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A blend of 3 mushrooms dose-dependently increases butyrate production by the gut microbiota

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Table S1. Composition of the simulated ileal efflux medium (SIEM) as originally composed by Gibson *et al*. (1988).

Medium components	g/l	* Vitamin mix	mg/l
Pectin	9.6	Menadion	1
Xylan	9.6	Biotine	2
Arabinogalactan	9.6	Vitamine B12	0.5
Amylopectin	9.6	Patothenate	10
Starch	80	Nicotinamide	5
$CaCl_2 \cdot 2H_2O$	0.144	p-Aminobenzoic acid	5
$MgSO_4$	0.8	Thiamine	4
$K_2HPO_4 \cdot 3H_2O$	0.8		
$FeSO_4 \cdot 7H_2O$	0.0016		
NaCl	1.44		
Haeme	0.0032		
Tween 80	8.64		
Bactopepton	12		
Caseïne	12		
Ox-bile	0.2		
Cysteine.HCl	0.32		
Vitamin mix	1.6 ml *		
Antifoam B	8		

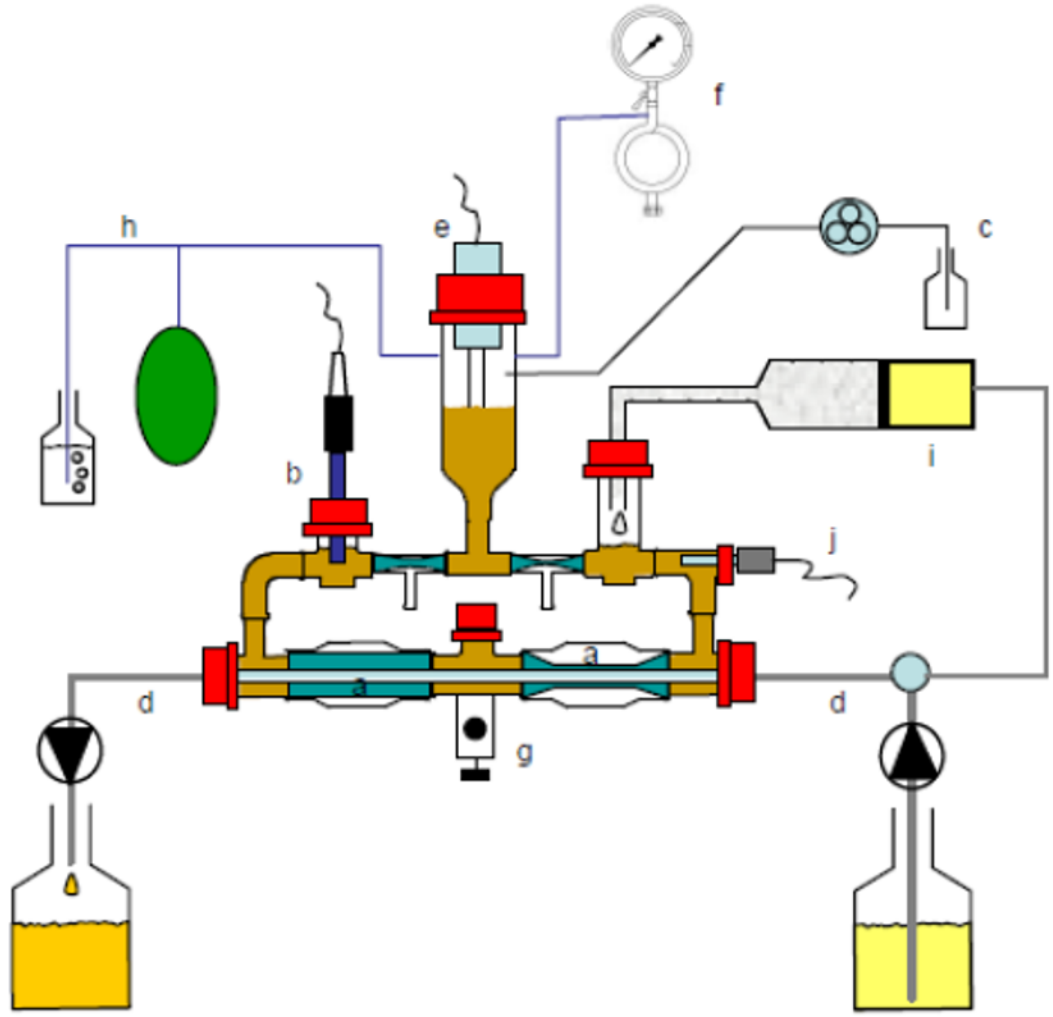

Figure S1. Schematic diagram of the dynamic, multi-compartmental TNO *in vitro* model of the colon (TIM-2).

a: peristaltic compartments; b: pH-electrode; c: alkali pump; d: dialysis liquid circuit with hollow fibres; e: level-sensor; f: N_2 gas inlet; g: sampling-port; h: gas outlet; i: 'ileal delivery' container; j: temperature sensor.

