Supplementary Figure Legends

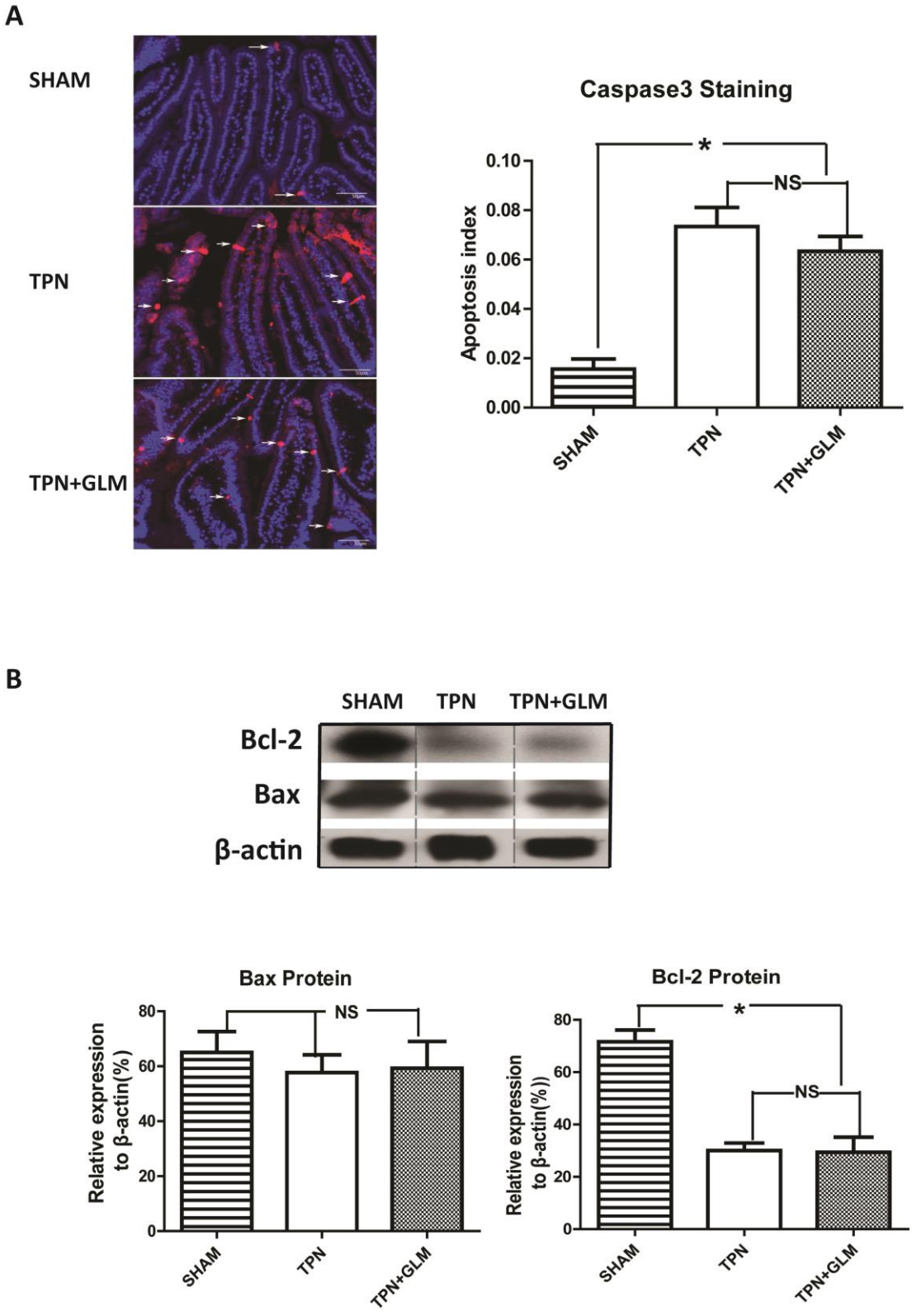
Fig.1 GLM supplementation has no significant impact on IEC apoptosis in TPN mice.
A: Immunofluorescent staining was performed on jejunal mucosa from TPN mice with anti-Caspase-3 antibody and counterstained with 4,6-diamidino-2-phenylindole (DAPI) nuclear stain. The right panel displays the Caspase-3 positive rate in intestinal mucosal crypt of each indicated group. Note that no significant difference was observed between TPN and TPN+GLM (75mM) groups.
B: The abundance of Bcl-2 and Bax at the protein level. The left panel displays the representative images of 3 groups. The right panel displays the relative expression of Bcl-2 and Bax of each study group. Note that no significant difference was observed between TPN and TPN+GLM (75mM) groups. A minimum of 3 experiments and images were used for each selection. Values are means ± standard deviations (error bars). (* $P < 0.05$ compared with the sham group; # $P < 0.05$ compared with TPN group; ns, not significantly different).

Fig.2 GLM supplementation at 25 mM has no significant influence on EBF of TPN mice.
A and B: Ussing chamber and FITC-dextran permeability results of each indicated group. Note that no difference was observed between TPN and TPN+GLM (25mM) groups. (* $P < 0.05$ compared with the sham group; ns, not significantly different).

