



Supplementary Material

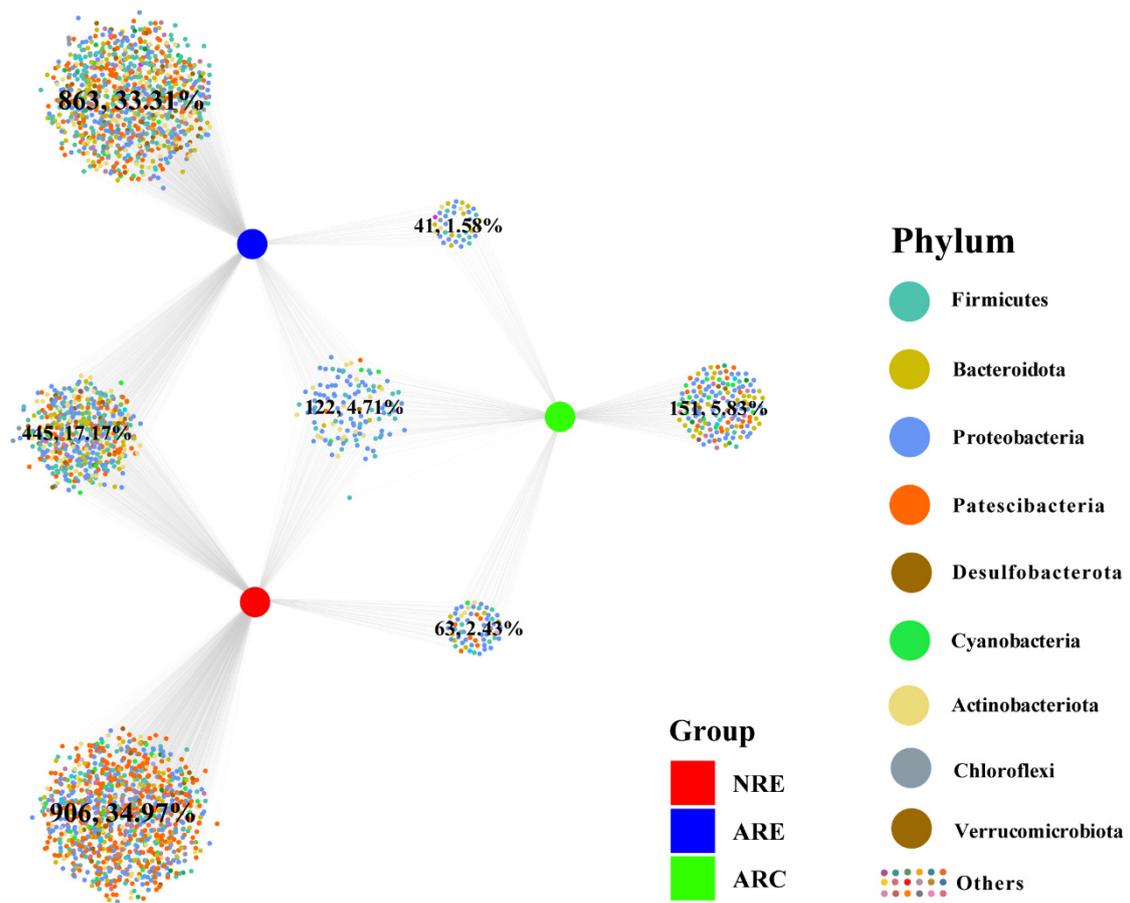


Figure S1. Microbial composition.

