

Supplementary Materials

Jellyfish skin polysaccharides enhance intestinal barrier function and modulate and gut microbiota in mice with DSS-induced colitis

Supplementary Figures

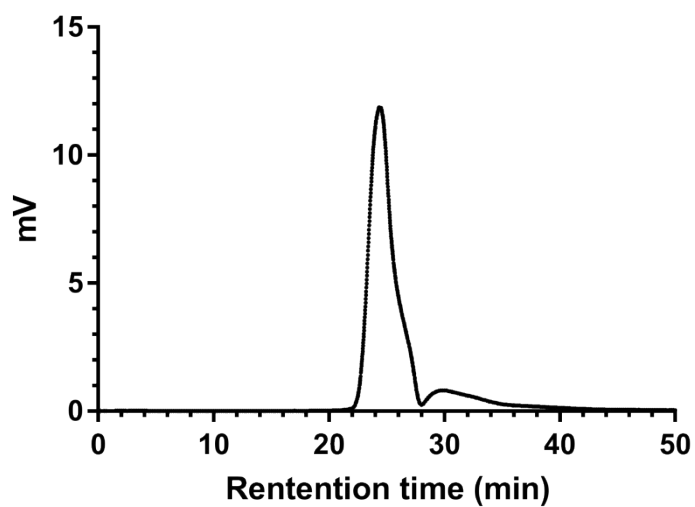


Fig. S1. High performance liquid chromatogram of JSP extracted from jellyfish skin.

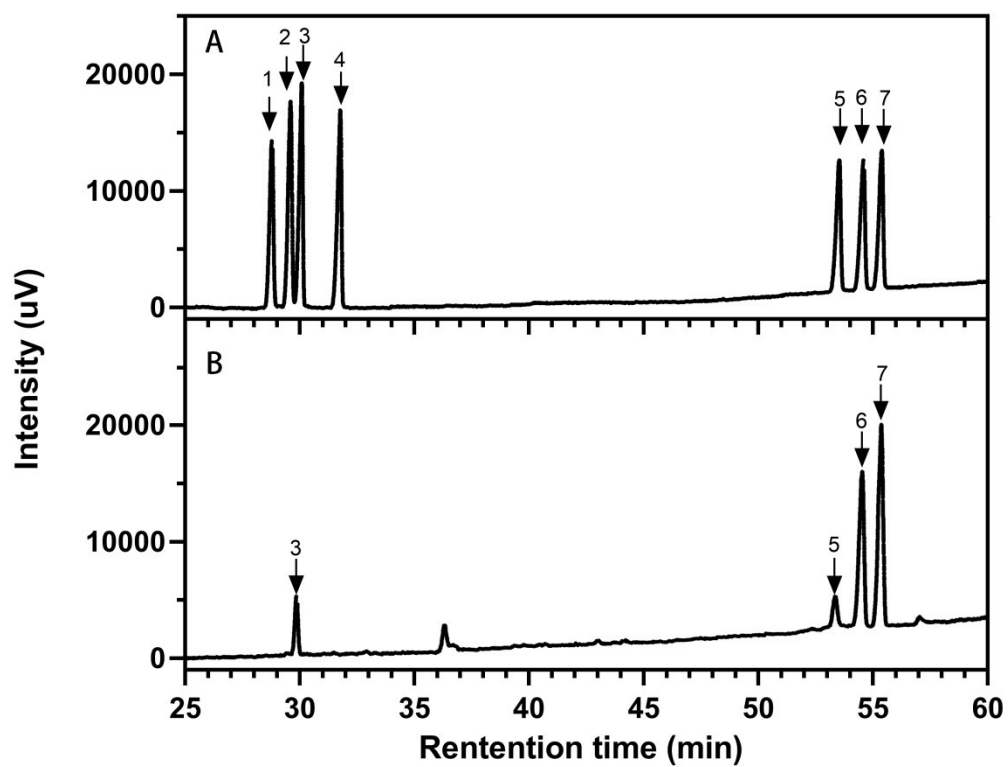


Fig.S2 Gas chromatography profile of monosaccharide standard (A) and JSP (B). Peaks: 1 L-rhamnose, 2 L-Fucose, 3 L-arabinose, 4 D-xylose, 5 D-mannose, 6 D-glucose, 7 D-galactose

