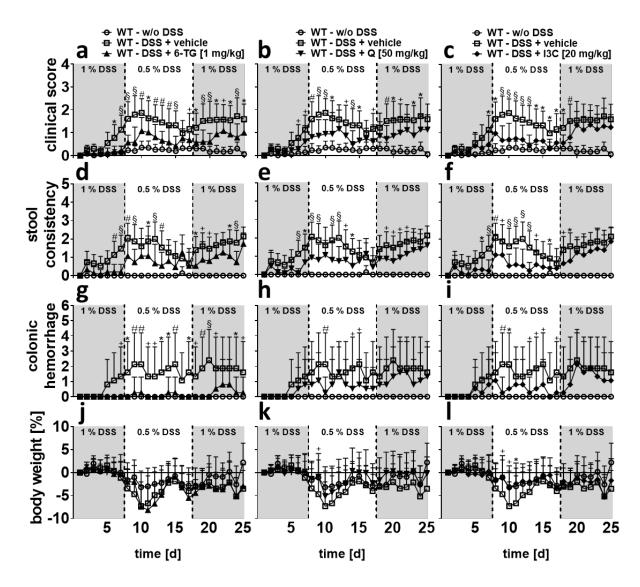
## **Supplementary Materials:**

The following are available online at www.mdpi.com/xxx/s1.



**Figure S1.** Therapeutic effects of Q and I3C during the course of chronic DSS colitis. Chronic colitis was induced in C57BL/6 wild-type (WT) mice by administering 1 % DSS in drinking water for 7 days, followed by 0.5 % DSS for 10 days, and again 1 % DSS for 7 days of. Animals were treated from days 1-10 and 18-22 with 6-thioguanine (6-TG; 1 mg/kg; a, g, d, j), quercetin (Q; 50 mg/kg; b, e, h, k) or indol-3-carbinol (I3C; 20 mg/kg; c, f, i, l) as indicated. Control animals were administered with PBS (1 % hydroxyethyl cellulose) by gavage (vehicle control). The clinical score (a, b, c) and its single parameters - stool consistency (d, e, f), colonic hemorrhage (g, h, i), and body weight loss (j, k, l) - were evaluated daily and are shown in the time course of the experiment as mean + SD. n=15 WT mice; +P < 0.05, \*P < 0.01, #P < 0.001 and §P < 0.0001 vs the vehicle control group.

 Table S1. Scoring system for stool consistency and blood in stool.

Scoring points	Stool consistency	Blood in stool	
0	normal	no visible blood in stool	
1	soft, but still formed	-	
2	very soft	-	
3	liquid	-	
4	-	visible blood in stool	

Table S2. Histological scoring system.