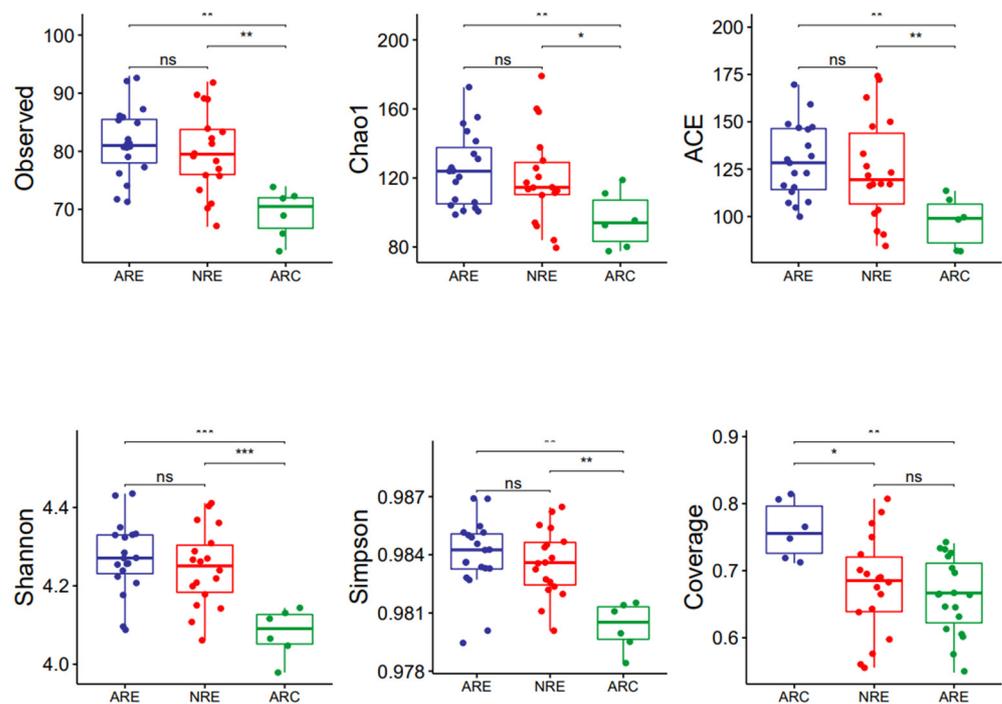
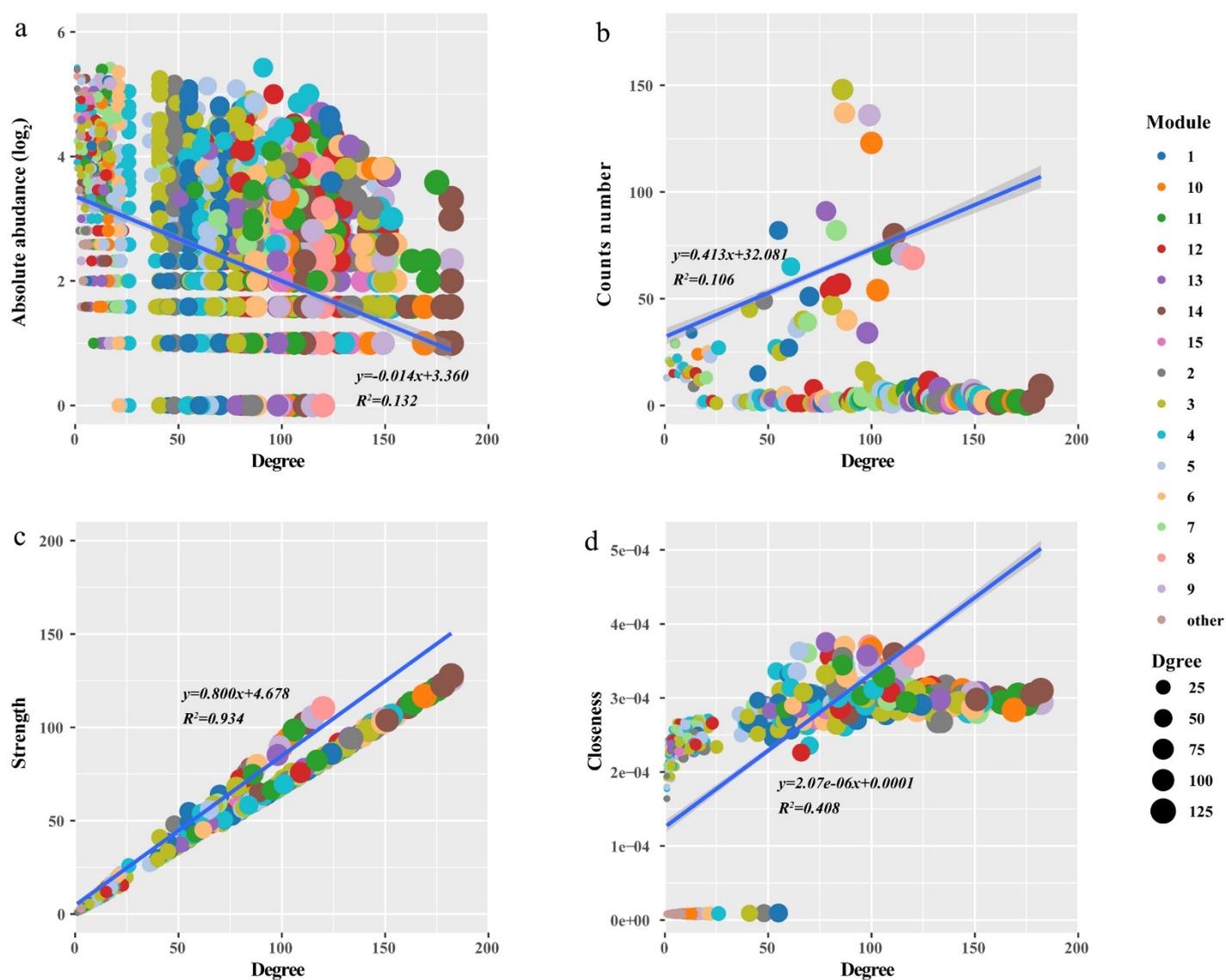
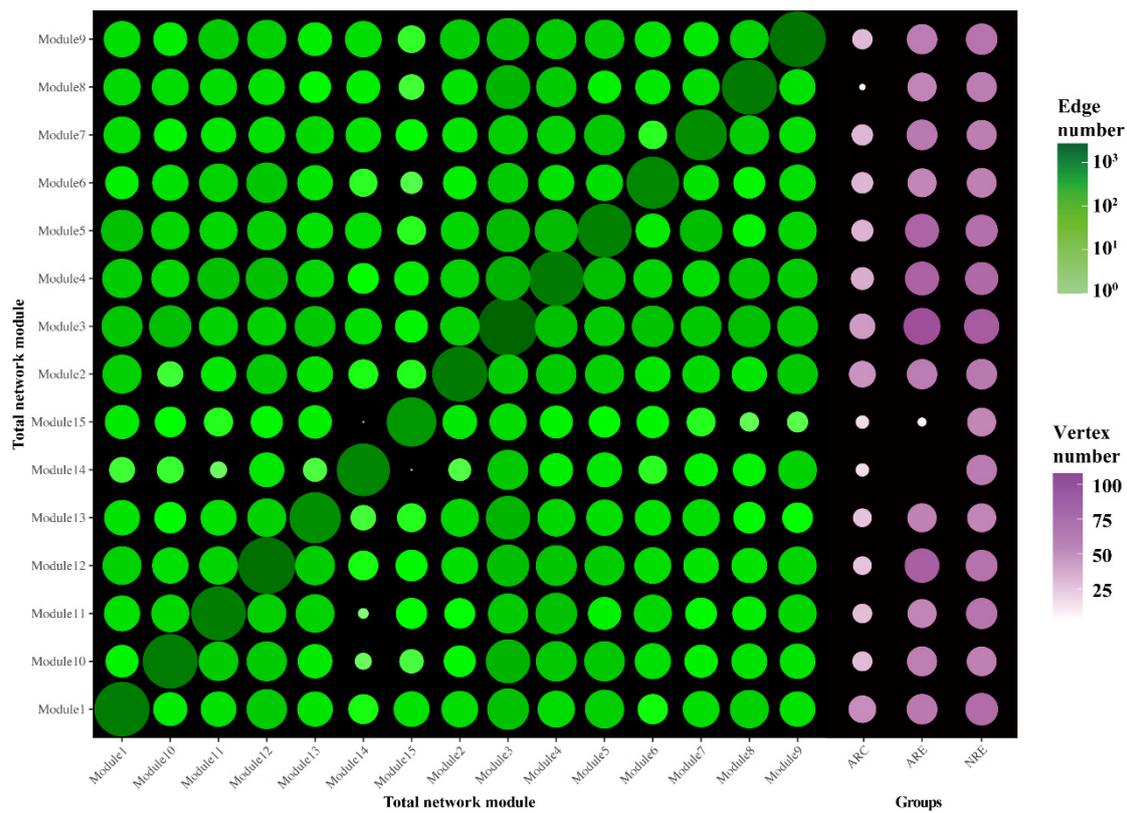


Figure S2. Alpha diversity of microbial community.





**Figure S4.** The degree distribution of microbial co-occurrence network. (a) The scale free distribution of degree of nodes. (b) Relationship between degree and the read counts of corresponding ESVs. (c) Relationship between degree and strength of corresponding ESVs. (d) Relationship between degree and closeness of corresponding ESVs.



**Figure S5.** The topological roles of 15 modules of the microbial co-occurrence network. The linkage and vertices across 15 modules of the microbial co-occurrence network.