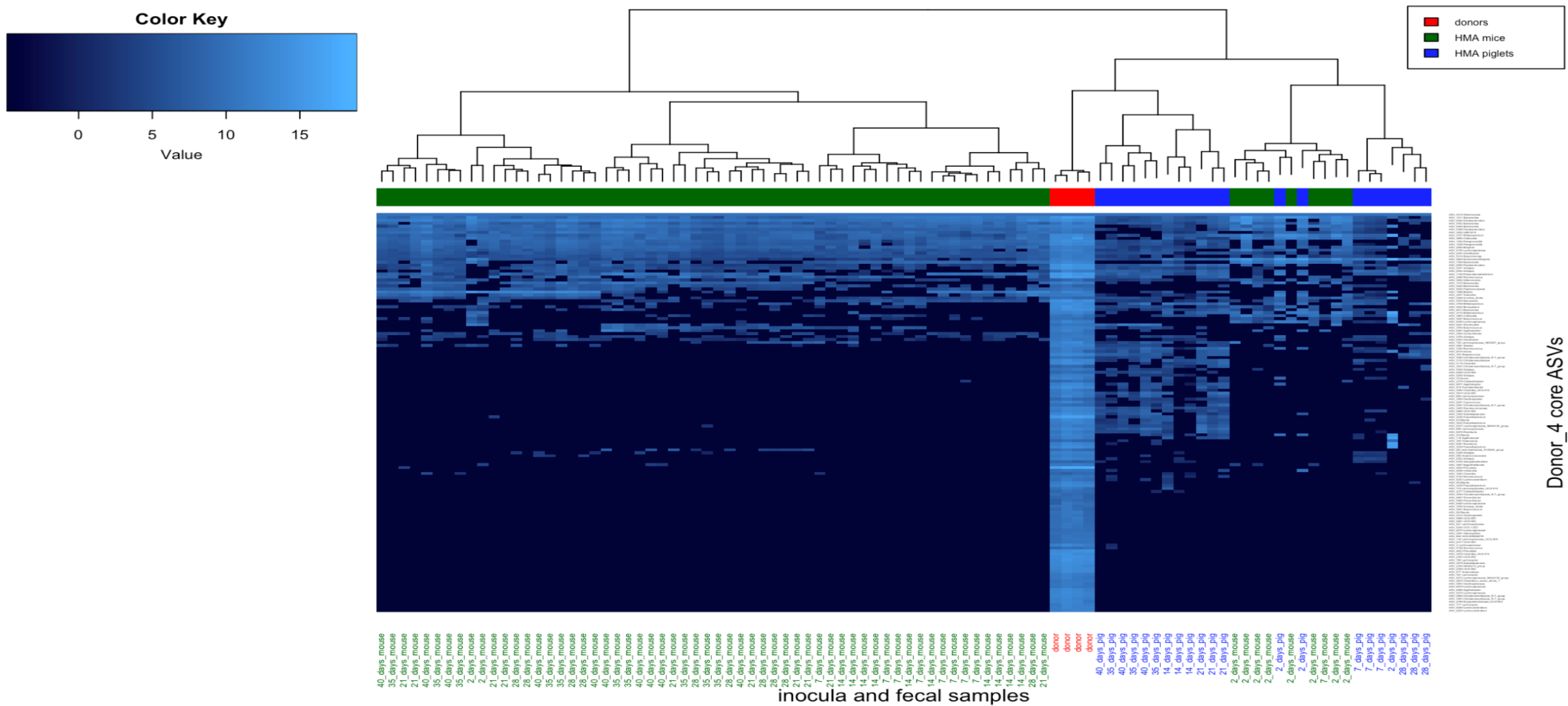
