

Supplementary Materials

Table S1. Linear Mixed Models output summary: Effects of Treatment, Time and Treatment*Time interaction on fecal parameters.

	Calprotectin in Model	Cortisol Model	Short Fatty Chain Acids Model	Indole/Scatole Model	N-methylhistamine Model	pH Model
(Intercept)	5.78*** (0.28)	0.63*** (0.02)	199.28*** (5.14)	1.73*** (0.08)	109.07*** (3.25)	6.48*** (0.06)
Treat	-0.46 (0.38)	-0.06* (0.02)	22.13*** (6.31)	-0.27** (0.09)	-7.65 (4.10)	0.02 (0.08)
Time	-0.00 (0.05)	0.00 (0.00)	-0.22 (1.41)	0.01 (0.02)	0.47 (0.82)	0.01 (0.01)
Treat:Time	-0.22*** (0.06)	-0.02** (0.01)	4.85** (1.52)	-0.06** (0.02)	-3.57*** (0.90)	-0.01 (0.01)
AIC	375.28	-341.30	1299.76	71.37	1155.15	-114.45
BIC	393.34	-323.23	1317.83	89.44	1173.22	-96.38
Log Likelihood	-181.64	176.65	-643.88	-29.69	-571.58	63.22
Num. obs.	150	150	150	150	150	150
Num. groups: Dog	30	30	30	30	30	30
Var: Dog (Intercept)	0.74	0.00	70.64	0.01	46.71	0.04
Var: Residual	0.39	0.00	296.49	0.07	101.92	0.01

***p < 0.001; **p < 0.01; *p < 0.05. Model Formula: Treatment + Time + Treatment * Time + (1|Dog).

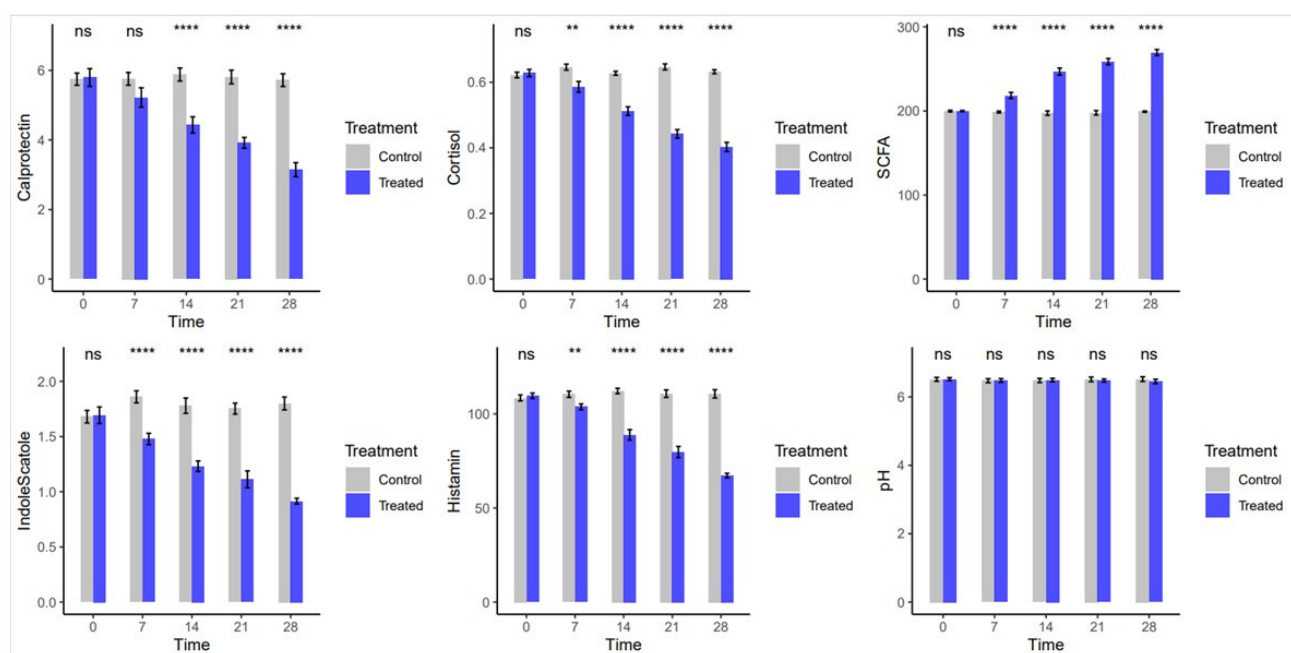


Figure S1. Bar charts comparative analysis (t-test) between treated (TRT) group and control (CTR) group at different time points. *** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$.

Table S2. Analytical chemical composition of feed products containing bromelain, *Lentinula edodes* and the mixture.

Substances	Proteins (%)	Fats (%)	Ash (%)	Fiber (%)
Bromelain (B)	2.13	0.10	8.42	3.42
Quercetin (Q)	0.3	45.86	5.89	0.5
<i>Lentinula edodes</i> (LE)	18.0	0.5	1.3	5.2
Mix (B+Q+LE)	9	4.6	5.4	3.5