

### **Description of Additional Supplementary Files**

File Name: Supplementary Data 1

Description: Bukeh plots for all VOC  $\gamma$  metagenomic analyses.

File Name: Supplementary Data 2

Description: Bukeh plots for all WA1/2020 metagenomic analyses.

File Name: Supplementary Data 3

Description: Source data of results shown in figures 1-4, Supplementary figures 1-2, and extended data tables 1-3.

File Name: Supplementary Data 4

Description: Statistical analyses of results shown in figures 2-4.