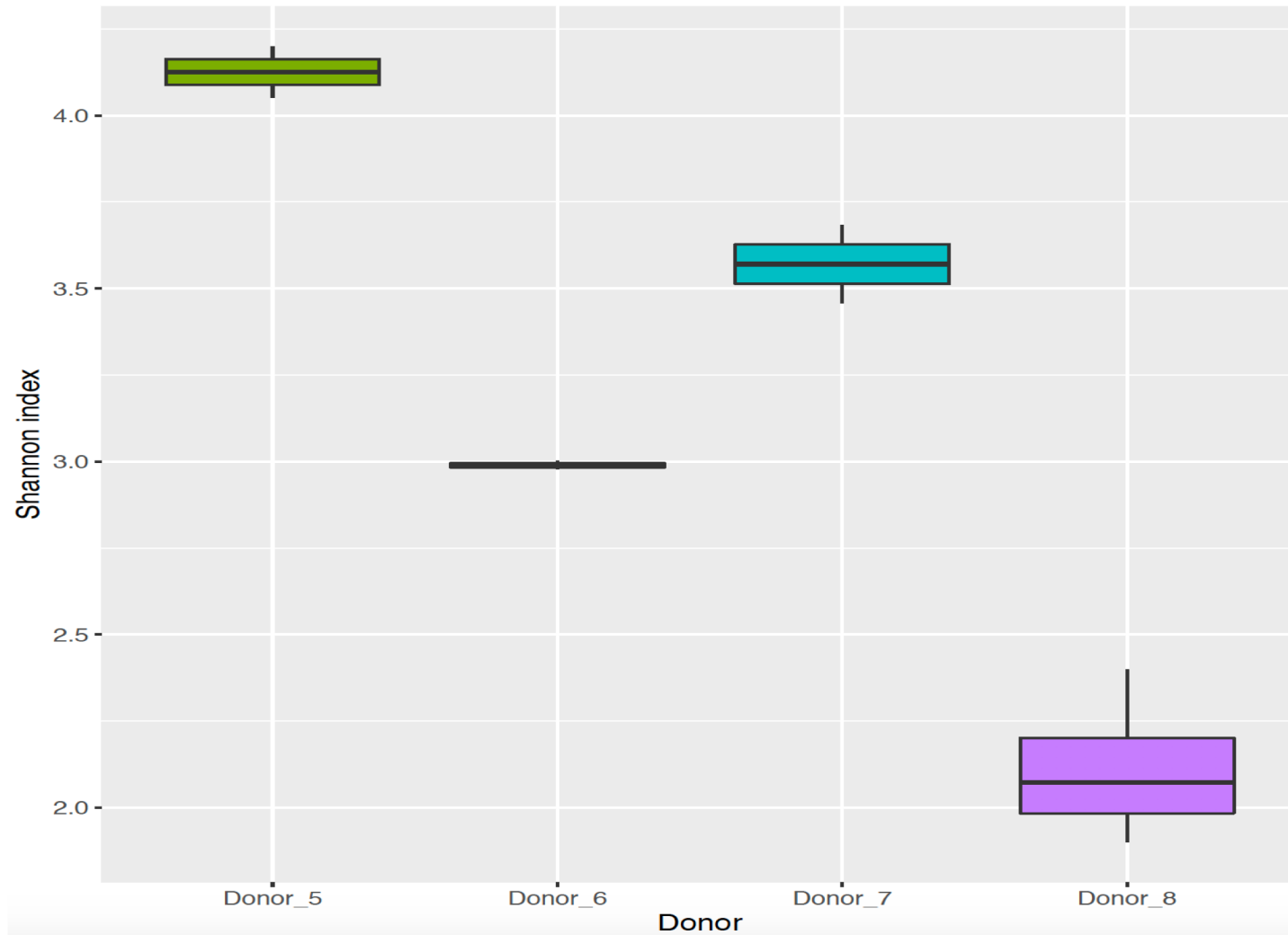


