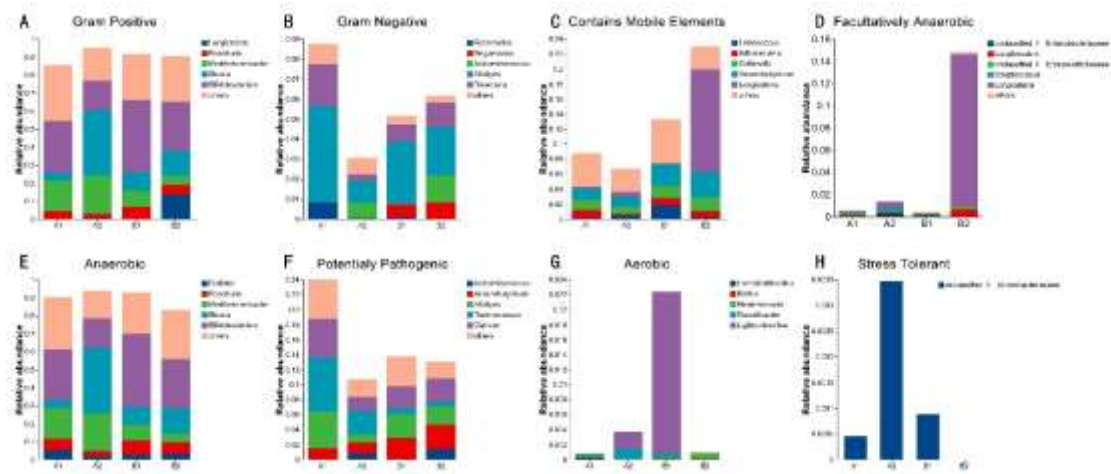




**Supplementary Figure 1 Prediction of species contribution to phenotypic functions.** Group A (berberine group): A1, before treatment; A2, after treatment. Group B (clarithromycin group): B1, before treatment; B2, after treatment. This figure displays the dominant species composition of specific phenotypes, and reflects the matching relationship between species and phenotypes. The x-axis shows group names; different colors in the legend represent distinct species; the y-axis represents the relative abundance values of each species under the target phenotype. The top 5 genera are shown.