

## **SUPPLEMENTARY INFORMATION**

### **Essential turmeric oils enhance anti-inflammatory efficacy of curcumin in dextran sulfate sodium-induced colitis**

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**Supplementary Table 1: Mathematical comparison of DAI associated parameters between doses for each curcumin treatment**

Day 5					Day 7				
	Dose comparison		Dose comparison			Dose comparison		Dose comparison	
	P-values		P-values			P-values		P-values	
	Standard		ETO			Standard		ETO	
<b>DAI</b>	5 v 25	0.764	5 v 25	0.056	<b>DAI</b>	5 v 25	0.937	5 v 25	0.13
	25 v 50	0.248	25 v 50	<b>0.033</b>		25 v 50	0.463	25 v 50	<b>0.027</b>
	5 v 50	0.143	5 v 50	<b>0.0001</b>		5 v 50	0.499	5 v 50	<b>0.0003</b>
<b>Weight change</b>	5 v 25	0.556	5 v 25	<b>0.022</b>	<b>Weight change</b>	5 v 25	0.848	5 v 25	0.05
	25 v 50	<b>0.023</b>	25 v 50	0.256		25 v 50	0.075	25 v 50	0.071
	5 v 50	0.071	5 v 50	<b>0.0007</b>		5 v 50	0.099	5 v 50	<b>0.0003</b>
<b>Stool consistency</b>	5 v 25	0.872	5 v 25	0.477	<b>Stool consistency</b>	5 v 25	0.769	5 v 25	0.665
	25 v 50	0.267	25 v 50	0.058		25 v 50	0.487	25 v 50	0.187
	5 v 50	0.325	5 v 50	<b>0.01</b>		5 v 50	0.661	5 v 50	0.081
<b>Fecal bleeding</b>	5 v 25	0.57	5 v 25	0.099	<b>Fecal bleeding</b>	5 v 25	0.787	5 v 25	0.165
	25 v 50	0.804	25 v 50	0.113		25 v 50	0.751	25 v 50	0.061
	5 v 50	0.42	5 v 50	<b>0.002</b>		5 v 50	0.942	5 v 50	<b>0.001</b>

**DAI: Disease activity index**

**Supplementary Table 2: Mathematical comparison between ETO- and standard curcumin in DAI associated parameters**

<b>P-Values</b>				
<b>Dose (mg/kg)</b>	<b>Day 3</b>	<b>Day 5</b>	<b>Day 7</b>	<b>Overall</b>
<b>DAI</b>				
<b>5</b>	0.73	0.657	0.301	0.344
<b>25</b>	0.851	0.279	0.529	0.429
<b>50</b>	0.921	0.237	<b>0.043</b>	0.08
<b>Weight changes</b>				
<b>5</b>	0.739	0.505	0.405	0.562
<b>25</b>	0.321	<b>0.002</b>	<b>0.003</b>	<b>0.0008</b>
<b>50</b>	0.739	0.184	<b>0.005</b>	<b>0.024</b>
<b>Stool consistency</b>				
<b>5</b>	1	0.362	0.274	0.274
<b>25</b>	0.656	0.656	0.729	0.849
<b>50</b>	1	0.412	0.781	0.549
<b>Fecal bleeding</b>				
<b>5</b>	0.624	0.769	0.172	0.271
<b>25</b>	0.633	0.873	0.873	0.682
<b>50</b>	1	0.493	<b>0.005</b>	0.156

