

## Supplementary Materials

### Supplementary Materials and methods

#### 1. Materials and methods

##### 1.1 Materials

Nutritional components for mice daily food: Corn, soybean meal, fish meal, flour, bran, salt calcium ammonium phosphate, stone powder, a variety of vitamins, a variety of trace elements, amino acids, etc.

##### 1.2 Animal treatment

During the experiment, the mice were free to daily food. In addition, mice of normal control group(NC) and model control group(MC) were intragastric with 0.2 mL normal saline solution every day, positive control group(PC) were intragastric with 0.2 mL 40 mg/(kg·bw) levamisole; low-dose SCTP group (LD); medium-dose SCTP group (MD); high-dose SCTP group (HD) were intragastric with 0.2 mL 50 mg/(kg·bw), SCTP 100 mg/(kg·bw), SCTP 200 mg/(kg·bw), respectively.

### Supplementary Table

Table S1 Relative abundance of predominant taxa at the phylum level

groups	<i>Bacteroidetes</i> (%)	<i>Firmicutes</i> (%)	<i>Proteobacteria</i> (%)
NC	46.81 ± 9.43	37.08 ± 5.80	5.453 ± 1.25
PC	43.60 ± 19.32	35.58 ± 5.90	13.68 ± 16.49
MC	53.63 ± 7.51	35.17 ± 17.07	4.20 ± 2.58
LD	47.69 ± 11.33	28.03 ± 6.03	16.21 ± 13.72
MD	51.69 ± 18.78	41.03 ± 17.75	2.03 ± 0.48
HD	50.15 ± 6.30	33.41 ± 3.20	11.13 ± 8.25

Table S2 Relative abundance of predominant taxa at the genus level

Genus	NC	MC	PC	LD	MD	HD
<i>Lactobacillus</i>	7.99	3.61	4.22	5.46	20.34	14.98
<i>Bacteroides</i>	5.48	3.19	4.49	7.73	5.39	8.03
<i>Lachnospiraceae_NK4A136_grou</i>	7.79	6.10	5.06	4.71	2.48	4.61
<i>p</i>						
<i>Proteus</i>	0.45	1.27	9.57	4.68	0.55	8.92
<i>Candidatus_Saccharimonas</i>	4.17	3.7	3.4	3.21	3.44	1.03
<i>Alistipes</i>	2.38	5.04	2.53	2.20	2.76	2.30
<i>Ruminococcaceae_UCG-014</i>	1.6	1.92	3.71	1.98	2.95	1.22
<i>Odoribacter</i>	1.76	1.40	3.00	0.77	1.49	2.08
<i>Prevotellaceae_UCG-001</i>	2.39	3.01	1.35	1.32	0.41	0.84
<i>Rikenellaceae_RC9_gut_group</i>	1.52	1.78	2.06	1.18	1.28	1.09
<i>Helicobacter</i>	2.86	0.62	1.82	0.86	0.56	0.34215
<i>Escherichia-Shigella</i>	0.13	0.06	0.81	4.80	0.09	0.91
<i>Alloprevotella</i>	0.93	1.30	0.61	1.91	0.62	1.25
<i>Akkermansia</i>	0.03	0.01495	0.08	2.74	0.08	2.72
<i>Other</i>	12.51	11.51	14.39	14.31	9.42	7.93
<i>Unclassified</i>	47.86	55.37	42.72	42.06	48.05	41.68

