Supplementary materials and methods

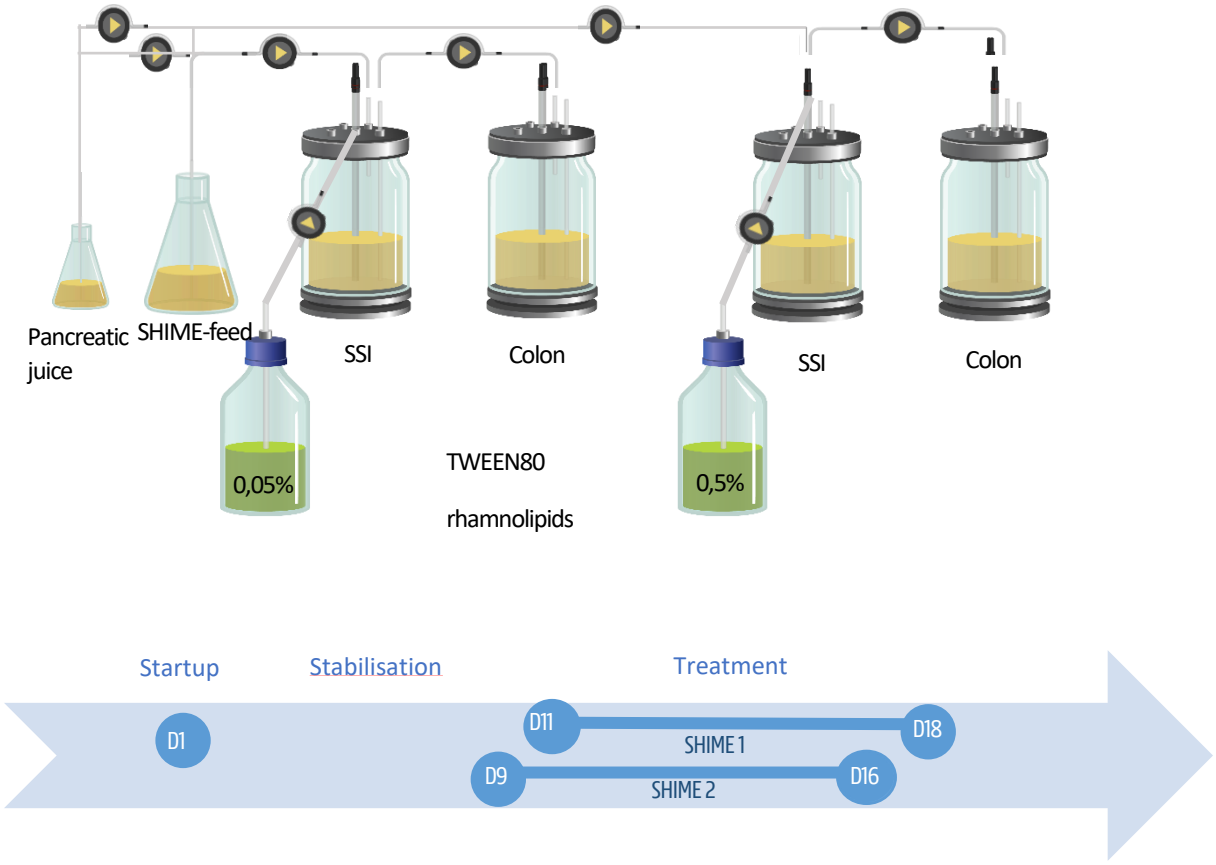

Figure 1: Schematic representation of an experiment with the Simulator of the Human Intestinal Microbial Ecosystem (SHIME) investigating the impact of 0,05 m% and 0,5 % TWEEN80 and rhamnolipids on the composition and functionality of the gut microbiota from 2 human faecal donors.

Table 1: Chemical composition of nutritional SHIME-feed

Component	**Concentration (g/L)**
Arabinogalactan	1,2 g/L
Pectin	2
Xylan	0,5
Glucose	0,4
Yeast extract	3
Special Pepton	1
Mucin	2
Cystein-HCl	0,5
Starch	4

Table 2: Time table of pumping action between different SHIME-compartments.

Feed => Stomach/small intestine	**Pancreatic juice => Stomach/small intestine**	**Emulsifier => Stomach/small intestine**	**Stomach/small intestine => Colon**	**Colon => Waste**
9u -> 9u30	10u -> 9u15	9u50 -> 10u	12u30 -> 14u30	13u30 -> 15u30
17u -> 17u30	18u -> 17u15	18u50 -> 19u	20u30 -> 22u30	21u30 -> 23u30
1 -> 1u30	2 -> 2u15	2u50 -> 3u	4u30 -> 6u30	5u30 -> 7u30

Table 3: Sampling scheme for SHIME 1 with donor 1.

		Stabilization Period: 10 days										Treatment Period: 8 days								
7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	28
Days		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**	
SCFA		X **	x	x		x		x	x	x	x	x	x	x	x		x		x	Follow-up
FC			x	x		x		x	x	x	x	x	x	x	x		x		x	
Flic *			x							x	x	x	x				x		x	3-4 T's
LPS *			x							x	x	x	x				x		x	3-4 T's
Illumina			x							x	x	x	x				x		x	3-4 T's
RNA ***			x							x	x	x	x				X		x	3-4 T's
Mucin				x		x			x		x		x			x		x		3-4 T's

Table 4: Sampling scheme for SHIME 2 with donor 2.

		Stabilization Period: 8 days										Treatment Period: 8 days								
26	27 (mon)	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	
Days		**1**	**2**	**3**	**4**	**5**	**6**	**7**	**8**	9	**10**	**11**	**12**	**13**	**14**	**15**	**17**	**18**	**19**	
SCFA		X **	x	x		x		x	x		x	x	x	x	x		x		x	Follow-up
FC			x	x		x		x	x		x	x	x	x	x		x		x	
Flic *			x						x		x	x	x		x				x	3-4 T's
LPS *			x						x		x	x	x		x				x	3-4 T's
Illumina			x						x		x	x	x		x				x	3-4 T's
RNA ***			x						x		x	x	x		x				x	3-4 T's
Mucin					x			x		x		x	x		x		x		x	3-4 T's
RESERVE												x	x	x	x	x	x	x	x	