Fibrosis in submucosa  Fibrosis in submucosa  1 Focal lesion  Several focal lesions  3 Bridging lesion in the submucosa  Like Grade 3, but with enlargement of submucosa  Enlargement causes doubling and more of originally submucosa height  Fibrosis in mucosa  1 Focal lesion  2 Several focal lesions  3 Up to 50 % replaced  Almost 80 % replaced  5 Full replacement  Infiltration, granulocytes (normal: max. 2-3/hpf (x20))  2 2 20/hpf  3 10/hpf  (normal: max. 2-3/hpf (x20))  2 1 10/hpf  (normal: max. 2-3/hpf (x20))  2 2 20/hpf  3 10/hpf  4 Large, multifocal infiltration  5 Infiltration, lymphocytes (normal: max. 2-3/hpf (x20))  2 2 20/hpf  4 Large, multifocal infiltration  Infiltration, macrophages (normal: max. 2-3/hpf (x20))  2 2 20/hpf  4 Large, multifocal infiltration  5 Infiltration forming compact masses of lymphocytes  Infiltration, macrophages (normal: max. 2-3/hpf (x20))  2 2 20/hpf  3 50/hpf  4 Large, multifocal infiltration  5 Infiltration forming compact masses of lymphocytes  Infiltration, macrophages (normal: max. 2-3/hpf (x20))  3 50/hpf  4 Large, multifocal infiltration  5 Infiltration forming compact masses of macrophages  Edema  1 Very small lesions or focal only  Several foci, may be confluenting  3 Extending normal thickness of intestine  Associated with disruption of original structures  Necrosis  Necrosis  3 20-30 % of mucosal surface  Several foci, may be confluenting or one focus leading up to submucosa  1 Very small lesions on mucosal surface  Several foci, may be confluenting or one focus leading up to submucosa  1 Very small lesions on involved  4 Up to 50 % of mucosa involved  4 Up to 50 % of mucosa involved	Table 52. Flistological scoring system.		
Several focal lesions   3	Finding	Grade	Definition
Bridging lesion in the submucosa   Like Grade 3, but with enlargement of submucosa   Like Grade 3, but with enlargement of submucosa   Enlargement causes doubling and more of originally submucosa   height	Fibrosis in submucosa	1	Focal lesion
Fibrosis in mucosa Fibrosis in mucosa Fibrosis in mucosa  1 Focal lesion 2 Several focal lesions 3 Up to 50 % replaced 4 Almost 80 % replaced 5 Full replacement Infiltration, granulocytes (normal: max. 2-3/hpf (x20)) 2 20/hpf 3 50/hpf 4 Large, multifocal infiltration Fibrosimax. 2-3/hpf (x20)) 2 20/hpf 3 50/hpf 4 Large, multifocal infiltration Fibrosimax. 2-3/hpf (x20)) 3 50/hpf 4 Large, multifocal infiltration Fibrosimax. 2-3/hpf (x20)) 5 Infiltration forming compact masses of granulocytes Infiltration, lymphocytes Fibrosimax. 2-3/hpf (x20)) 5 Infiltration forming compact masses of lymphocytes Fibrosimax. 2-3/hpf (x20)) 5 Infiltration forming compact masses of lymphocytes Fibrosimax. 2-3/hpf (x20)) 5 Infiltration forming compact masses of lymphocytes Fibrosimax. 2-3/hpf (x20)) 5 Infiltration forming compact masses of lymphocytes Fibrosimax. 2-3/hpf (x20)) 7 Solve Fibrosimax. 2-3/hpf (x20) 8 Fibrosimax. 2-3/hpf (x20) 9 Solve Fibrosimax. 2-3/hpf (x20) 9 Solve Fibrosimax. 2-3/hpf 9 Fibrosimax. 2-3/h		2	Several focal lesions
Fibrosis in mucosa  Fibrosis in mucosa  Fibrosis in mucosa  I  Focal lesion  Several focal lesions  Up to 50 % replaced  Almost 80 % replaced  Almost 80 % replaced  Full replacement  Infiltration, granulocytes  (normal: max. 2-3/hpf (x20))  Infiltration, lymphocytes  Infiltration, lymphocytes  Infiltration, lymphocytes  Infiltration, lymphocytes  Infiltration, max. 2-3/hpf (x20))  Infiltration forming compact masses of granulocytes  Infiltration, lymphocytes  Infiltration, lymphocytes  Infiltration forming compact masses of lymphocytes  Infiltration, max. 2-3/hpf (x20))  Infiltration forming compact masses of lymphocytes  Infiltration, max. 2-3/hpf (x20))  Infiltration forming compact masses of lymphocytes  Infiltration, macrophages  Infiltration, macrophages  Infiltration forming compact masses of lymphocytes  Infiltration, macrophages  Infiltration forming compact masses of macrophages  Infiltration, max. 2-3/hpf (x20))  Infiltration forming compact masses of macrophages  Infiltration, macrophages  Infiltration forming compact masses of macrophages  Infiltration, macrophages  Infiltration forming compact masses of macrophages  Infiltration forming compact masses of macrophages  Infiltration forming compact masses of macrophages  Edema  I  Very small lesions or focal only  Extending normal thickness of intestine  Associated with disruption of original structures  Necrosis  I  Very small lesions on mucosal surface  Several foci, may be confluenting or one focus leading up to submucosa  In the property of mucosa involved  I  Very small lesions on mucosa involved  I  Very son of mucosa involved  I  Very to 50 % of mucosa involved		3	Bridging lesion in the submucosa