## Supplementary Figure

Fig.S1

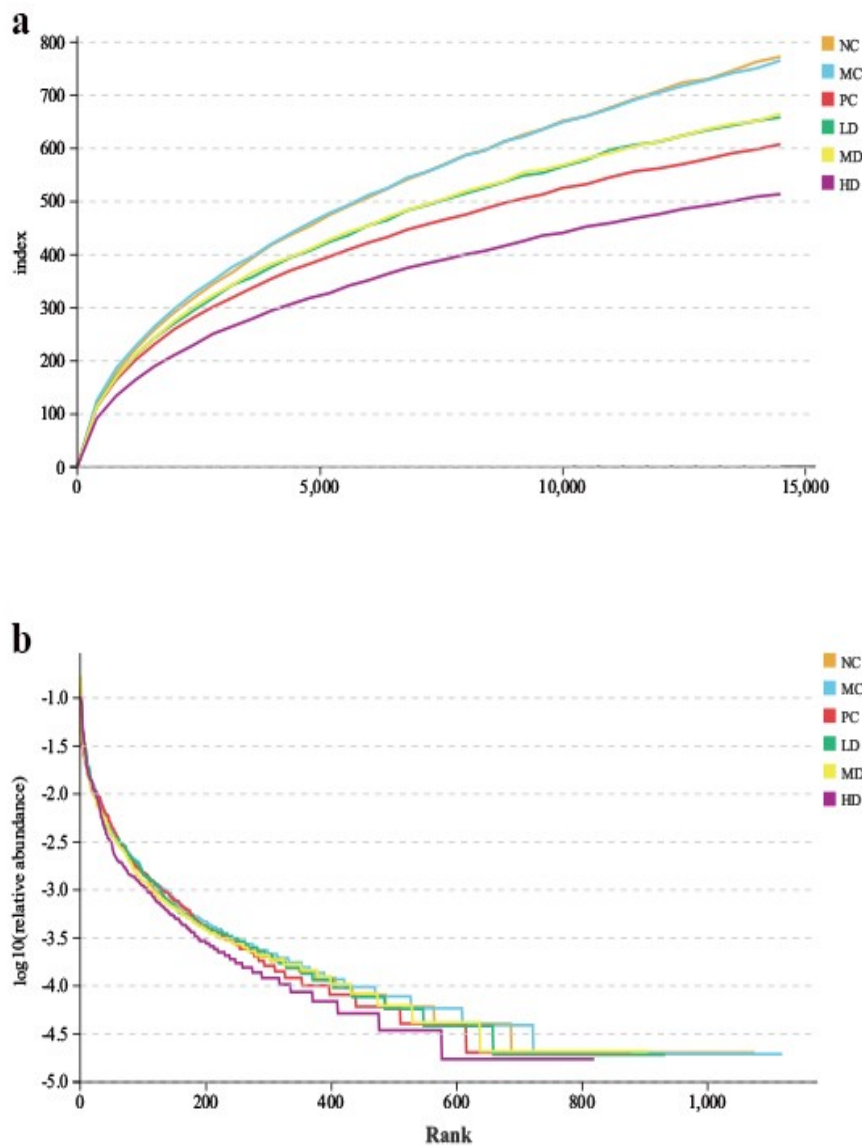


Fig.S1 Gut microbiota diversity curve of different groups. a: The rarefaction curve of gut microbiota based on random extraction of sequencing data from cecal digestives. b: Rank abundance based on the relative abundance of OTUs.

Fig.S2

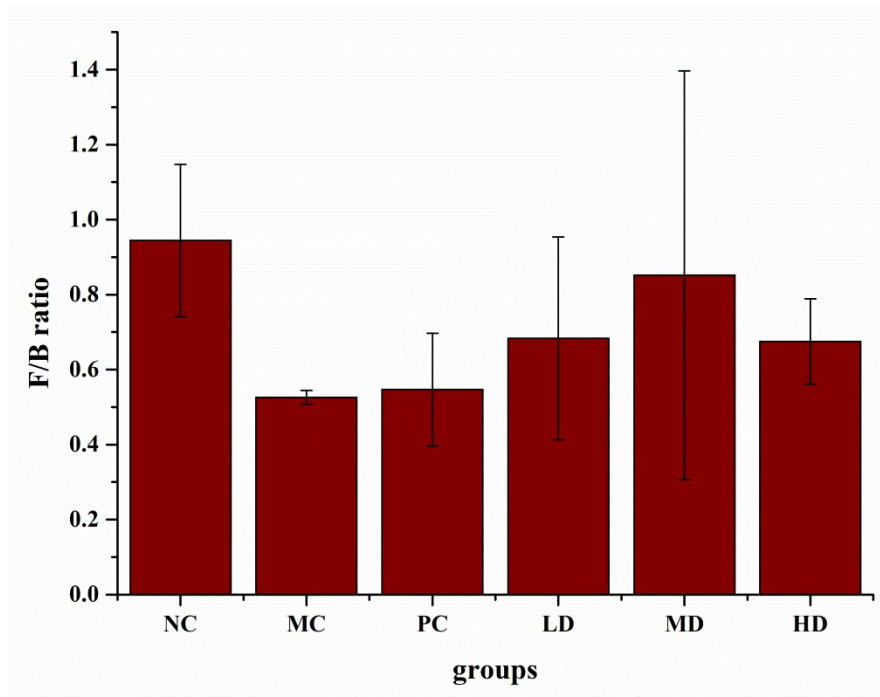


Fig.2S Firmicutes/Bacteroidetes ratio

Abbreviations: NC, normal control group; MC, model control group; PC, positive control group; LD, low-dose SCTP group; MD, medium-dose SCTP group; HD, high-dose SCTP.