1 **Table S1.** The composition and nutrient of dam diets.

	Nutrient levels at different fiber levels（%）	
	FFD	INU
Casein	20.00	20.00
Corn starch	59.06	54.07
Soybean oil	7.00	7.00
Sucrose	10.00	10.00
Inulin	0	5
L-cystine	0.3	0.3
Choline chloride	0.25	0.25
Calcium hydrophosphate	1.00	1.00
Potassium citrate	0.80	0.80
Calcium carbonate	0.55	0.55
Vitamin	0.03	0.03
Mineral element	1	1
Total	100.00	100.00
Nutrient levels		
Gross energy, MJ/kg	4.2	4.1
Crude protein, %	17.00	17.00

Table S2. Parameters and criteria of histological damage evaluation.

Parameters	Score	Histological features
(1) Loss of epithelial surface	0	No change
	1	Localized and mild
(2) Destruction of crypt	2	Localized and moderate
	3	Localized and severe
(3) Infiltration of inflammatory cells	4	Extensive and moderate
	5	Extensive and severe

Histological score was the sum of scoring from parameter (1), (2) and (3).

Table S3. The Primer Sequence of target gene and housekeeping gene.

Gene	Primer Sequence (5'-3')	GenBank NO.
TNF-α	F: GCATGATCCGAGATGTGGAACTGG R: CGCCACGAGCAGGAATGAGAAG	NM_012675.3
IL-22	F: CTGCCTGCTTCTCGTTGCTCTG R: AAGGTGCGGTTGACGATGTATGG	NM_001191988.1
IL-1β	F: ATCTCACAGCAGCATCTCGACAAG R: CACACTAGCAGGTCGTCATCATCC	NM_031512.2
IL-10	F: CACACTAGCAGGTCGTCATCATCC R: CTCTCGGAGCATGTGGGTCT	NM_012854.2
NF-κB	F: TGTGGTGGAGGACTTGCTGAGG R: AGTGCTGCCTTGCTGTTCTTGAG	NM_001276711.1
β-actin	F: CAC AGC TGA GAG GGA AAT R: TCA GCA ATG CCT GGG TAC	NM_045626.1

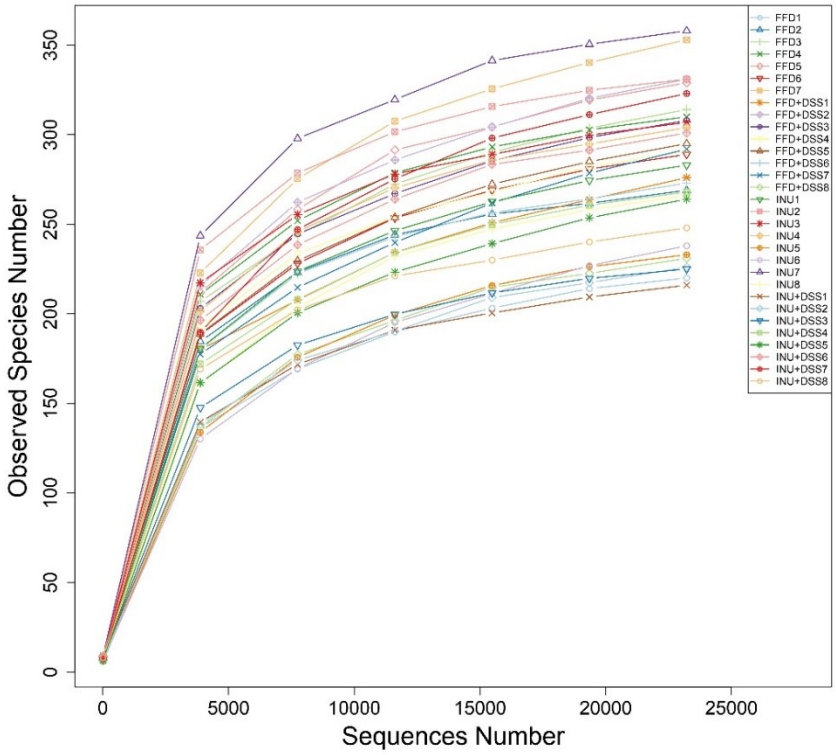

Figure S1: Rarefaction curves of each sample. The ordinate is the number of OTU that can be constructed based on the number of sequencing strips, which is used to reflect the sequencing depth. Different samples are represented by curves with different colors.

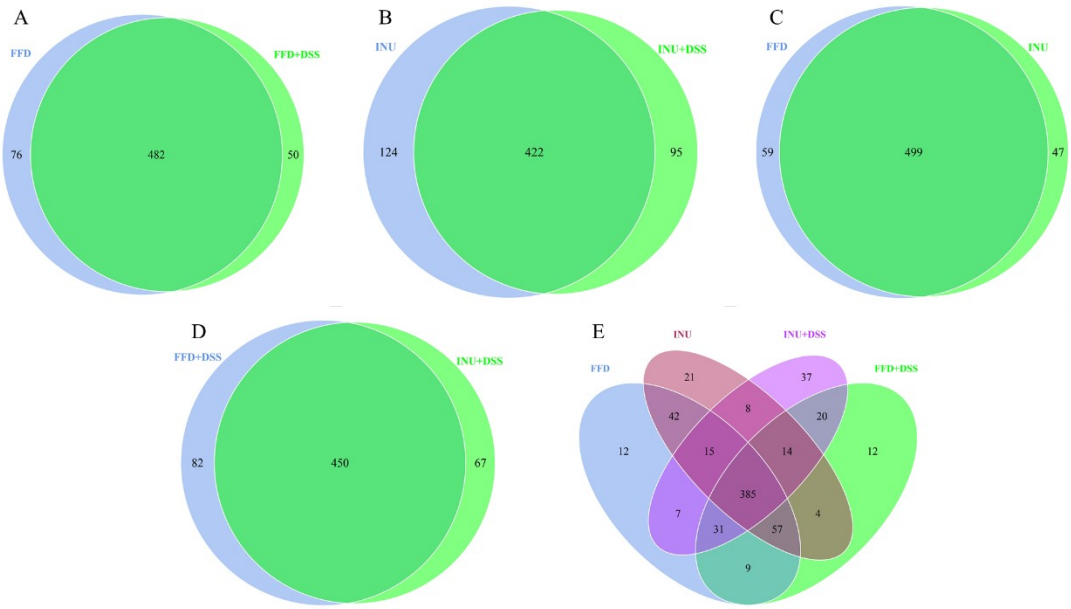

Figure S2: The Venn diagram of OTUs between the colon microbiota of (A) FFD and FFD+DSS, (B) INU and INU+DSS, (C) FFD and INU, (D) FFD+DSS and INU+DSS groups, and among (E) FFD, INU, INU+DSS and FFD+DSS groups.