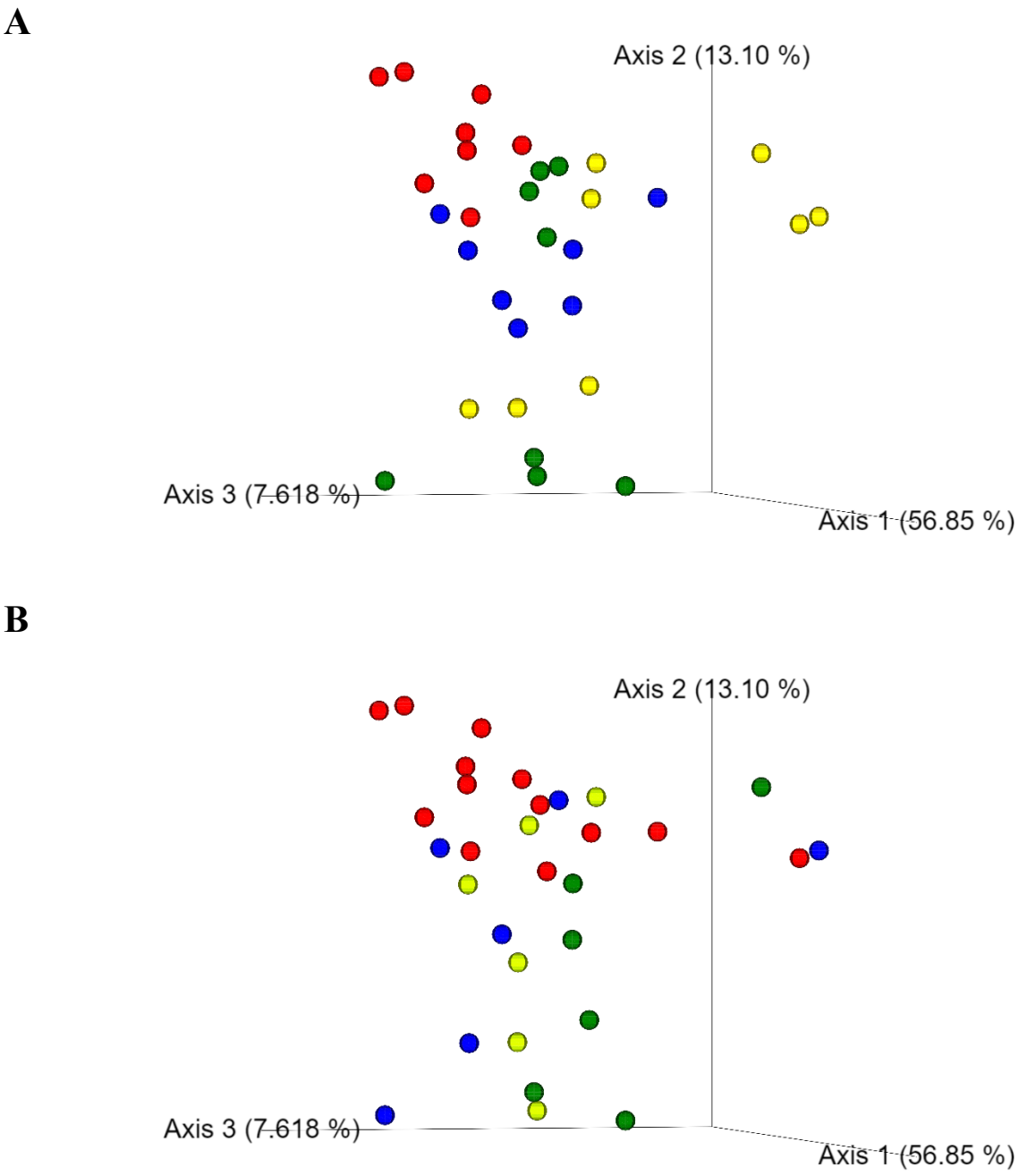

Figure S2. Weighted UniFrac of samples colored by time point (A; 0 h: red; 24 h: blue; 48 h: orange; 72 h: green) and intervention (B; SIEM: red; 0.5 g/day mushroom blend: blue; 1.0 g/day mushroom blend: orange; 1.5 g/day mushroom blend: green).