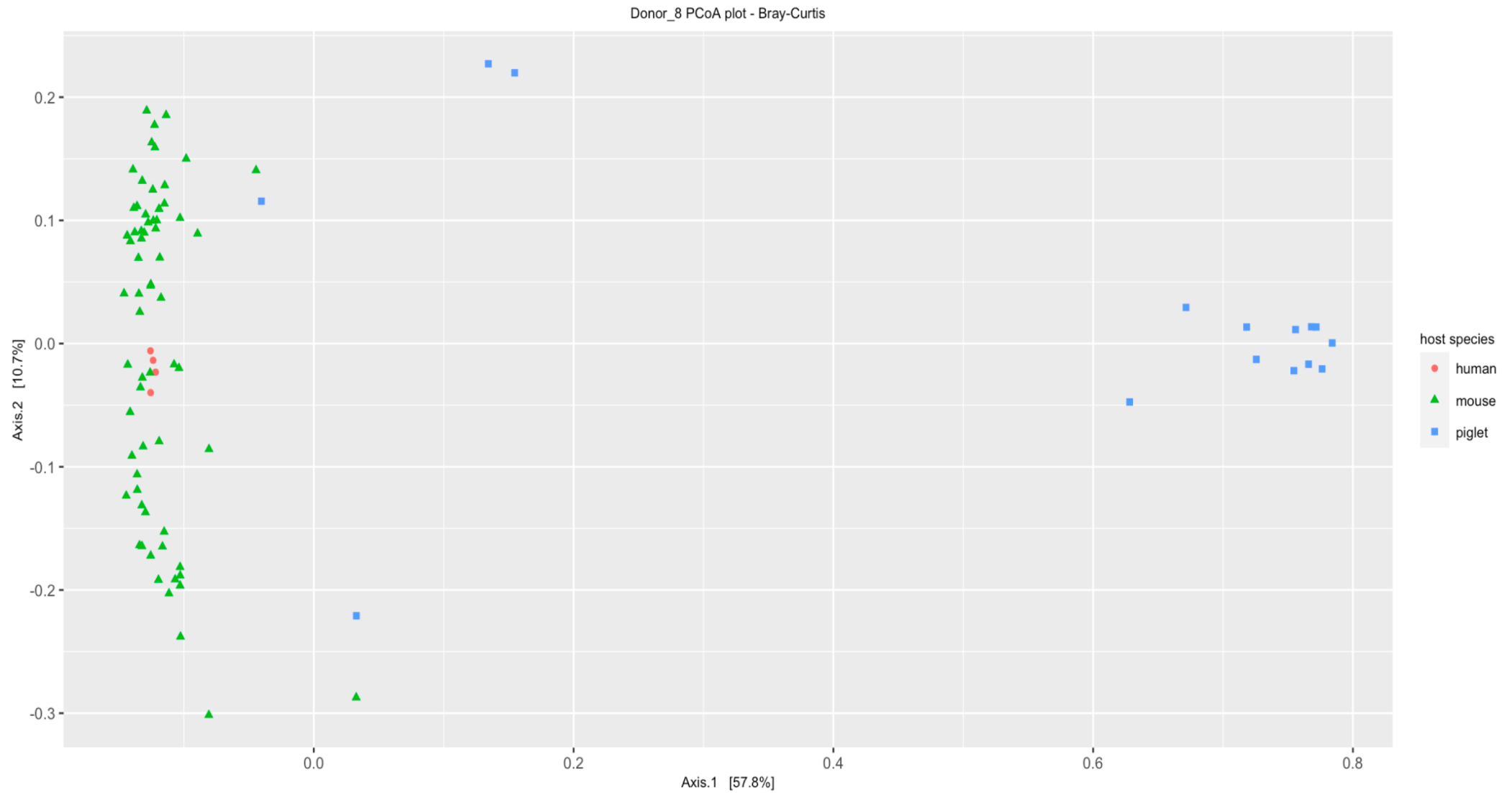
Supplementary Figure 1: Heatmap showing the distribution of core donor ASVs from Donor_1 across the corresponding HMA mouse and piglet fecal samples at different time points. The abundances have been normalized using variance-stabilizing transformation. The dendrogram depicts sample clustering based on Bray-Curtis distances.



