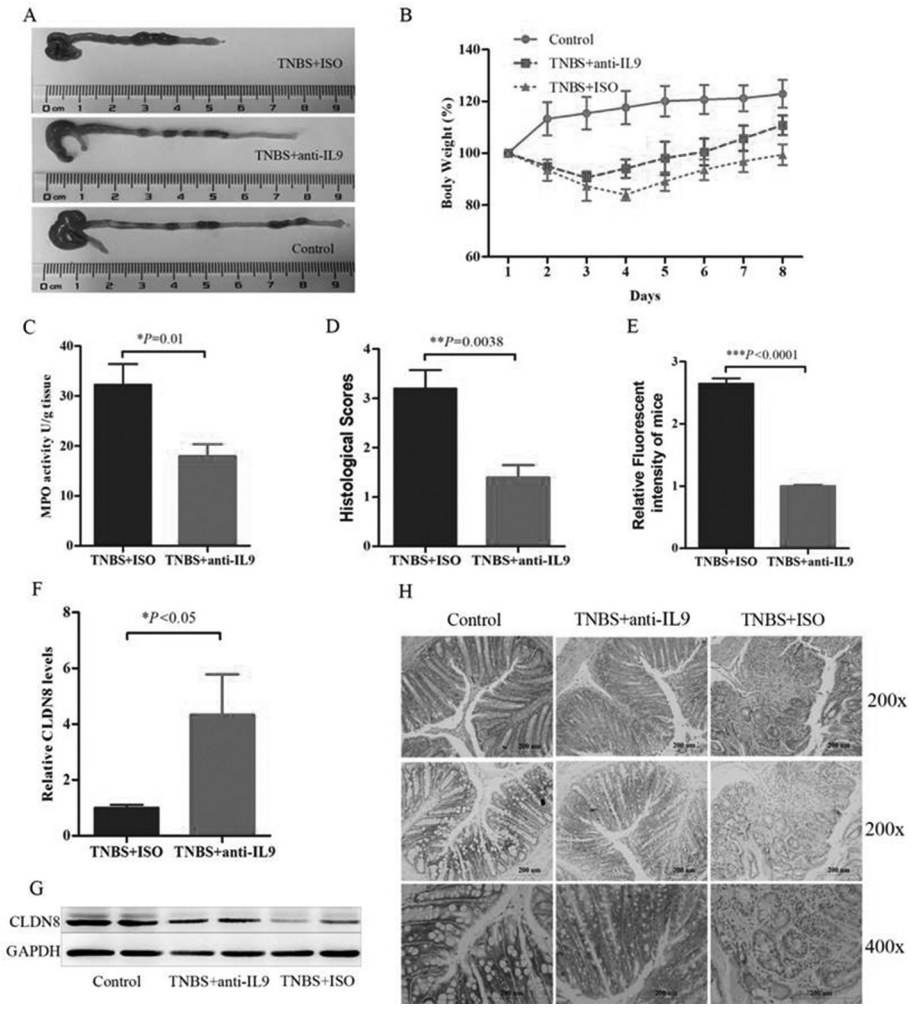

Abstract IDDF2018-ABS-0193 Figure 1

mucosa (figure 1). Notably, we characterised microRNA miR21 as a critical player that mediates the crosstalk between the proinflammatory IL9 and the downstream CLDN8 in both *in vitro* and *in vivo* models.

Conclusions Our results, for the first time, uncover a critical role of miR21 and CLDN8 in the complex network that IL9 regulates the intestinal epithelium barrier in the pathogenesis of CD. Interventional blockade of the IL9-miR21-CLDN8 pathway could be a novel therapeutic approach for the management of CD.

IDDF2018-ABS-0196 EXOSOMES DERIVED FROM HUMAN IPSC-MSCS PROTECTED AGAINST TNBS-INDUCED COLITIS

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Background Growing evidence indicates that exosomes derived from human MSCs (MSCs-Exo) have a favourable efficacy on several immune disease models. Thus, we assessed their efficacy on a chemically induced colitis mouse model.

Methods hiPSC-MSCs were characterised by microscopy and flow cytometry. hiPSC-MSCs-Exo were isolated by ultracentrifugation and identified by transmission electron microscopy and Western blot. The trinitrobenzenesulfonic acid (TNBS)-induced colitis mouse model was used. Different doses of hiPSC-MSCs-Exo or iPSC-MSCs were injected into BALB/C mice. Survival rates, colitis symptoms, and macroscopic and histologic scores were evaluated. CD4 +T helper (Th) cell subgroups in lymphocytes were quantitated by flow cytometry. Furthermore, stem cell markers Lgr5 and Bmi1 and proliferation index ki67 were analysed by immunofluorescence staining in colonic tissues.

Results Intraperitoneally injected hiPSC-MSCs-Exo alleviated TNBS-induced colitis by increasing survival rates, relieving symptoms, and improving macroscopic and histologic scores compared with mice treated with hiPSC-MSCs in a dose-dependent manner. Increases in regulatory T cells (Tregs) and decreases in Th1 cells, Th17 cells, and several pro-inflammatory cytokines were observed with hiPSC-MSCs-Exo treatment. It was also shown that the high dose-hiPSC-MSCs-Exo could increase the numbers of Lgr5 +and Bmi1 +cells and promote cell proliferation in colon.

Conclusions hiPSC-MSCs-Exo protected against experimental colitis by correcting Treg/Th17/Th1 imbalances, thus providing a more favouring condition for colonic stem cell.