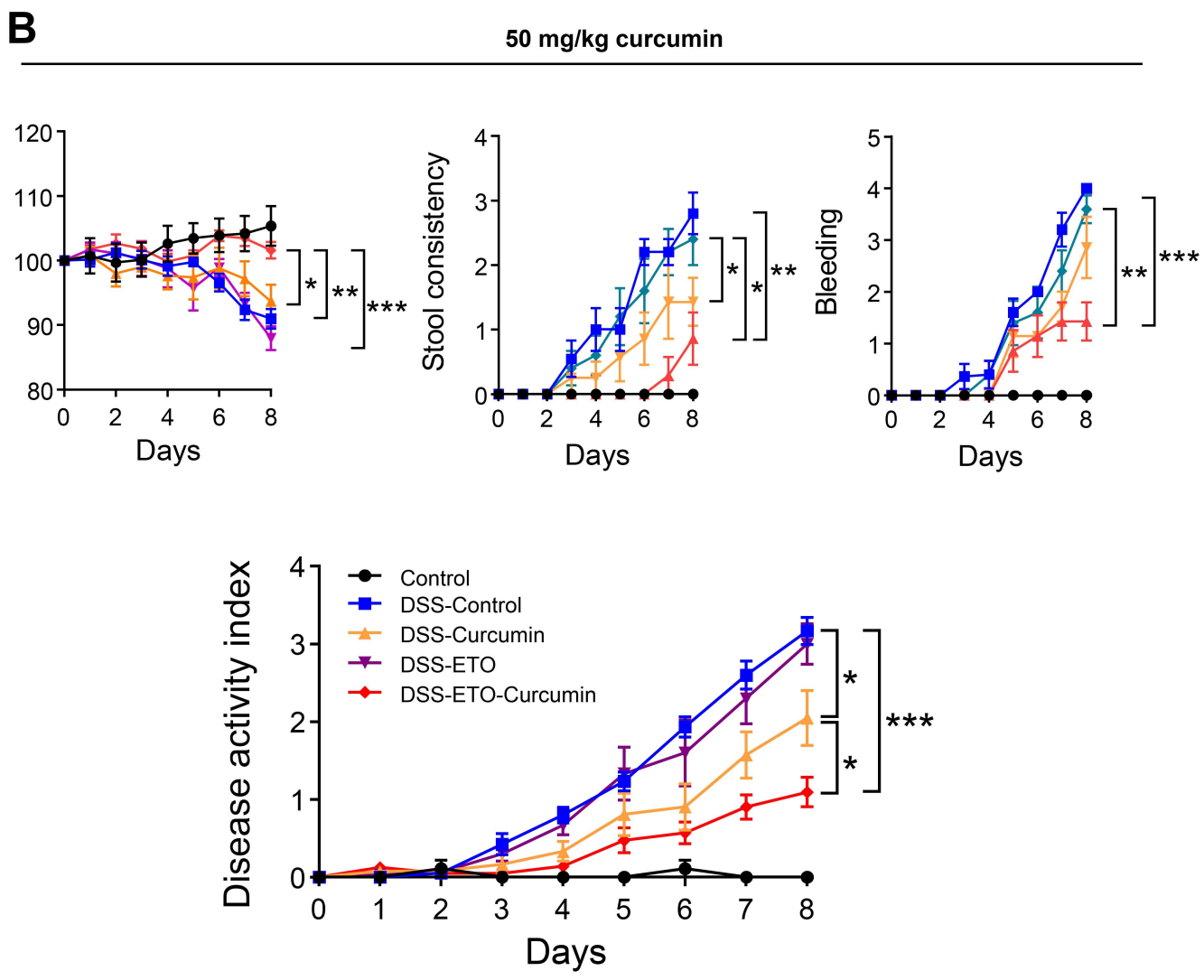
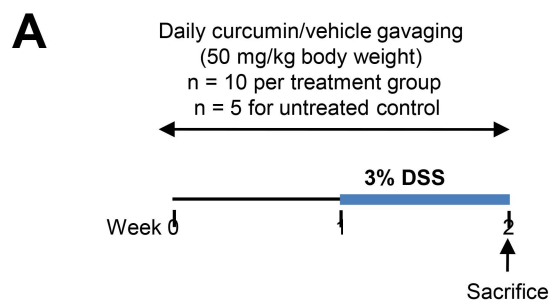
**DAI: Disease activity index**

**Supplementary Table 3: Primer lists**

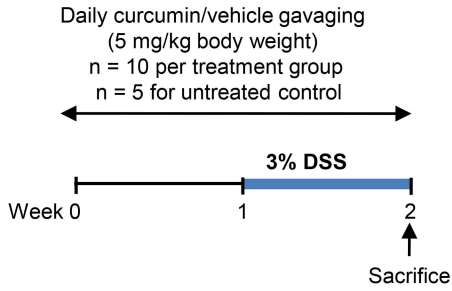
Primers		Sequence
FOXP3	(forward)	5'-GGTACACCCAGGAAAGACAG
	(reverse)	5'-ATCCAGGAGATGATCTGCTTG
IL10	(forward)	5'-GGTTGCCAAGCCTTATCGGA
	(reverse)	5'-ACCTGCTCCACTGCCTTGCT
IL-11	(forward)	5'-CTGCAAGCCCGACTGGAA
	(reverse)	5'-AGGCCAGGCGAGACATCA
CCL17	(forward)	5'-CCCATGAAGACCTTCACCTC
	(reverse)	5'-CATCCCTGGAACACTCCACT
CXCL5	(forward)	5'-CTCAGTCATAGCCGCAACCGAGC
	(reverse)	5'-CGCTTCTTTCCACTGCGAGTGC
18S	(forward)	5'- CCCCTCGATGCTCTTAGCTGAGTGT
	(reverse)	5'- CGCCGGTCCAAGAATTCACCTCT