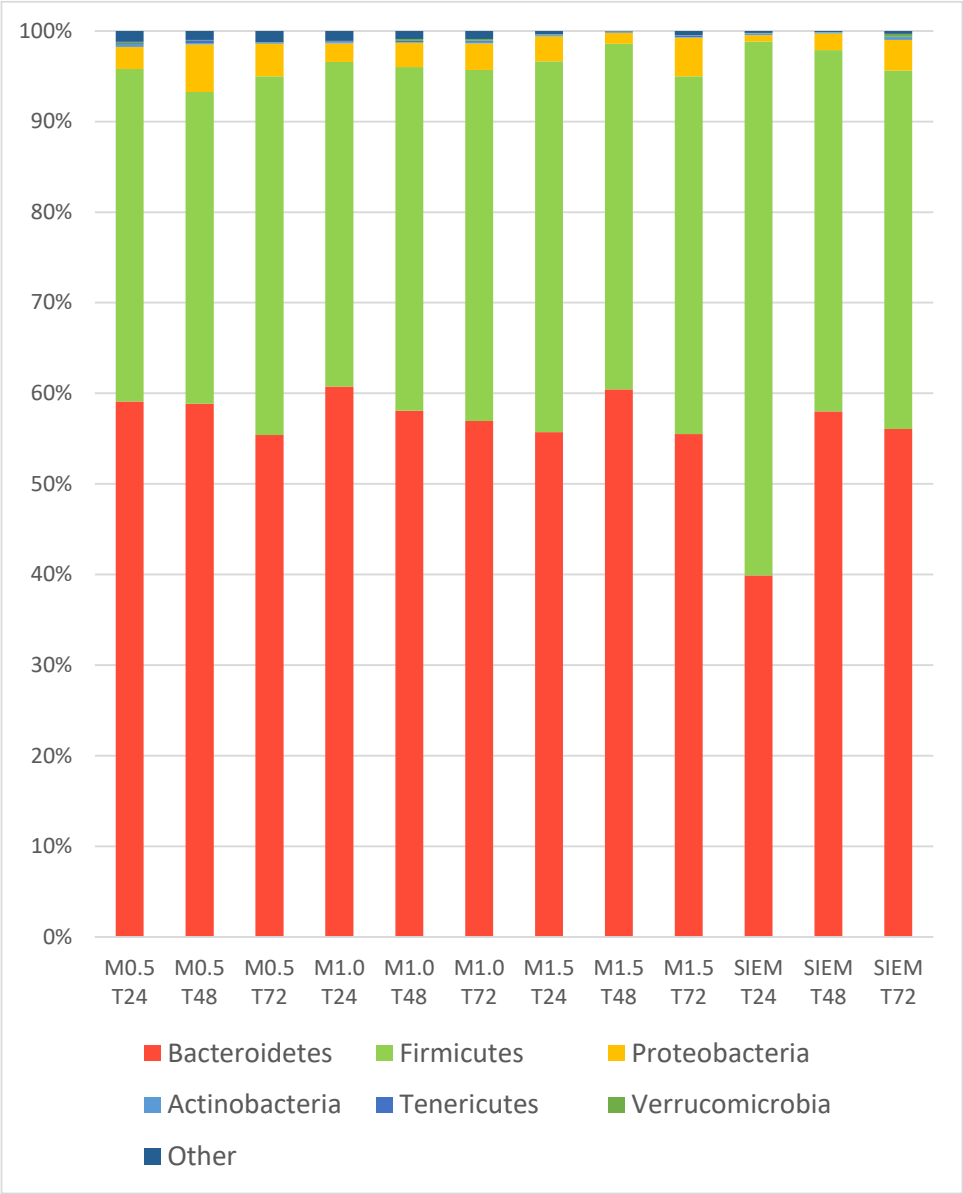

Figure S3. Relative abundance of phyla in the different TIM-2 samples treated with 0.5 g/day (M0.5). 1.0 g/day (M1.0), 1.5 g/day (M1.5) mushroom blend, or SIEM.

The phyla Euryarchaeota, Cyanobacteria, Fusobacteria, Lentisphaerae, Spirochaetae, and Synergistetes, which were present in a limited number of samples, were clustered together under 'Other'.

