

Production phase affects the bioaerosol microbial composition and functional potential in swine confinement buildings

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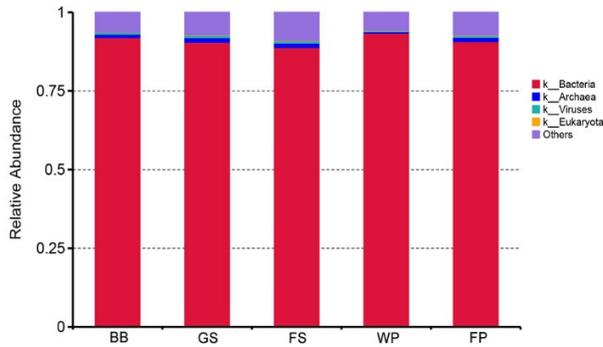
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Table S1. Overall gene catalogue profile

Gene prediction	
ORFs number	3,024,491
Average length (bp)	517.66
Complete ORFs percentage (%)	32.28
GC percentage (%)	48.56

a



b

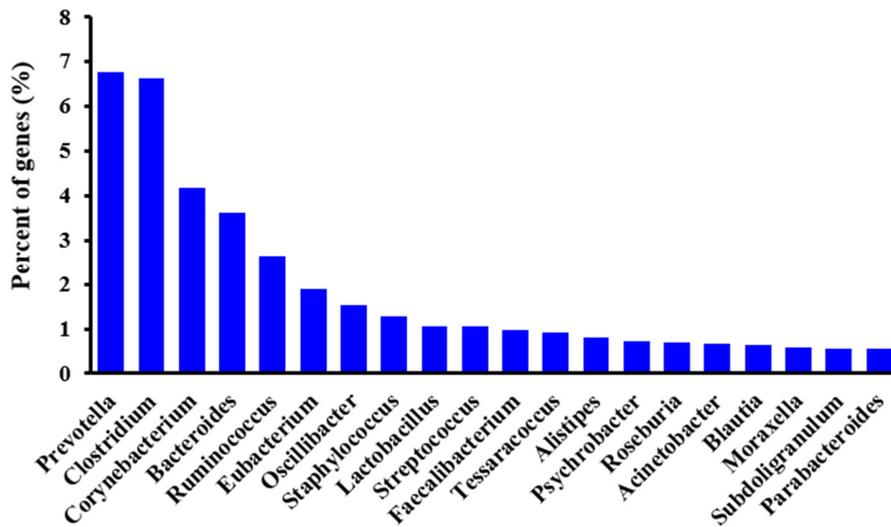


Figure S1. The relative abundances of taxa at the domain level among all samples (a) and the top 20 genera in bioaerosol microbiome (b). BB, GS, FS, WP and FP refer to the bioaerosols collected from the piggeries that were exclusively housing the breeding boars, gestating sows, farrowing sows, weaning piglets, and finishing pigs, respectively.

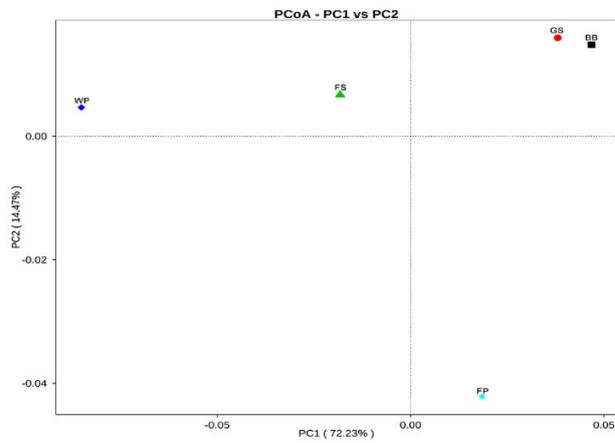
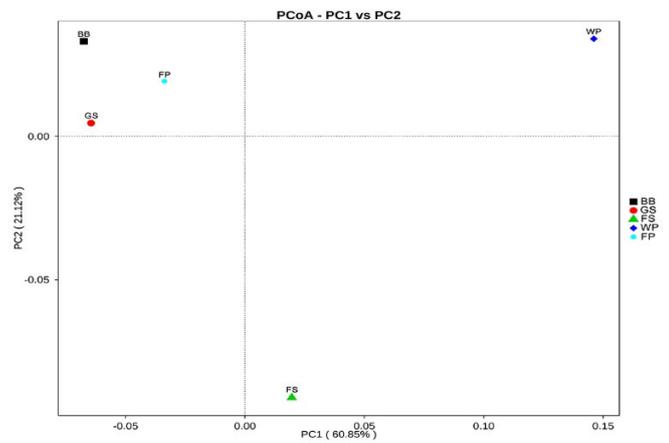
a**b**

