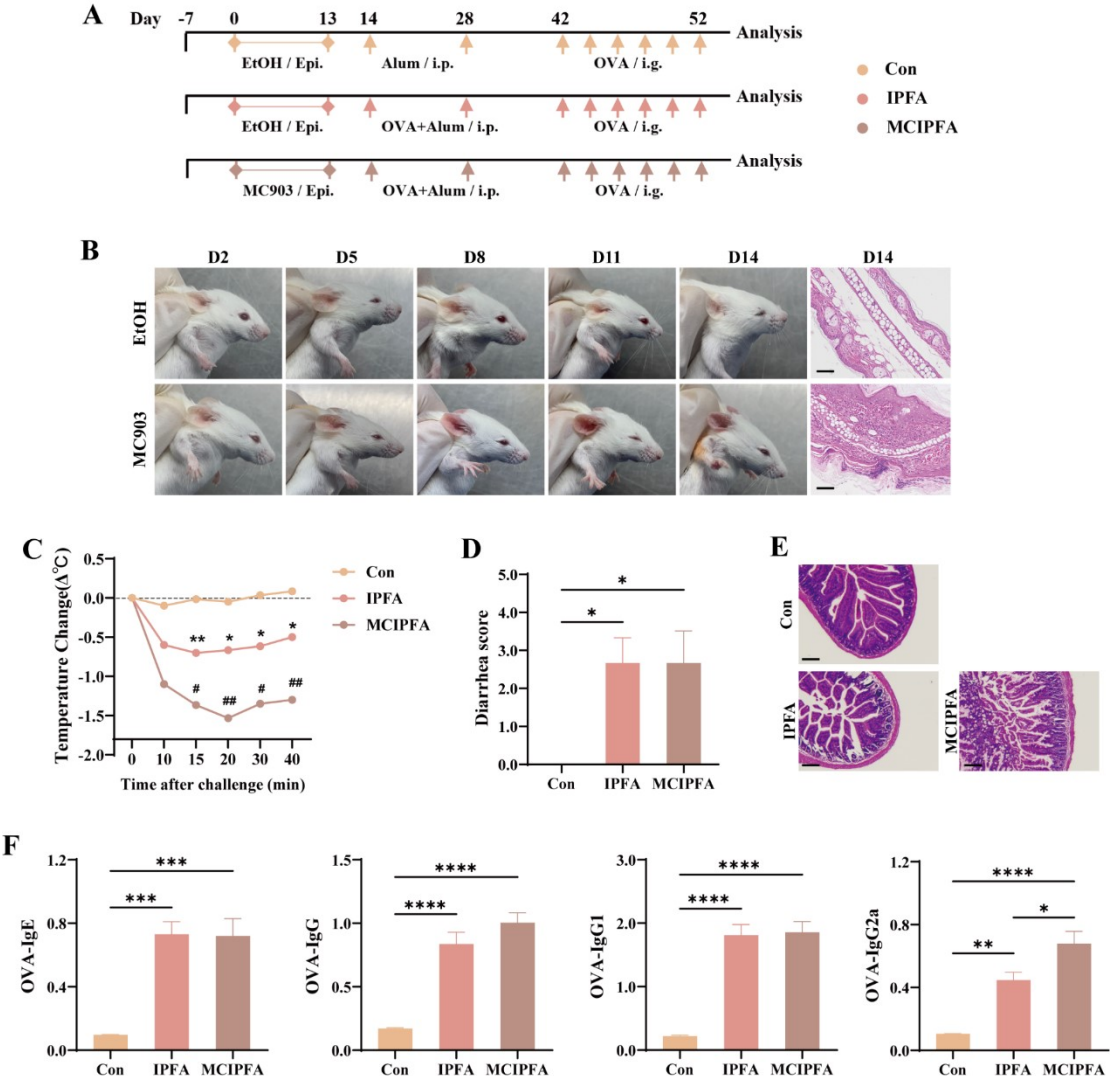
Supplementary Figures

Supplementary Fig. 1 Early skin inflammation caused more severe clinical symptoms in IPFA mice. (A) Experimental protocol. (B) Recording and histological analysis of ear skin inflammation. (C) Body temperature change after the 6th OVA challenge, and * $P < 0.05$, ** $P < 0.01$ vs control group (Con), # $P < 0.05$, ## $P < 0.01$ vs IPFA group by two-way ANOVA with the Šídák's multiple comparisons test. (D) Diarrhea score. (E) Histopathological analysis of jejunums. (F) Levels of OVA-IgE, IgG, IgG1 and IgG2a in serum. Data are presented as means ± SEM, *$P < 0.05$, ** $P < 0.01$, *** $P < 0.001$ and **** $P < 0.0001$ using one-way ANOVA with the Tukey's multiple comparison tests.



Supplementary Fig. 2. Early skin inflammation promoted Th2 immune response in IPFA mice. (A) Levels of IL-4, IL-5, IL-13 in the supernatants from OVA-restimulated splenocytes. (B) The MFI of Th1 ($CD4^+T\text{-}bet^+$) cells, Th2 ($CD4^+GATA3^+$) cells and the ratio of Th2/Th1 in the spleen. (C) Concentration of MCPT-1 in the serum. (D) The frequency of mast cell in the small intestine. (E) The immunohistochemical staining of mast cell in jejunal sections. Data are presented as means ± SEM, *P < 0.05, ** P < 0.01, *** P < 0.001 and **** P < 0.0001 using one-way ANOVA with the Tukey's multiple comparison tests.