**Supplementary Figure 1: ETO-curcumin exerts superior anti-inflammatory effects compared to standard curcumin and ETO on DSS-induced inflammation at 50 mg/kg body weight** **A)** Graphical representation of curcumin treatment strategy **B)** Changes in individual categories of DAI (top), body weight changes, stool consistency and stool bleeding (left-right). Changes in disease activity index (DAI) (bottom). \*=  $p < 0.05$ , \*\*=  $p < 0.01$ , \*\*\*=  $p < 0.001$ .

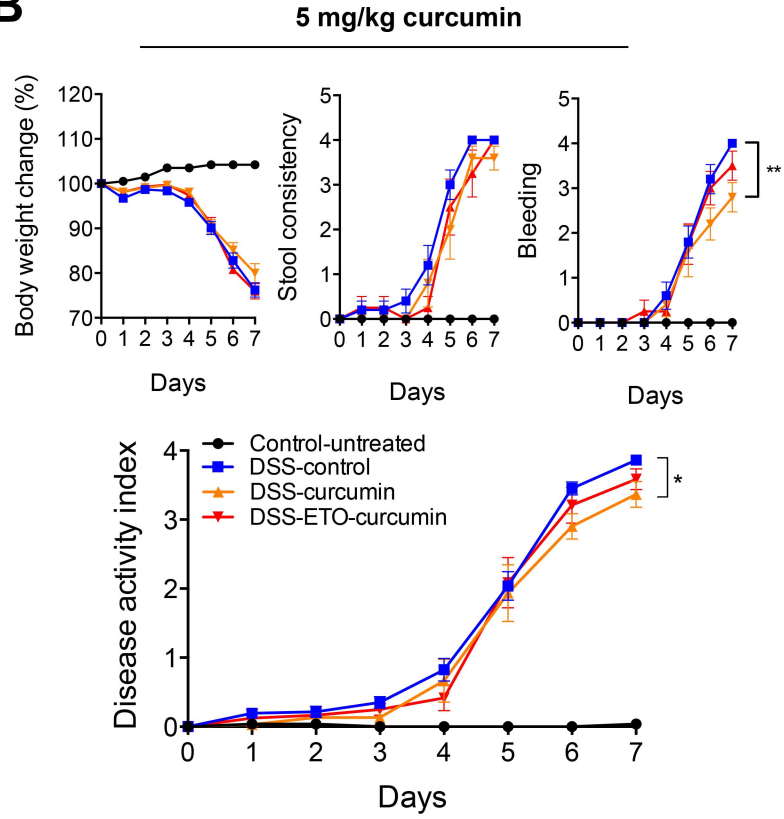
**Supplementary Figure 2: Effects of ETO-curcumin and standard curcumin on DSS-induced inflammation at 5 mg/kg body weight daily gavaging** **A)** Graphical representation of curcumin treatment strategy **B)** Changes in individual categories of DAI (top), body weight changes, stool consistency and stool bleeding (left-right). Changes in disease activity index (DAI) (bottom). **C)** Colon length, **D)** Spleen weight and **E)** Histology score on day 7. \*=  $p < 0.05$ , \*\*=  $p < 0.01$ , \*\*\*=  $p < 0.001$ .



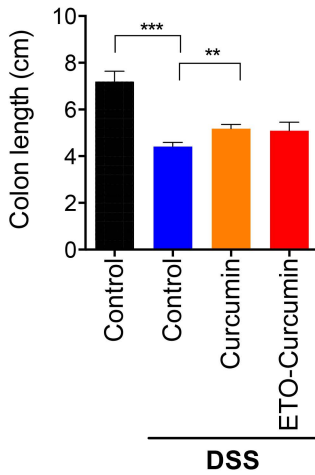
**A**



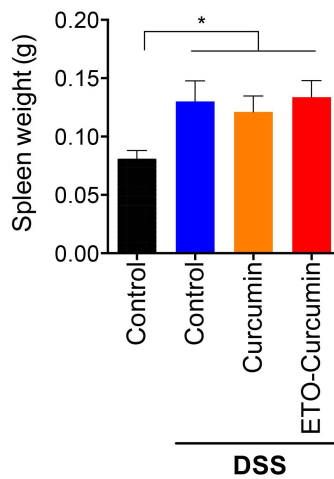
**B**



**C**



**D**



**E**