Figure S3. PCoA of bioaerosol samples based on functional annotation of the genes by KEGG pathway (a) and eggNOG (b). Plots were based on Bray Curtis dissimilarity of the assigned KEGG orthologous groups (KOs) and the eggNOG orthologous groups (NOs). BB, GS, FS, WP and FP refer to bioaerosols collected from the piggeries that were exclusively housing breeding boars, gestating sows, farrowing sows, weaning piglets and finishing pigs, respectively.

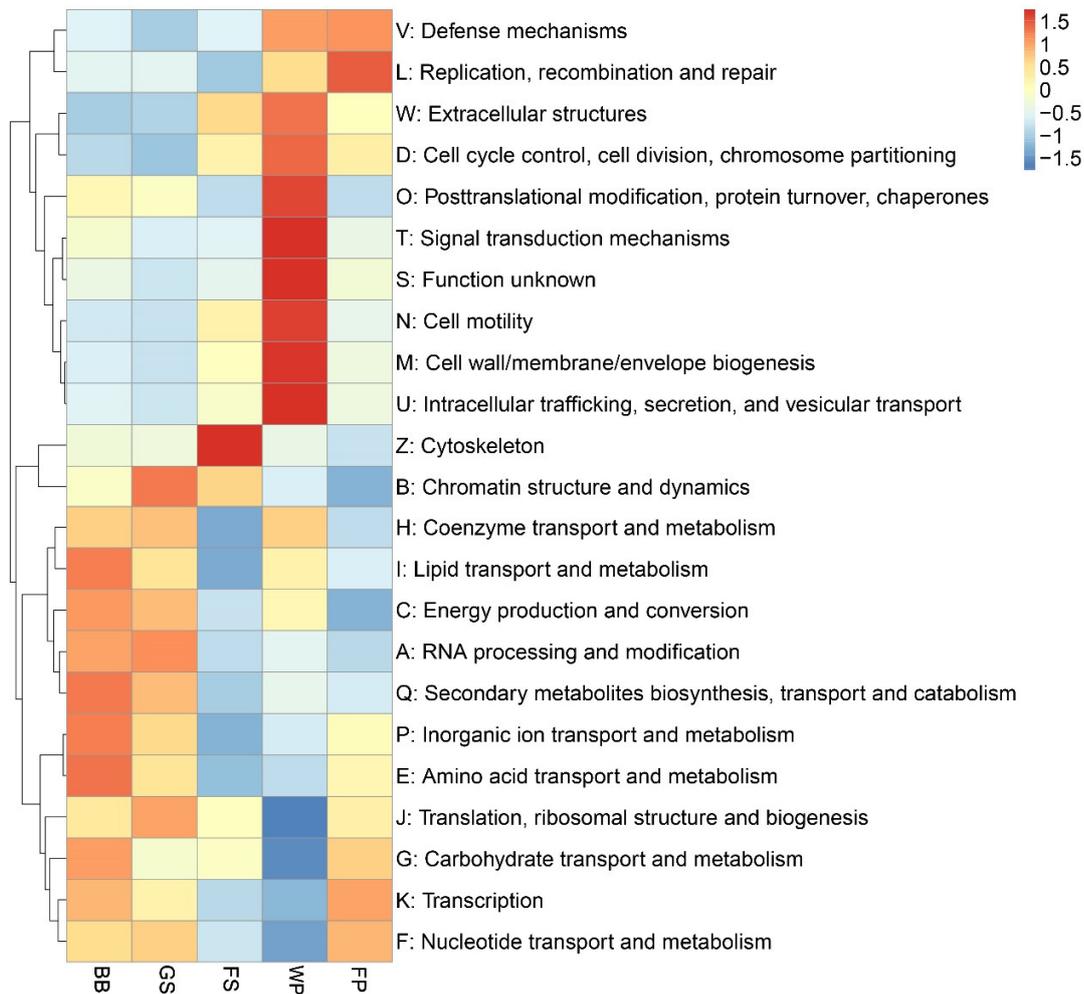
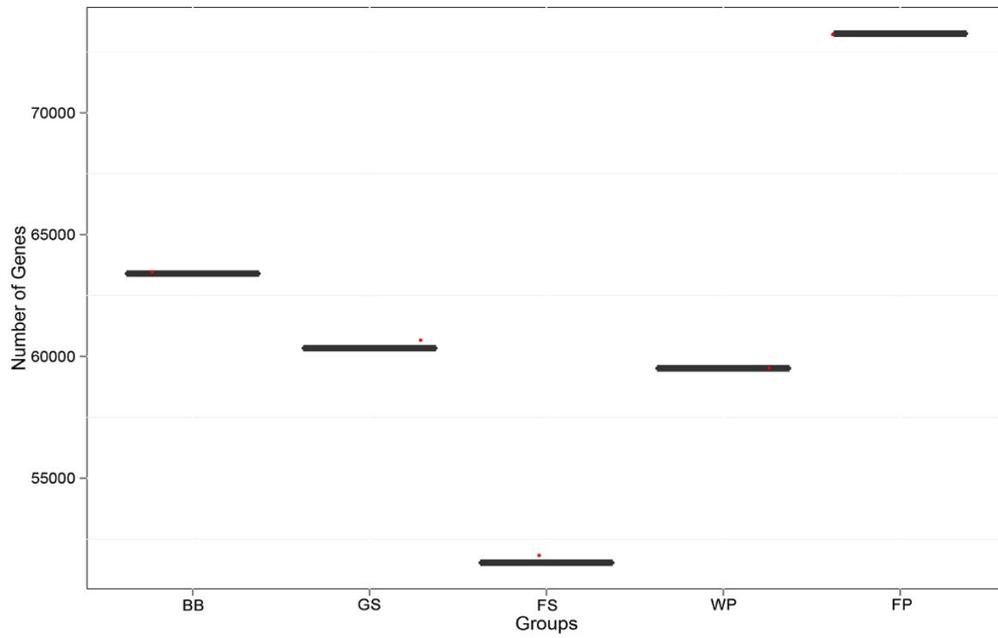


