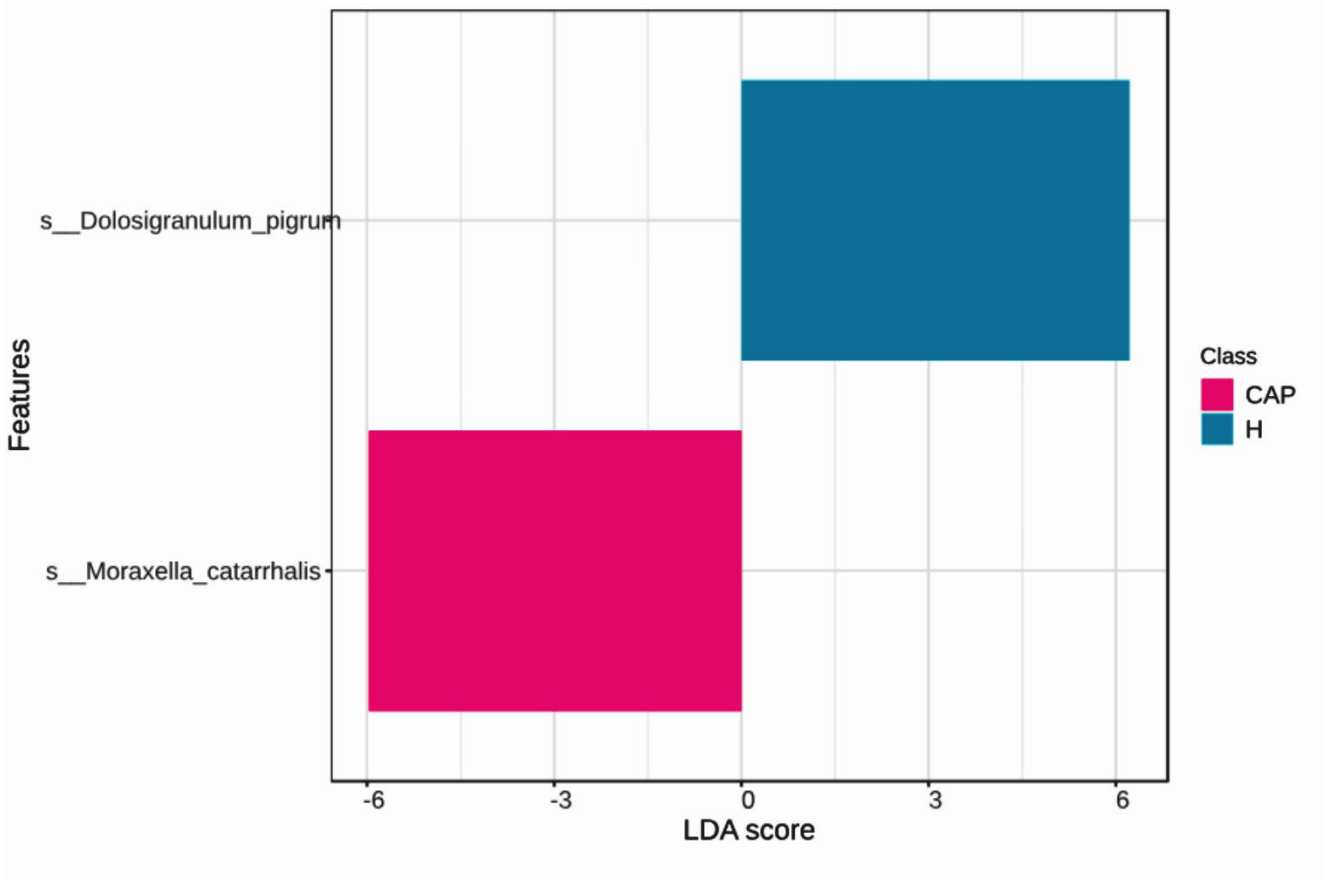
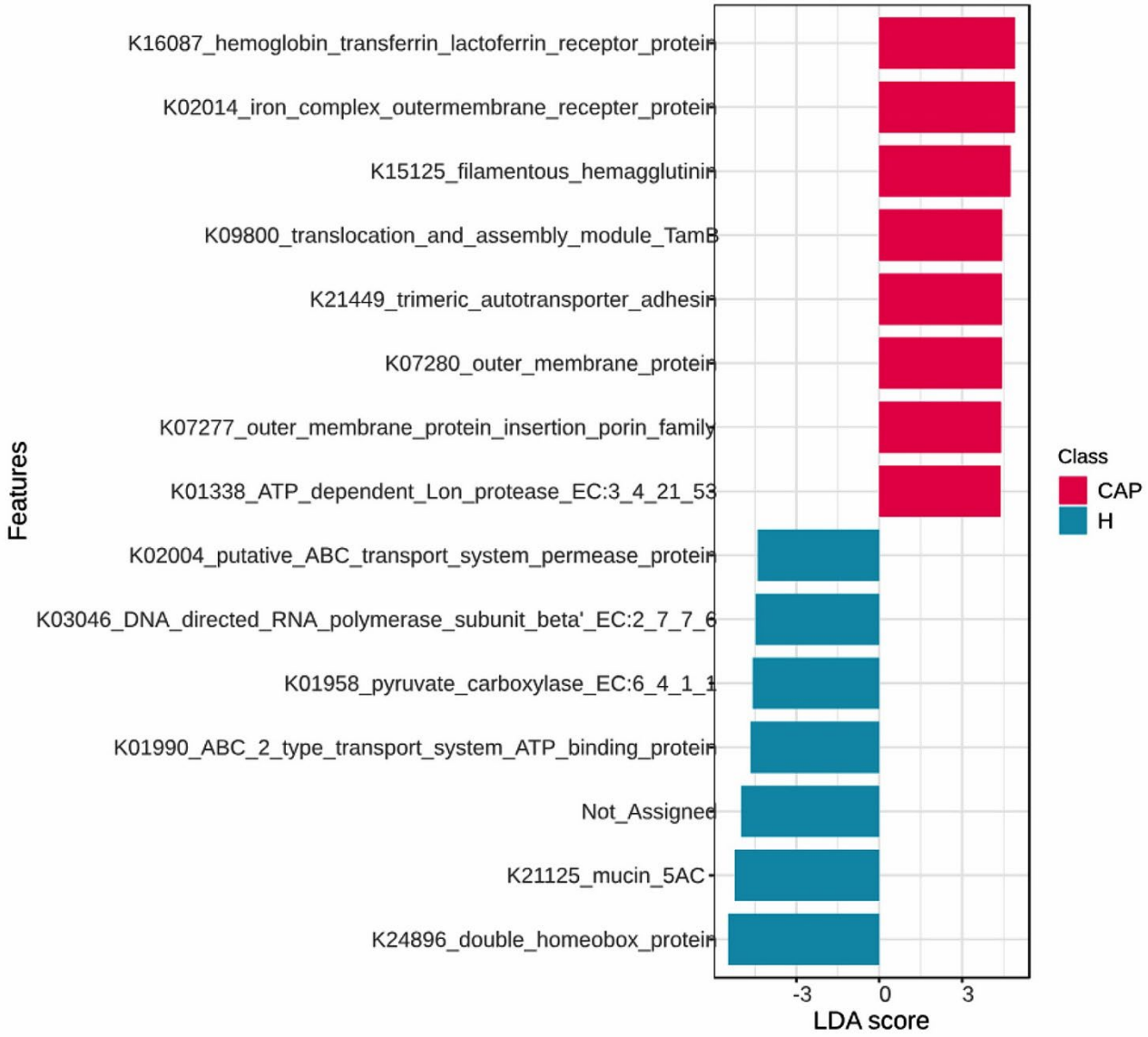


Suppl. Fig. 6(a): Linear discriminant analysis effect size (LEfSe) analysis identifying bacterial taxa that differentiates children with community-acquired pneumonia (CAP) from healthy controls. The LEfSe algorithm was applied using an alpha significance threshold of 0.05 for the Kruskal–Wallis test and Wilcoxon rank-sum test ($p < 0.05$), followed by linear discriminant analysis (LDA). Taxa with logarithmic LDA scores > 2 are displayed. The bar plot represents the effect size for each biomarker, where positive and negative values indicate association with the healthy children and CAP, respectively**.**



Suppl. Fig. 6(b): LEfSe plots illustrating the significant KEGG pathways differentiating children with community-acquired pneumonia (CAP) from healthy controls. The Linear Discriminant Analysis Effect Size (LEfSe) method was applied using the Kruskal–Wallis test ($p < 0.05$) followed by the Wilcoxon rank-sum test ($p < 0.05$). Pathways were ranked according to their linear discriminant analysis (LDA) scores, and only those with an LDA score > 2 are shown. Bars represent the magnitude of the LDA score, with pathways enriched in CAP shown in red and those enriched in healthy children shown in blue**.**