

**Dietary freeze-dried fruit powder of *Actinidia arguta*
ameliorates dextran sulphate sodium-induced ulcerative colitis
in mice via inhibiting the activation of MAPKs**

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Fig S1 Effects of FAA on the body weight changes of mice

Fig S2 The cell viability with the designed extract content with or without LPS treatment

Table S1 The body weight of mice from day 1 to day 10 (Mean \pm SD, n=10)

Table S2 The percentage changes in body weight of mice (Mean \pm SD, n=10)

Table S3. The pharmacodynamic parameters (Mean \pm SD, n=10)

Table S4. The cell viability (%) with the designed extract content with or without LPS treatment (Mean \pm SD, n=3)

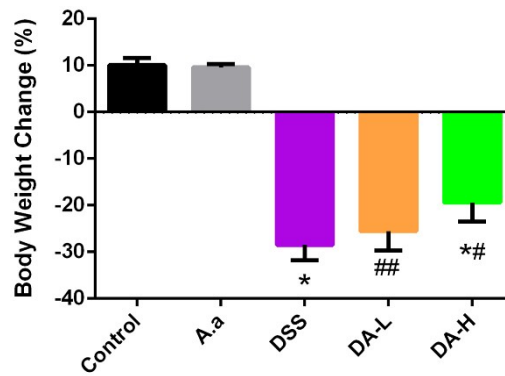
Table S5. The parameters of inflammatory response and oxidative stress levels (Mean \pm SD, n=3)

Table S6. The NO generation and iNOS expression in RAW 264.7 macrophages (Mean \pm SD, n=3)

Table S7. The relative MAPK protein expressions in mice colon (% of Control, Mean \pm SD, n=3)

Table S8. The relative MAPK protein expressions in RAW 264.7 cells (% of LPS, Mean \pm SD, n=3)

Fig S1 Effects of FAA on the body weight changes of mice



Notice: *, $p < 0.01$ versus Control; *#, $p < 0.01$ versus DSS; ##, $p > 0.05$ versus DSS.

Fig S2 The cell viability with the designed extract content with or without LPS treatment

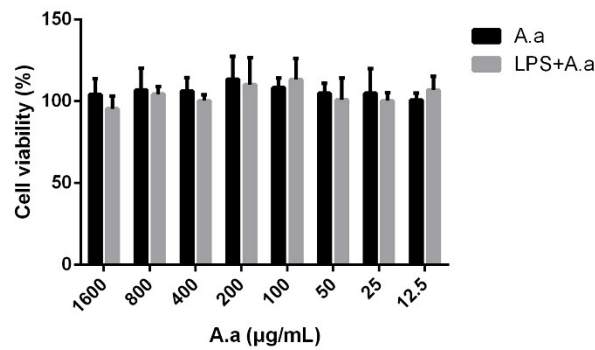


Table S1 (Data for Fig 1A)

Table S1 The body weight of mice from day 1 to day 10 (Mean \pm SD, n=10)

Group	Body weight of mice (g)				
	1d	2d	3d	4d	5d
Control	21.86 \pm 0.86	22.00 \pm 0.59	22.33 \pm 0.84	22.80 \pm 1.06	23.66 \pm 1.10
A.a	21.23 \pm 0.46	21.78 \pm 0.63	22.46 \pm 0.84	23.00 \pm 1.02	23.20 \pm 1.07
DSS	21.88 \pm 0.77	22.16 \pm 1.35	22.68 \pm 1.22	22.34 \pm 1.06	21.98 \pm 1.28
DA-L	21.97 \pm 0.90	22.37 \pm 0.88	21.86 \pm 0.91	21.47 \pm 1.21	20.67 \pm 1.37
DA-H	21.43 \pm 0.65	22.70 \pm 0.75	22.05 \pm 1.07	21.67 \pm 1.18	21.25 \pm 1.58

continue

Group	Body weight of mice (g)				
	6d	7d	8d	9d	10d
Control	23.73 \pm 0.98	23.93 \pm 1.34	24.04 \pm 1.09	24.08 \pm 1.09	24.38 \pm 1.11
A.a	23.40 \pm 0.65	23.70 \pm 0.78	23.99 \pm 0.89	24.10 \pm 0.80	24.23 \pm 0.62
DSS	21.07 \pm 1.26	19.87 \pm 1.93	18.37 \pm 2.20	17.07 \pm 2.14	15.67 \pm 2.20
DA-L	20.33 \pm 1.75	19.44 \pm 1.76	18.13 \pm 1.56	17.24 \pm 1.42	16.48 \pm 1.48
DA-H	20.47 \pm 1.29	19.63 \pm 1.37	18.46 \pm 1.42	17.67 \pm 1.27	17.3 \pm 1.26

Table S2 (Data for Fig S1)**Table S2** The percentage changes in body weight of mice (Mean \pm SD, n=10)

	Group				
	Control	A.a	DSS	DA-L	DA-H
Changes of body weight (%)	+ 10.06 \pm 1.51	+ 9.58 \pm 0.73	- 28.45 \pm 3.36*	- 25.51 \pm 4.15##	- 19.44 \pm 4.04*#

Notice: *, $p < 0.01$ versus Control; *#, $p < 0.01$ versus DSS; ##, $p > 0.05$ versus DSS.

+, increase of body weight compared with the first day;

-, decrease of body weight compared with the first day.

Changes of body weight (%) = (the mouse body weight of day 10 – the mouse body weight of day 1) / the mouse body weight of day 1 \times 100%.