Figure S4. Annotated functional profile (eggNOG level 1) of the bioaerosols from the five types of swine confinement buildings. BB, GS, FS, WP and FP refer to bioaerosols collected from the piggeries that were exclusively housing breeding boars, gestating sows, farrowing sows, weaning piglets and finishing pigs, respectively.

a



b

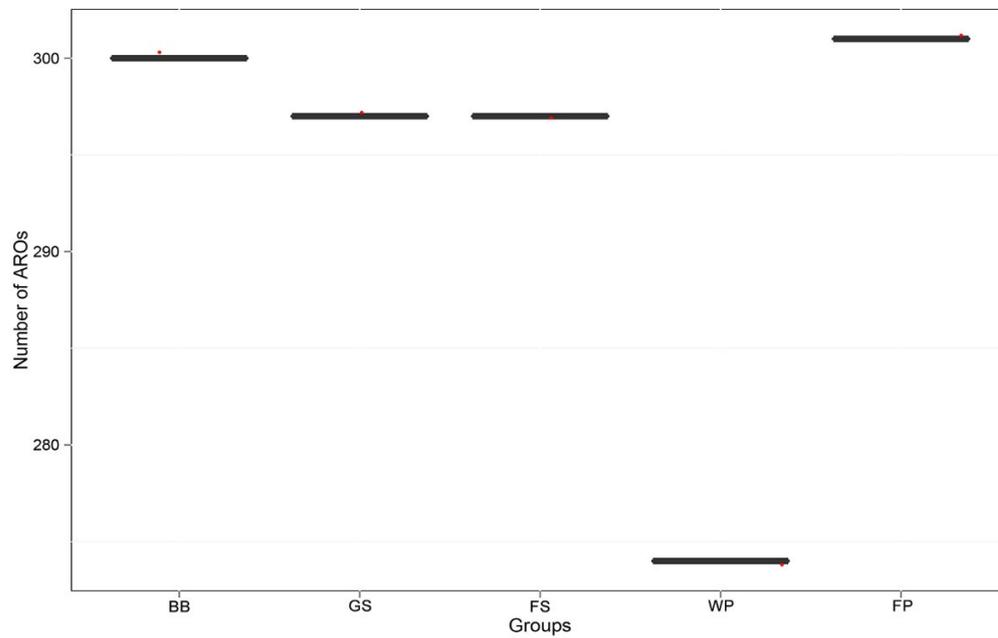


Figure S5. Total number of antibiotic resistant genes (ARG) (a) and ARG subtypes (b) detected in bioaerosol samples. BB, GS, FS, WP