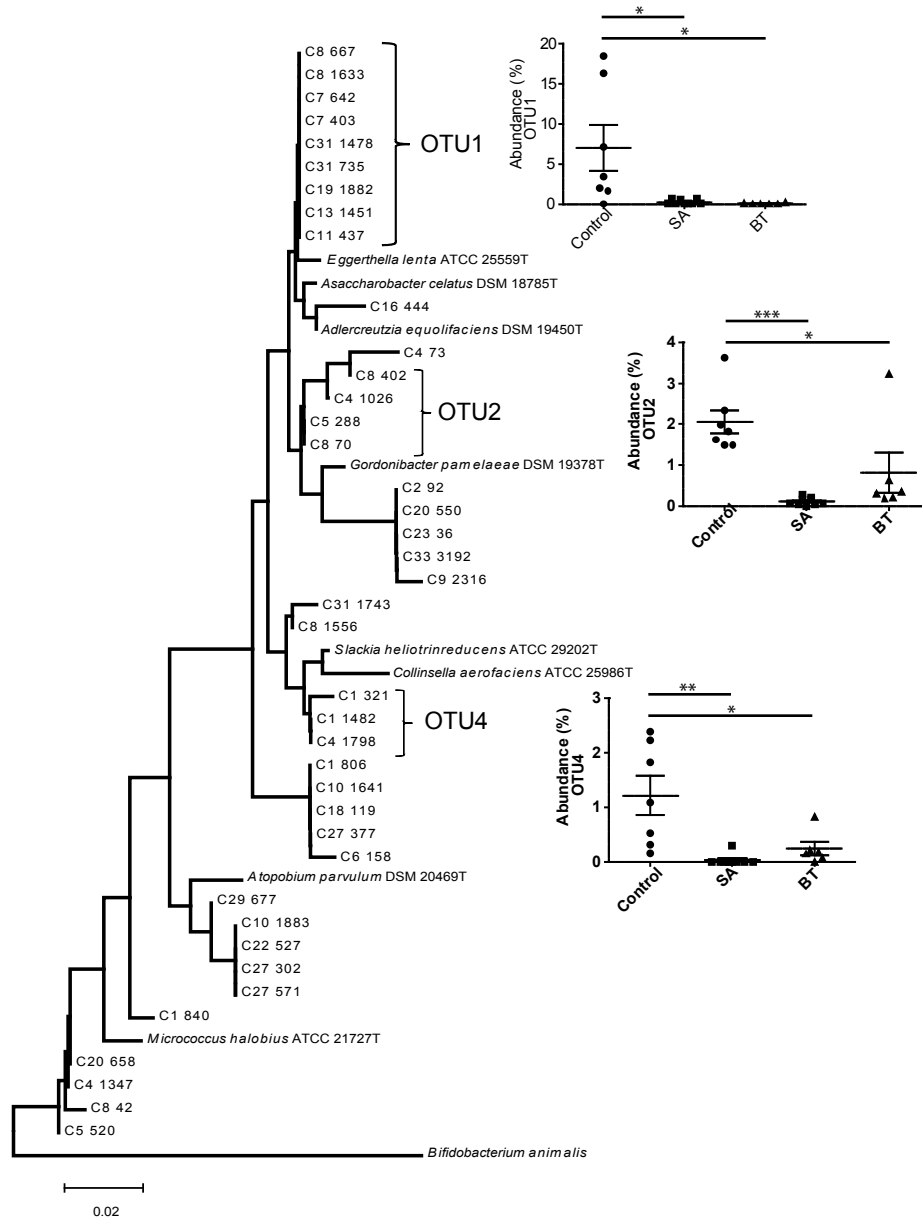