Supplementary Figure 4: Heatmap showing the distribution of core donor ASVs from Donor_4 across the corresponding HMA mouse and piglet fecal samples at different time points. The abundances have been normalized using variance-stabilizing transformation. The dendrogram depicts sample clustering based on Bray-Curtis distances.

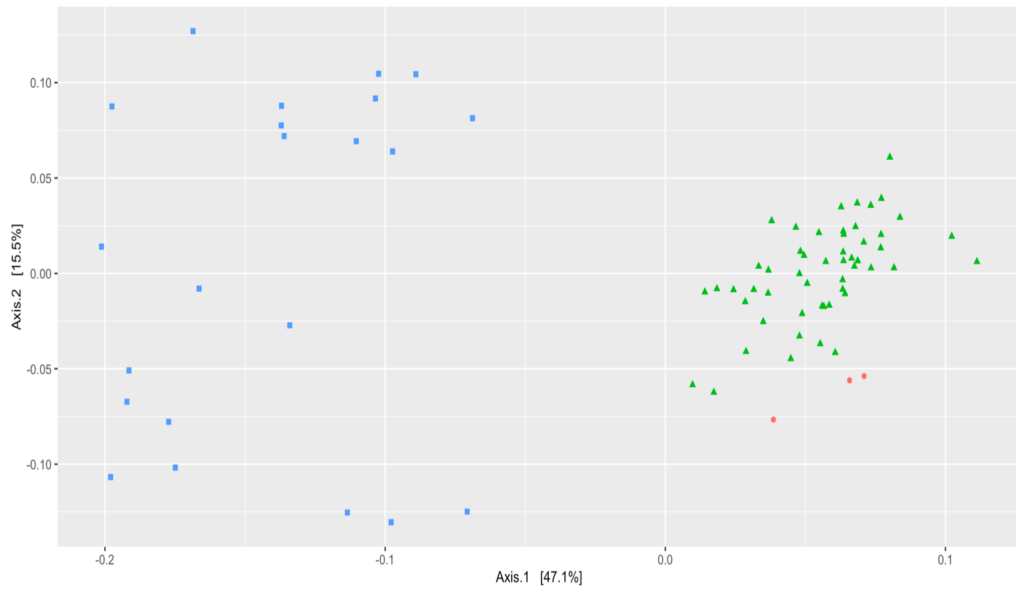


Supplementary Figure 5: Box-whisker plot comparing the alpha diversity of the inocula among the different donors of the second study using the Shannon index. Statistical comparisons were performed using the Wilcoxon rank-sum test. None of the donor diversities were statistically significantly different from each other. The box represents the 25th and 75th percentiles as the interquartile range (IQR) and the short black line represents the median. The whiskers represent the minimum and maximum values. Outliers are shown as black dots. $n = 2$ inoculum aliquots for Donor_5, Donor_6, and Donor_7; $n = 4$ inoculum aliquots for Donor_8.



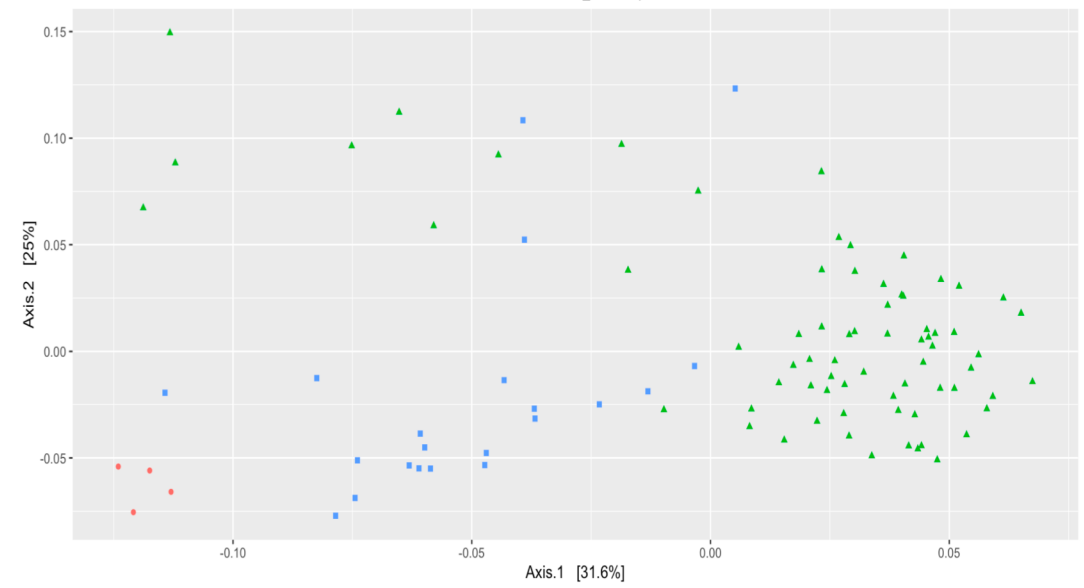
Supplementary Figure 6: Principal coordinate analysis plot based on Bray-Curtis distances comparing beta diversity of Donor_8 (infant) inocula with HMA mouse and HMA piglet fecal samples. $n = 4$ piglets and $n = 10$ mice. Red circles, human donor inocula; green triangles, HMA mouse fecal samples; blue squares, HMA piglet fecal samples.