and FP refer to bioaerosols collected from the piggeries that were exclusively housing breeding boars, gestating sows, farrowing sows, weaning piglets and finishing pigs, respectively.

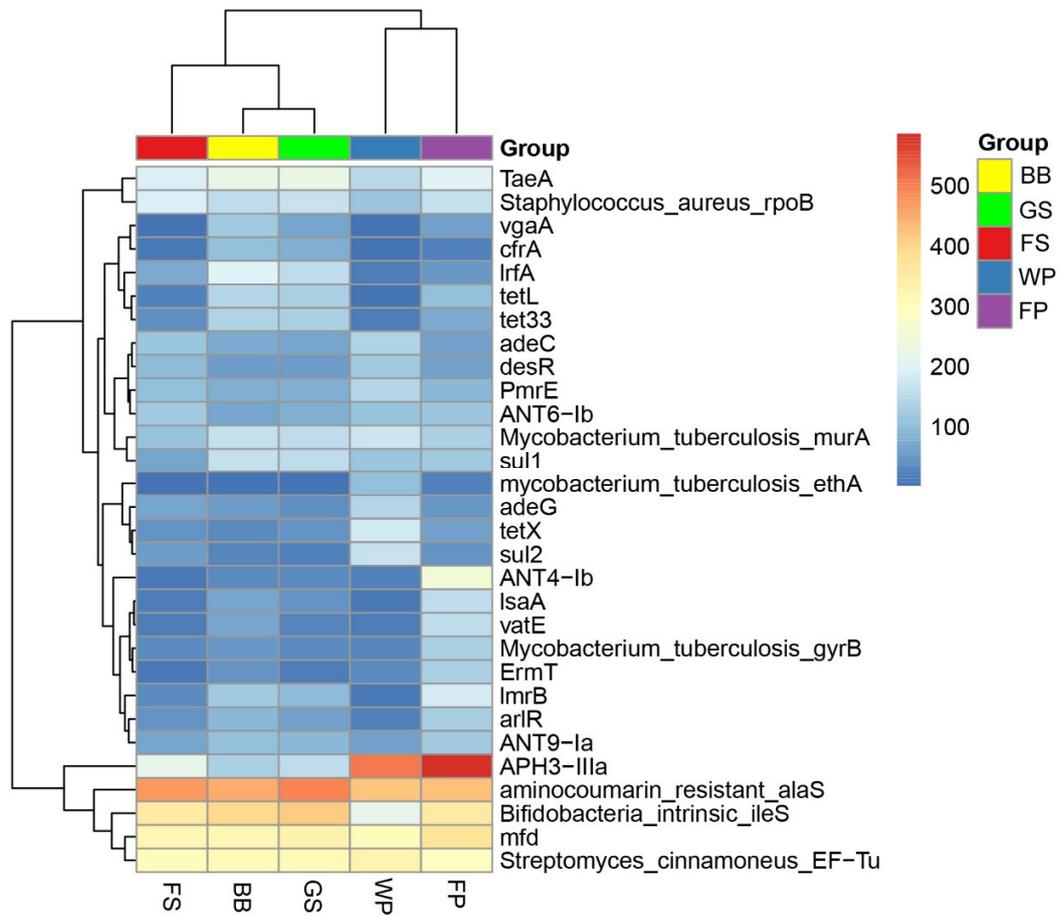


Figure S6. Heatmap of ARG subtype abundances in all samples. BB, GS, FS, WP and FP refer to bioaerosols collected from the piggeries that were exclusively housing breeding boars, gestating sows, farrowing sows, weaning piglets and finishing pigs, respectively.