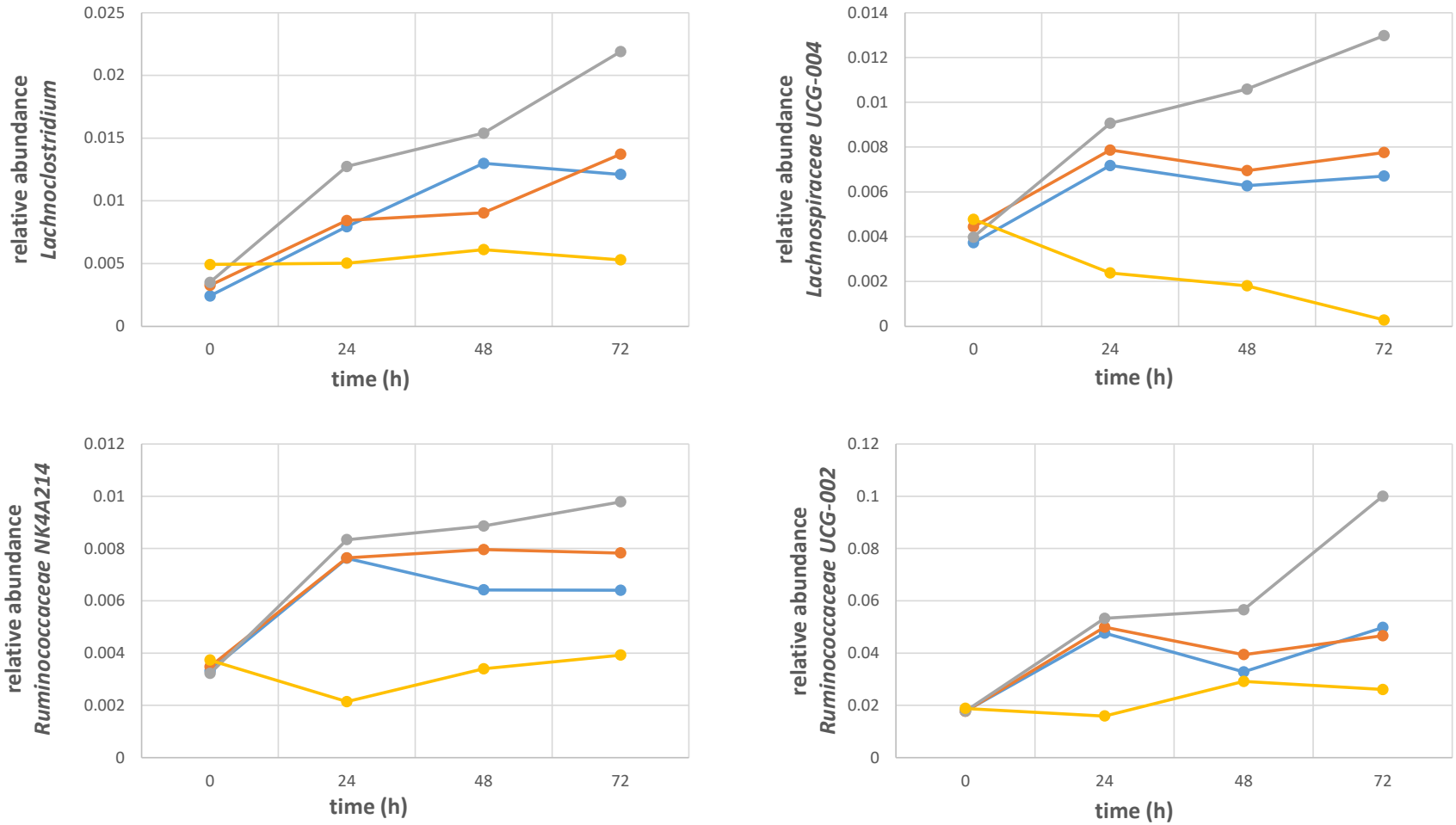

Figure S4. Changes over time of *Lachnoclostridium*, *Lachnospiraceae UCG-004*, *Ruminococcaceae NK4A214-group* and *Ruminococcaceae UCG-002* upon feeding of 0.5 g/day (blue), 1.0 g/day (orange), 1.5 g/day (grey) of the mushroom blend or SIEM (yellow). These 4 taxa are (dose-dependently) stimulated by the mushroom blend, whereas the relative abundance for SIEM stays more or less the same or reduces.