Table S3 (Data for Fig 1B, D, E and F)

Table S3. The pharmacodynamic parameters (Mean \pm SD, n=10)

	Group				
	Control	A.a	DSS	DA-L	DA-H
DAI score	0.04 \pm 0.12	0.04 \pm 0.12	3.27 \pm 0.47*	2.97 \pm 0.48##	2.40 \pm 0.68*#
Colon length (cm)	8.76 \pm 0.81	8.74 \pm 0.81	5.15 \pm 0.69*	5.78 \pm 0.87##	6.74 \pm 0.69#
Colon weight/length ratio (mg/cm)	35.56 \pm 2.79	34.48 \pm 4.13	46.06 \pm 6.96*	40.26 \pm 2.79##	31.27 \pm 3.17*#
Spleen index (mg/g)	4.27 \pm 0.27	4.03 \pm 0.30	6.53 \pm 0.28*	6.15 \pm 0.91##	5.07 \pm 0.32*#

Notice: * $p < 0.01$ versus Control group; *# $p < 0.01$ versus DSS group; # $p < 0.05$ versus DSS group; ## $p > 0.05$ versus DSS group.

Table S4 (Data for Fig S2)

Table S4. The cell viability (%) with the designed extract content with or without LPS treatment (Mean \pm SD, n=3)

Concentration (μ g/mL)	A.a	A.a + LPS
1600	104.16 \pm 9.63	95.43 \pm 7.91

800	106.89±13.46	104.43±4.56
400	106.34±8.26	100.35±3.59
200	113.51±13.87	110.15±16.66
100	108.46±5.76	113.27±12.91
50	104.91±6.17	100.99±13.28
25	104.96±15.11	100.35±4.92
12.5	100.82±4.20	106.95±8.19

Table S5 (Data for Fig 3A, B, C,D and E)

Table S5. The parameters of inflammatory response and oxidative stress levels (Mean ± SD, n=3)

	Group				
	Control	A.a	DSS	DA-L	DA-H
MPO (U/g)	1.89±0.67	2.08±0.69	12.35±2.17*	7.14±1.18*#	5.72±1.56*#
MDA (nmol/mg protein)	1.72±0.52	1.67±0.24	5.84±1.05*	4.24±0.53*	3.18±0.72*#
SOD (U/ml)	65.32±5.03	62.79±4.26	54.95±1.20*	58.65±2.63#	63.42±3.53*#
GSH (μmol/g protein)	4.72±0.94	5.18±1.08	1.05±0.81*	1.28±0.48*	1.61±0.81*
IL-6 (pg/ml)	24.86±3.55	25.26±2.61	82.30±8.38*	59.11±6.47*#	46.57±4.73*#
IL-1β (pg/ml)	25.72±4.37	23.63±2.97	82.47±4.46*	43.39±4.87*#	34.88±3.78*#
TNF-α (pg/ml)	158.6±11.83	156.5±8.31	257.57±17.42*	212.47±8.72*#	186.23±8.43*#

Notice: * $p < 0.01$ versus Control group; # $p < 0.05$ versus Control group; *# $p < 0.01$ versus DSS group.

Table S6 (Data for Fig 4A, B and D)**Table S6.** The NO generation and iNOS expression in RAW 264.7 macrophages(Mean \pm SD, n=3)

	Group					
	Control	LPS	LA-L	LA-M	LA-H	A.a
Extracellular NO content (μ M)	4.38 \pm 2.22	35.01 \pm 3.70*	23.98 \pm 1.58*#	21.55 \pm 1.84*#	11.07 \pm 1.53*#	5.89 \pm 2.38
Intracellular NO probe fluorescence intensity	3957.32 \pm 302.54	8931.16 \pm 678.16*	7911.63 \pm 589.75##	6775.00 \pm 1032.54*#	5779.01 \pm 865.39*#	4013.02 \pm 256.41
iNOS/GAPDH	10.06 \pm 3.95	100*	41.56 \pm 6.12*#	33.74 \pm 6.62*#	21.72 \pm 7.64*#	14.91 \pm 8.94

Notice: * $p < 0.01$ versus Control group; *# $p < 0.01$ versus LPS group; ## $p > 0.05$ versus LPS group.**Table S7 (Data for Fig 5B, C and D)****Table S7.** The relative MAPK protein expressions in mice colon(% of Control, Mean \pm SD, n=3)

	Group				
	Control	A.a	DSS	DA-L	DA-H
p-p38/p38	100	114.47 \pm 23.55	748.43 \pm 104.66*	449.68 \pm 142.21#	376.37 \pm 139.36*#
p-JNK/JNK	100	111.61 \pm 23.37	283.23 \pm 53.77*	234.68 \pm 36.09##	158.27 \pm 16.78*#

p-ERK/ERK	100	107.36±21.92	265.60±67.43*	213.20±31.64##	221.45±59.84##
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Notice: * $p < 0.01$ versus Control group; *# $p < 0.01$ versus DSS group; # $p < 0.05$ versus DSS group; ## $p > 0.05$ versus DSS group.

Table S8 (Data for Fig 5F, G and H)

Table S8. The relative MAPK protein expressions in RAW 264.7 cells

(% of LPS, Mean ± SD, n=3)

	Group					
	Control	LPS	LA-L	LA-M	LA-H	A.a
p-p38/p38	5.70±2.56*	100	52.40±18.72*	40.82±11.06*	21.07±15.23*	6.10±6.23
p-JNK/JNK	26.05±7.45*	100	122.16±17.39##	54.37±10.14*	40.11±4.45*	14.17±3.39
p-ERK/ERK	6.56±1.40*	100	91.34±8.93##	56.13±1.42*	29.75±9.77*	5.64±2.06

Notice: * $p < 0.01$ versus LPS group; ## $p > 0.05$ versus LPS group.