

Supplementary material

Chronic Gut Inflammation and Dysbiosis in IBS: Unraveling Their Contribution to Atopic Dermatitis Progression

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Table S1. Detailed information on group allocation

Experiment 1: Establishment of 2,4,6-trinitrobenzenesulfonic acid (TNBS)-induced IBS mouse.

Group	Treatment
CON	Ethanol-injected group
IBS	TNBS-injected group

Experiment 2: Changes of AD symptoms in TNBS-induced IBS mouse

Group	Treatment	
	Injection into the colon	On the right cheek
CON	50% ethanol	100% ethanol
IBS	TNBS	100% ethanol
AD	50% ethanol	MC903
IBS+AD	TNBS	MC903

Experiment 3: Changes of AD symptoms in mice transplanted with gut microbiota from IBS mice

Group		Treatment	
		FMT	On the right cheek
CON	C-MF	transplanted with fecal microbiota from the CON mice	100% ethanol
	I-MF	transplanted with fecal microbiota from the IBS mice	
AD	C-MF	transplanted with fecal microbiota from the CON mice	MC903
	I-MF	transplanted with fecal microbiota from the IBS mice	

Experiment 4: Changes of AD symptoms in mice transplanted with gut microbiota from the IBS patient.

Group		Treatment	
		FMT	On the right cheek
CON	C-HF	transplanted from the gut microbiota of healthy control	100% ethanol
	I-HF	transplanted from the gut microbiota of the IBS patient	
AD	C-HF	transplanted from the gut microbiota of healthy control	MC903
	I-HF	transplanted from the gut microbiota of the IBS patient	

Table S2. Primer for real-time PCR

Primer	Forward	Reverse
<i>Il-6</i> (Interleukin 6)	TACCACTTCACAAGTCGGAGGC	CTGCAAGTGCATCATCGTTGTTT
<i>Il6r</i> (Interleukin 6 receptor)	GTCATCCATGATGCCTTGCG	GTGGTCCTGGGCTCTATCCAA
<i>Il-4</i> (interleukin 4)	CCCCCAGCTAGTTGTCATCC	AGGACGTTTGGCACATCCAT
<i>Il-4r</i> (interleukin 4 receptor)	ACGTGGTACAACCACTTCCA	TGCGGGTACTTGGTTGACTC
<i>Mmp12</i> (Matrix metalloproteinase 12)	TGTATTTTGTATCTGCCTGTGGG	CTGGGGCACTGCTCTAAGAT
<i>Il-31</i> (Interleukin 31)	AACAACGAAGCCTACCCTGG	TGGTTAATGCTTCCCGGTCC
<i>Il-22</i> (interleukin 22)	TGCGATCTCTGATGGCTGTC	CCTCGGAACAGTTTCTCCCC
<i>Ifn-γ</i> (interferon gamma)	GAGGTCAACAACCCACAGGT	GGGACAATCTCTTCCCCACC
<i>Gata3</i> (GATA Binding Protein 3)	CCTCTGGAGGAGGAACGCTAAT	GTTTCGGGTCTGGATGCCTTCT
<i>Il-22</i> (interleukin 22)	TGCGATCTCTGATGGCTGTC	CCTCGGAACAGTTTCTCCCC

Table S3. Demographics and characteristics of donor (HC and IBS)

	HC	IBS
Sex	Male	Female
Age	24	39
BMI (kg/m ²)	25.5	19.1
IBS-SSS	7	313
Bristol Stool Form Scale	Normal	Type 6
IBS-D	-	65%

HC; Health control

IBS; irritable bowel syndrome