PICRUST Donor_1 PCoA plot



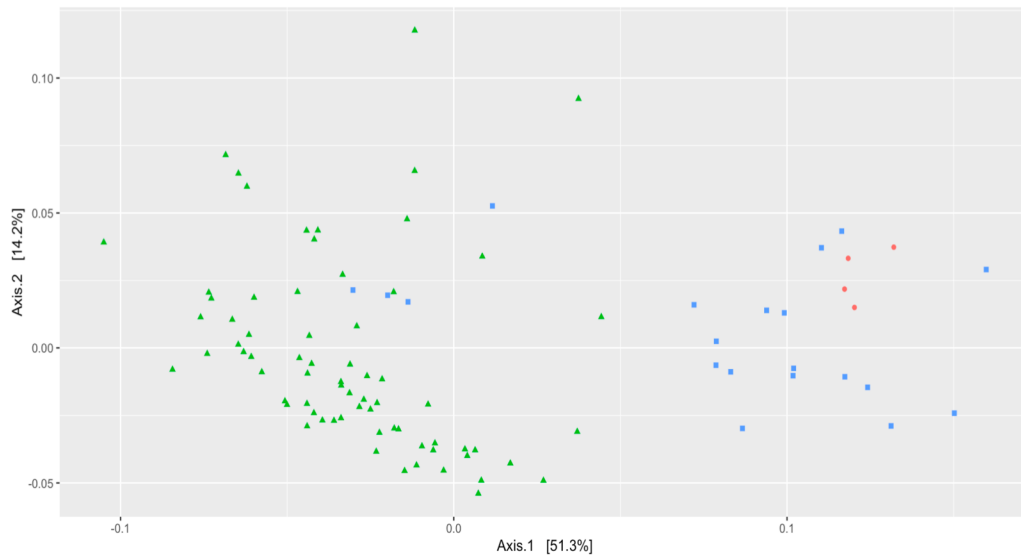
(a)

PICRUST Donor_2 PCoA plot



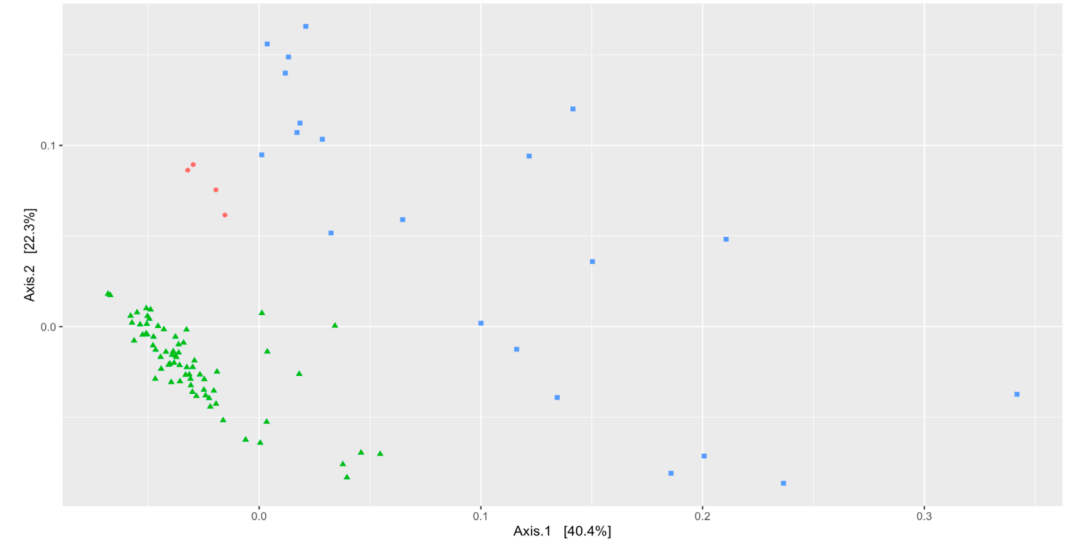
(b)

PICRUST Donor_3 PCoA plot



(c)

PICRUST Donor_4 PCoA plot



(d)

host species

- human
- ▲ mouse
- piglet

Supplementary Figure 7: Principal coordinate analysis (PCoA) plots based on Bray-Curtis distances comparing core PICRUST-predicted KEGG orthology (KO) functions between the human donors and the HMA animal models. (a) Donor_1 (b) Donor_2 (c) Donor_3 and (d) Donor_4. $n = 13$ (3 piglets/donor, with the exception $n=4$ for Donor_1, 2 days post inoculation) and $n = 37$ mice (Donor_1=7, Donor_2 = 10, Donor_3 = 10, Donor_4 = 10). Red circles, human donor inocula; green triangles, HMA mouse fecal samples; blue squares, HMA piglet fecal samples.