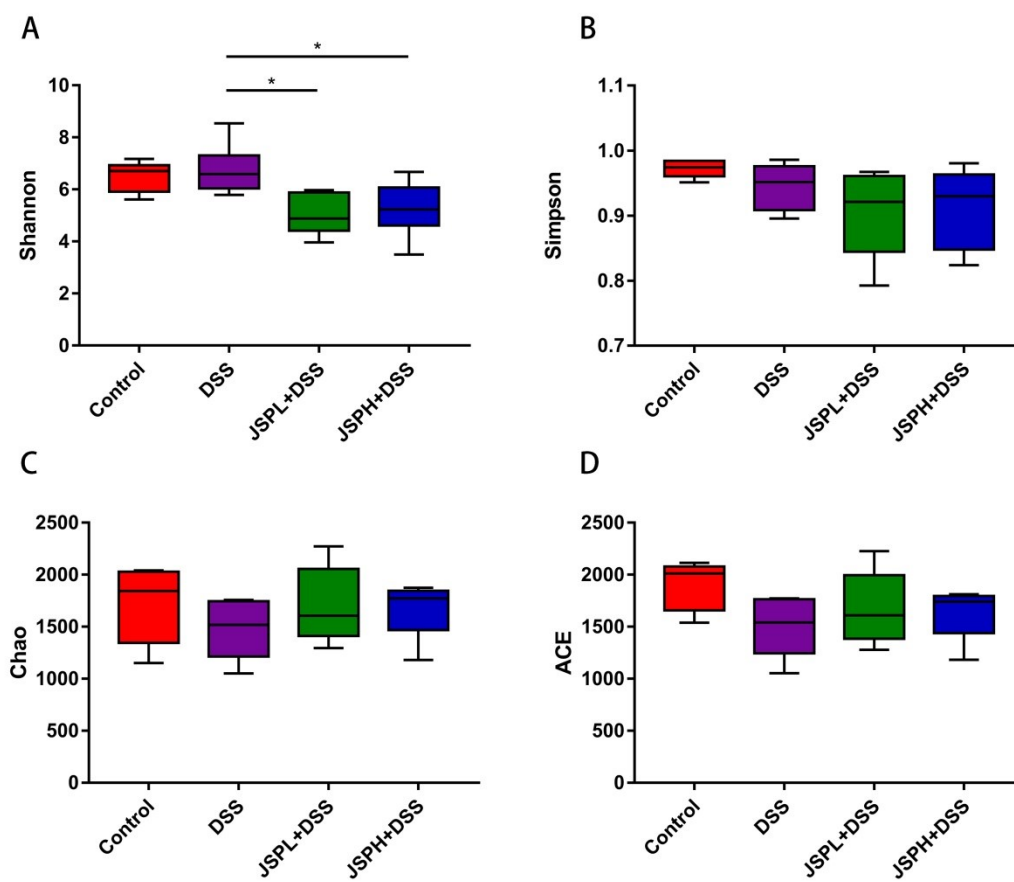


Fig. S3. Box plot exhibiting alpha diversity indices in each group. (A) Shannon, (B) Simpson, (C) Chao, and (D) ACE. * $p < 0.05$, ** $p < 0.01$, * $p < 0.001$, **** $p < 0.0001$ vs DSS group.**

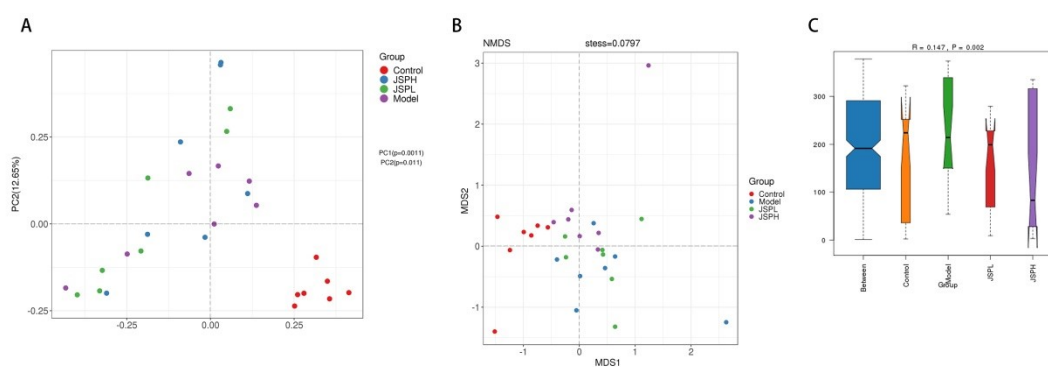


Fig. S4. Impact of JSP on gut microbial structure in DSS-induced UC rats. (A) Principal component analysis (PCA) score plot. (B) non-metric multidimensional

scaling (NMDS). (C) Analysis of similarities (ANOSIM).

Supplementary Tables

Table S1: Primer sequences used for RT-PCR experiments

Genes	Gene ID	Forward primer	Reverse primer
GAPDH	14433	TGTGTCCGTCGTGGATCTGA	TTGCTGTTGAAGTCGCAGGAG
IL-6	16193	CTCAGCGCTGAGTTG	CCTGTAGCCCACGTCGTAGC
TNF- α	21926	ACTGAACTTCGGGGTGATCG	GGCTACAGGCTTGCTACTCG
IL-1 β	16176	GAGCACCTTCTTTTCCTTCATCTT	TCACACACCAGCAGGTTATCATC
Occludin	18260	GGCAAGCGATCATACCCAGAG	AGGCTGCCTGAAGTCATCCAC
ZO-1	21872	GACCAATAGCTGATGTTGCCAGAG	TATGAAGGCGAATGATGCCAGA
Muc2	17831	TCATGACGTCTGGTGAATGG	AGCTTGTCGTGGCAGCTTGA
E-cadherin	12550	GCCAATCCTGATGAAATTGGAAAC	CCACTGCCCTCGTAATCGAAC
Tff3	21786	TGCTGCCATGGAGACCAGAG	GACATTTGCCGGCACCATAC

Table S2: List of antibodies

Name of Antibody	Catalog number	Concentration	Company
NF- κ B/p65	#8242	1:1000	Cell Signaling Technology
p-NF- κ B/p65	#3033	1:1000	Cell Signaling Technology
I κ B α	#4814	1:1000	Cell Signaling Technology
p-I κ B α	#2859	1:1000	Cell Signaling Technology

β-actin	4970	WB: 1:1000	Cell Signaling Technology
Occludin	27260-1-AP	IF: 1:300	Proteintech Group
		WB: 1:1000	
ZO-1	A0659	WB: 1:500	ABclonal Technology
Muc2	27675-1-AP	IF: 1:1000	Proteintech Group
ZO-1	Ab221547	IF: 1:100	Abcam plc
Goat Anti-Rabbit IgG	Ab150077	IF: 1:400	Abcam plc

H&L (Alexa Fluor ® 488)