Fibrosis in mucosa 1 Focal lesion   2 Several focal lesions   3 Up to 50 % replaced   4 Almost 80 % replaced   5 Full replacement   10/hpf!   (normal: max. 2-3/hpf (x20)) 2 20/hpf   3 50/hpf   4 Large, multifocal infiltration   5 Infiltration forming compact masses of granulocytes   1 10/hpf   4 Large, multifocal infiltration   5 Infiltration forming compact masses of granulocytes   1 10/hpf   4 Large, multifocal infiltration   5 Infiltration forming compact masses of granulocytes   1 10/hpf   4 Large, multifocal infiltration   5 Infiltration forming compact masses of lymphocytes   1 10/hpf   4 Large, multifocal infiltration   5 Infiltration forming compact masses of lymphocytes   1 10/hpf   4 Large, multifocal infiltration   5 Infiltration forming compact masses of lymphocytes   1 10/hpf   4 Large, multifocal infiltration   5 Infiltration forming compact masses of macrophage   1 10/hpf   3 50/hpf   4 Large, multifocal infiltration   5 Infiltration forming compact masses of macrophages   1 Soveral foci, may be confluenting   3 Extending normal thickness of macrophages   4 Extending normal thickness of mucosa   4 Extending normal thickness of mucosa   5 Associated with disruption of original structures   8 Necrosis   1 Very small lesions on mucosal surface   5 Several foci, may be confluenting or one focus leading up to submucosa   3 20-30 % of mucosa involved   4 Up to 50 % of mucosa involved		4	Like Grade 3, but with enlargement of submucosa
Fibrosis in mucosa 1 Several focal lesion 2 Several focal lesions 3 Up to 50 % replaced 4 Almost 80 % replaced 5 Full replacement 10/hpf² (normal: max. 2-3/hpf (x20)) 2 20/hpf 3 50/hpf 4 Large, multifocal infiltration forming compact masses of granulocytes 1 10/hpf² (normal: max. 2-3/hpf (x20)) 2 20/hpf 3 50/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of granulocytes 1 10/hpf 4 Large, multifocal infiltration 5 10/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of lymphocytes 1 10/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of lymphocytes 1 10/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of lymphocytes 1 10/hpf 3 50/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of macrophages 1 10/hpf 3 50/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of macrophages 1 Several foci, may be confluenting 3 Extending normal thickness of micosa Extending normal thickness of micosa Extending normal thickness of micosa 1 Several foci, may be confluenting 3 Extending normal thickness of micosa 1 Very small lesions on mucosal surface 1 Several foci, may be confluenting or one focus leading up to submucosa 3 20-30 % of mucosa involved 4 Up to 50 % of mucosa involved		5	Enlargement causes doubling and more of originally submucosa
2 Several focal lesions 3 Up to 50 % replaced 4 Almost 80 % replaced 5 Full replacement  Infiltration, granulocytes (normal: max. 2-3/hpf (x20)) 2 2 20/hpf 3 50/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of granulocytes (normal: max. 2-3/hpf (x20)) 2 2 20/hpf 3 50/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of granulocytes  Infiltration, lymphocytes 1 10/hpf 3 50/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of lymphocytes  Infiltration, macrophages (normal: max. 2-3/hpf (x20)) 2 20/hpf 3 50/hpf 4 Large, multifocal infiltration 5 Infiltration forming compact masses of lymphocytes  Infiltration, macrophages 1 10/hpf 1 Large, multifocal infiltration 5 Infiltration forming compact masses of macrophages  Edema 1 Very small lesions or focal only 2 Several foci, may be confluenting 3 Extending normal thickness of mucosa 4 Extending normal thickness of intestine 5 Associated with disruption of original structures  Necrosis 1 Very small lesions on mucosal surface 2 Several foci, may be confluenting or one focus leading up to submucosa  Necrosis 1 Very small lesions on mucosal surface 2 Several foci, may be confluenting or one focus leading up to submucosa  3 20-30 % of mucosa involved			height
Several foci, may be confluenting or mechanism of mucosa involved   1   10/hpf	Fibrosis in mucosa	1	Focal lesion
Almost 80 % replaced   5   Full replacement		2	Several focal lesions
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A	(normal: max. 2-3/hpf (x20))	2	20/hpf
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Large, multifocal infiltration  Infiltration forming compact masses of macrophages  Edema  Very small lesions or focal only  Several foci, may be confluenting  Extending normal thickness of mucosa  Extending normal thickness of intestine  Extending normal thickness of intestine  Associated with disruption of original structures  Necrosis  Very small lesions on mucosal surface  Several foci, may be confluenting or one focus leading up to submucosa  3 20-30 % of mucosa involved  4 Up to 50 % of mucosa involved	(normal: max. 2-3/hpf (x20))	2	20/hpf
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Edema 1 Very small lesions or focal only 2 Several foci, may be confluenting 3 Extending normal thickness of mucosa 4 Extending normal thickness of intestine 5 Associated with disruption of original structures  Necrosis 1 Very small lesions on mucosal surface 2 Several foci, may be confluenting or one focus leading up to submucosa 3 20-30 % of mucosa involved 4 Up to 50 % of mucosa involved		4	Large, multifocal infiltration
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3 20-30 % of mucosa involved 4 Up to 50 % of mucosa involved		2	Several foci, may be confluenting or one focus leading up to
4 Up to 50 % of mucosa involved			submucosa
•		3	20-30 % of mucosa involved
5 Complete mucosa involved		4	Up to 50 % of mucosa involved
1		5	Complete mucosa involved

<sup>&</sup>lt;sup>1</sup> hpf: high power field