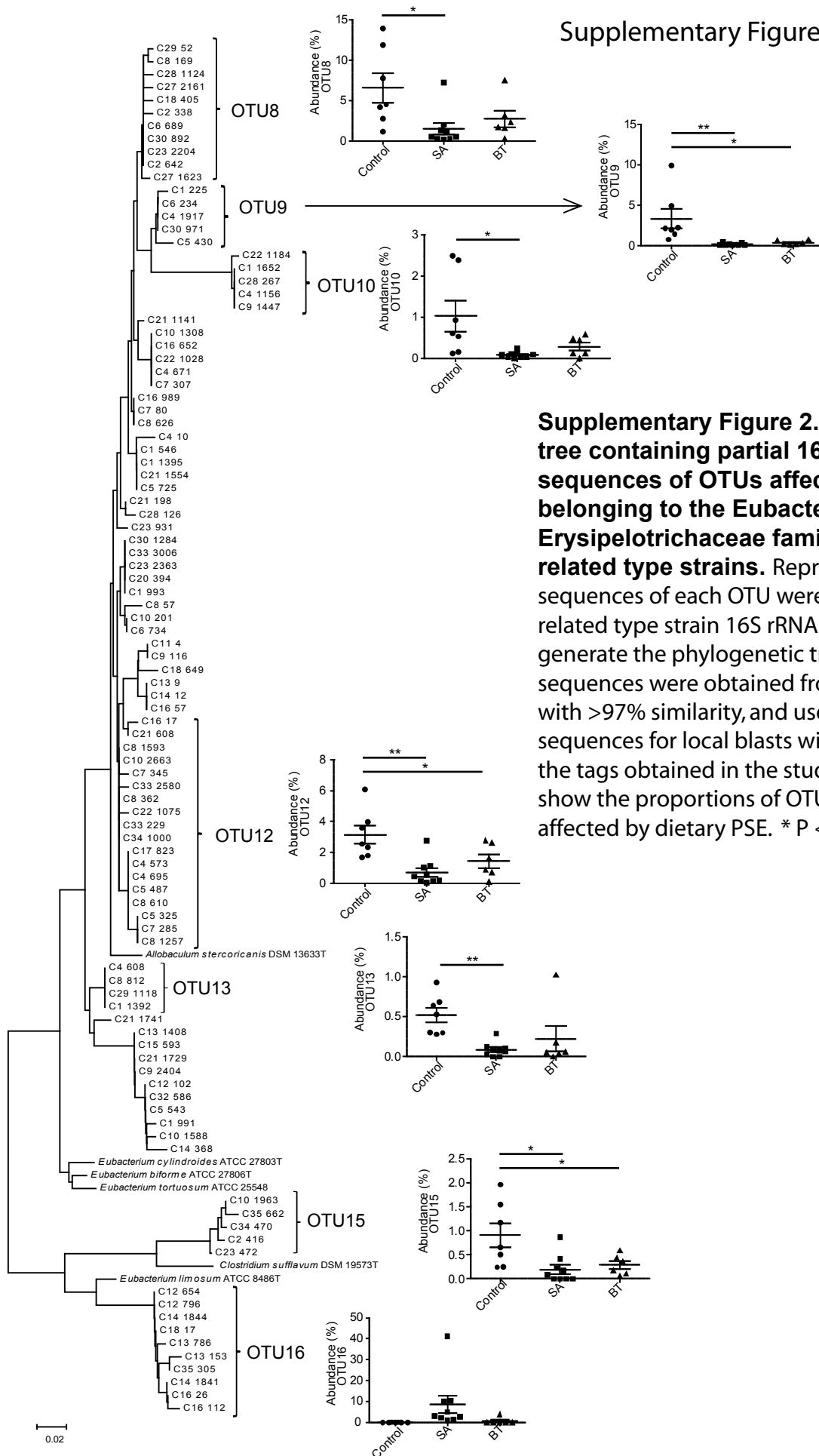