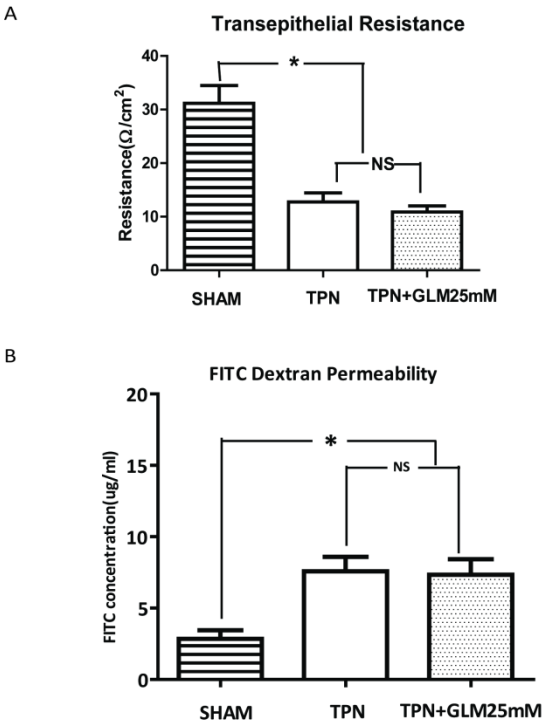
Fig.3 GLM supplementation at 25 mM has no significant influence on IEC proliferation of TPN mice.
A: H&E staining was performed on jejunum from sham, TPN and TPN+GLM (25mM) mice, respectively. No difference in villous length or crypt depth in jejunal mucosa was observed between TPN and TPN+GLM (25mM) groups.
B: Immunofluorescence staining was performed on jejunal mucosa from sham, TPN and TPN+GLM (25mM) groups with anti-PCNA and anti-BrdU antibodies, respectively and counterstained with DAPI nuclear stain. No difference in PCNA or BrdU positive IEC rates was observed between TPN and TPN+GLM (25mM) groups. (* $P < 0.05$ compared with the sham group; ns, not significantly different).

Fig.4 **mRNA expression of proglucagon in the mucosa of the ileum and colon in TPN mice with or without GLM supplementation**.
A and B: Real-time PCR analysis was performed to measure the abundance of mucosal proglucagon mRNA in the ileum (A) and colon (B), respectively as indicated. Note that proglucagon levels significantly decline by one week of TPN administration. No differences in proglucagon levels were seen between the TPN vs. TPN+GLM groups. (* $P < 0.05$).

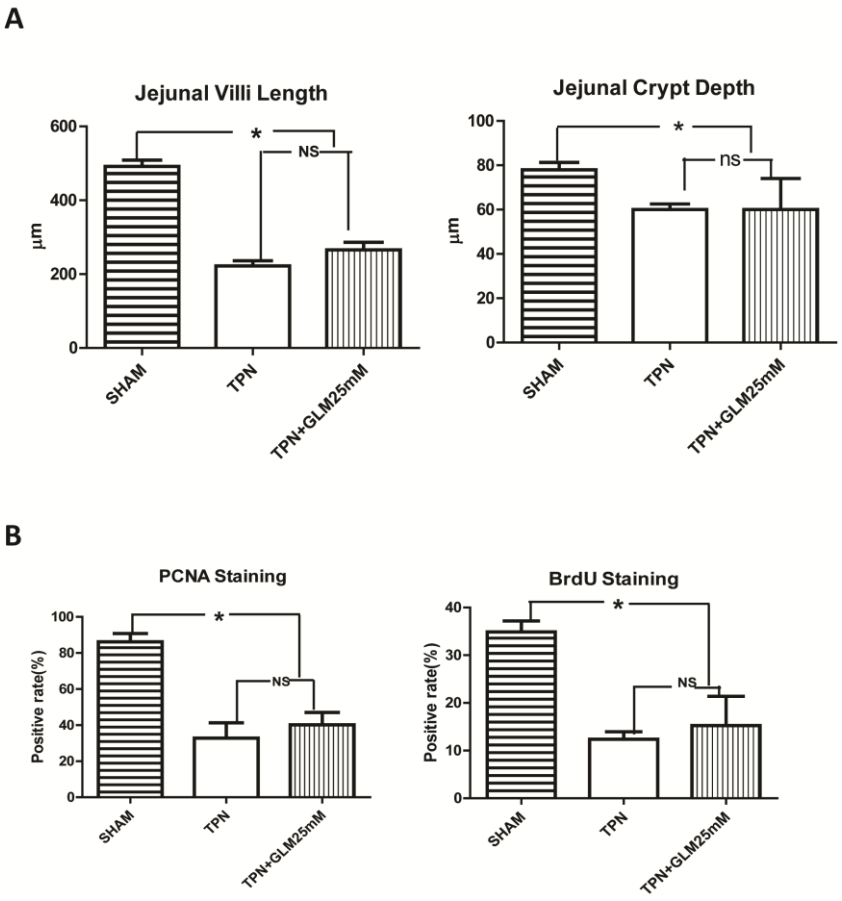
Supplemental Fig.1



Supplemental Fig.2



Supplemental Fig.3



Supplemental Fig.4