

Additional file 4: Caecal microbiota comparison of *Pxr*^{-/-} vs. *Pxr*^{+/+} male and female mice.

(A) α-diversity at the OTU level in *Pxr*^{-/-} vs. *Pxr*^{+/+} males.

(B) α-diversity at the OTU levels in *Pxr*^{-/-} vs. *Pxr*^{+/+} females.

(C) PLS-DA at the OTU level. Each dot represents one individual sample.

(D) Composition of the bacterial phyla in males.

(E) Composition of the bacterial phyla in females.

(F) Comparison of caecal microbiota was performed with LDA effect size (LEfSe). The red area indicates the over-abundance in *Pxr*^{-/-} male microbiota where the green area indicated the over-abundance in *Pxr*^{+/+} male microbiota.

(G) Comparison of caecal microbiota was performed with LDA effect size (LEfSe). The red area indicates the over-abundance in *Pxr*^{-/-} female microbiota where the green area indicated the over-abundance in *Pxr*^{+/+} female microbiota.

(H) Relative abundances of some bacterial genera identified as significantly different between groups using LEfSe analysis.

* = Significantly different (p<0.05) according to Mann-Whitney test between *Pxr*^{-/-} vs. *Pxr*^{+/+} in each sex.