## Supplementary Figure 1



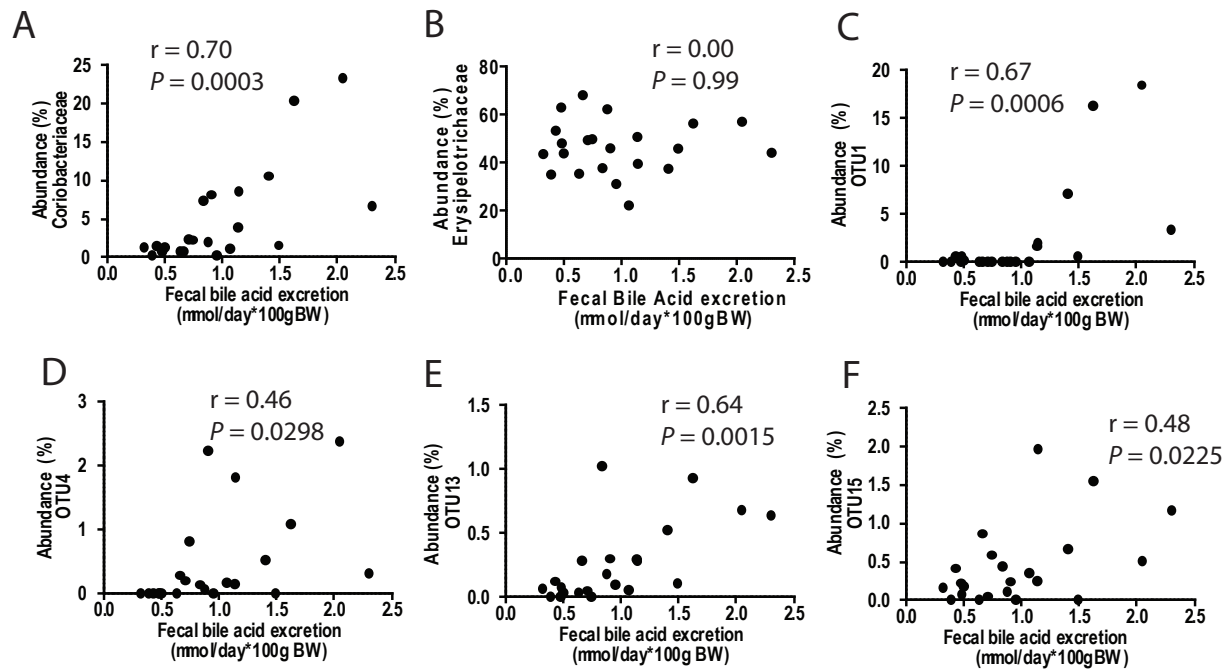
**Supplementary Figure 1. Phylogenetic tree containing partial 16S rRNA gene sequences of OTUs affected by PSE belonging to the Coriobacteriaceae family and closely related type strains.** Representative sequences of each OTU were aligned with related type strain 16S rRNA sequences to generate the phylogenetic tree. Consensus sequences were obtained from sequences with >97% similarity, and used as query sequences for local blasts with a database for the tags obtained in the study. The graphs show the proportions of OTUs significantly affected by dietary PSE. \*  $P < 0.05$ , \*\*  $P < 0.01$ , \*\*\*  $P < 0.001$ .

## Supplementary Figure 2



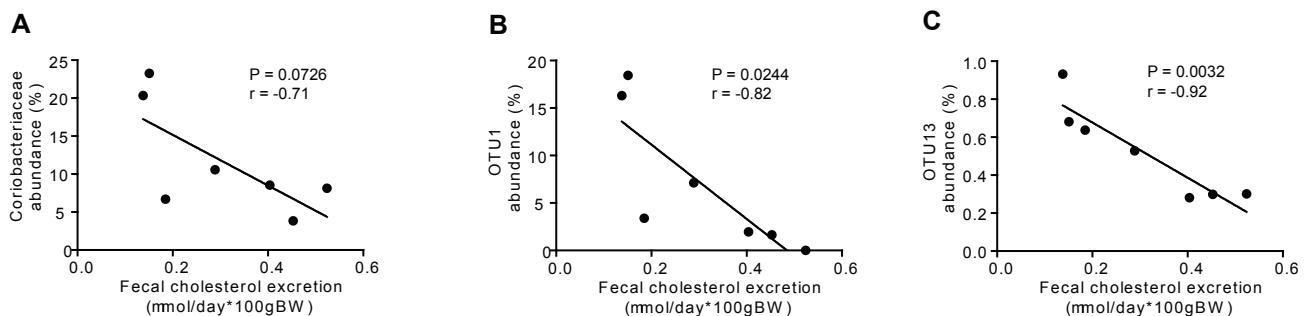
**Supplementary Figure 2. Phylogenetic tree containing partial 16S rRNA gene sequences of OTUs affected by PSE belonging to the Eubacteriaceae and Erysipelotrichaceae families and closely related type strains.** Representative sequences of each OTU were aligned with related type strain 16S rRNA sequences to generate the phylogenetic tree. Consensus sequences were obtained from sequences with >97% similarity, and used as query sequences for local blasts with a database for the tags obtained in the study. The graphs show the proportions of OTUs significantly affected by dietary PSE. \*  $P < 0.05$ , \*\*  $P < 0.01$ .

### Supplementary Figure 3



**Supplementary Figure 3. Associations between bile acid excretion and proportions of gut bacterial populations.** Correlations between bile acid excretion and the abundance of Coriobacteriaceae (A), Erysipelotrichaceae (B), OTU1 (C), OTU4 (D), OTU13 (E), and OTU15 (F).

### Supplementary Figure 4



**Supplementary Figure 4. Associations between fecal cholesterol excretion and proportions of gut bacterial populations in hamsters on the control diet.** Correlations between fecal cholesterol excretion and abundance of Coriobacteriaceae (A), OTU1 (B), and OTU 13 (C).